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INTRODUCTION

The future of Uzbekistan depends on economic and social achievements, securing a place on world economic systems, the use of modern information technologies in every aspect of human activity, increasing the efficiency of labor force and this also plays a big impact on the country future. Regarding to this, our former President Islam Karimov noted: "Today, the process of forming a national information system in the Global Internet and other information systems, in particular, play an important role. Achieving this in the twenty-first century plays a decisive role in the development of the country"

The Government of the Republic of information and communication technologies in the development of a number of legislative acts adopted and step-by-step implementation of the legislation. That the legislation adopted in the field of ICT, including the following examples. May 30, 2002, the President of the Republic of Uzbekistan No. UP-3080 "On further development of computerization and information and communication technologies" on June 30, 2002, the Cabinet of Ministers Decree No. 200 of computerization " and the development of information and communication technologies in a Resolution "on measures on December 11, 2003 No. 56" on information ", April 29, 2004, No. 611-II" electronic document The rotation resolutions and the President of the Republic of Uzbekistan "On March 21, 2012 No. PP-1730" introduction of modern information and communication technologies and the adoption of the resolution "On measures for the development of ICT sector the implementation and development of the dynamic steps.

In addition, the development of e-government in the republic now, and from all of these areas in order to supply information on the work carried out with the participation of students of higher educational institutions in various training courses have been organized. These training courses civilian national of the state policy in the field of ICT and computer technologies will be notified. In turn,

increased computer literacy among citizens is becoming more and more citizens in the field of ICT in various questions is normal.

The purpose of the work we have created a system starting in the field of ICT users about the concepts, terms, and operating systems can be installed on a computer file extensions, file extensions, which can open any applications using the data. This system began to go to work full time in its data base of more than 6,000 different file extensions, and information on more than 4500 different terms.

Oddly important priority and the primary users of this system will help to enrich the knowledge of computer literacy. Web site created in the form of the system, and this system is completely free.

This is the conclusion, Chapter 2, and the use of literature consists of a list. As well as the final qualifying work of 16 figures and 5 tables.

The first chapter of this system design and software used in the climate PHP programming language and MySQL database more authenticity. The first chapter about the PHP programming language, MySQL database and PHP programming language and MySQL database query performance.

In the second chapter, we use the aforementioned technologies, the structure of the tables in the database, the database software system to separate search system, as well as HTML and CSS technologies in its design. The first part of the structure of the MySQL database application design, shows PHP programming language MySQL database information, and HTML and CSS to develop the system design department.

In a word, this software system designed not only to impart information and communication is now studying users. These systems of qualified experts say that they need to find a variety of information and support for their work. This system of computer users in the future will be the closest.

CHAPTER I. PHP PROGRAMMING LANGUAGE AND MYSQL DATABASE

1.1. PHP programming language

The history of PHP (HyperText Preprocessor) begins in 1995, when RasmusLerdorf created a simple Perl application that analyzes user visits to his resume on the website. Then, when this application was already used by several people, and the number of those who wanted to receive it was constantly increasing, Lerdorf called his creation Personal Home Page Tools version 1 and put it for free download. From this moment, an unprecedented rise in the popularity of PHP began.

As it always happens, urgently needed improvements and additions. To implement them, Rasmus creates a new version of the package, now written in C. The resulting tool acquires the working name PHP / FI (Personal Home Page / Forms Interpreter), in the future it will also be known as PHP 2. This version is more similar to today's PHP.

It had a syntax and a way of naming variables in the style of Perl, automatic interpretation of forms, integration with databases (mainly with MySQL), and the ability to embed PHP statements in the html-code page. At the same time, everything worked very quickly, because PHP was recompiled to the Apache web server. By 1997, PHP had already been used on 50,000 domains (no more than 1% of all web servers).

In the same 1997, Zeev Suraski and Andy Gutmans joined the PHP project. Being students of one of the Israeli universities, they tried to use PHP / FI for one of the commercial university projects. At the same time they had to face many difficulties and limitations of this technology. Studying the source code of PHP 2, Ziv and Andy came to the conclusion about the need for refinement, or rather the substantial processing of PHP, especially in terms of language syntax. Within a few months they brilliantly coped with this task, more pleasingly , this work was credited to them as a teaching load of the university.

After completing the work, Ziv and Andy contacted Rasmus, who took all the changes in PHP "with a bang." From this moment, PHP Group appears - a group of like-minded people working on the development of PHP technology. The product of the joint activity was released in 1998 under the name PHP 3.

At the same time, the main feature of PHP 3 was the possibility of extending the kernel, which attracted to the work on PHP a lot of third-party developers who create specialized modules. Their presence gave PHP the ability to work with a huge number of databases, protocols, maintain a large number of APIs. By the end of 1998, the number of PHP users exceeded 100,000, and PHP was already installed on no less than 10% of Internet servers.

Immediately after the release of PHP 3, Andy Gutmans and ZivSuraski started the processing of the PHP kernel. First of all, it was necessary to solve the problem of increasing productivity. A new engine, called Zend Engine (from the names of the creators: Zeev and Andi), successfully coped with this task and was implemented in 1999. The basic idea of using it was the ability to compile the script into an portable module, which could increase the performance by an order of magnitude.

PHP 4, running on this engine was released in 2000. In addition to improving performance, PHP 4 has new session support capabilities, output buffering, secure ways of handling user input and new language constructs. With the release of version 4, PHP has already been used on more than 20% of the Internet domains.

During the period from 2000 to 2004, active work continued to improve the 4th version, but almost immediately the PHP Group began to consider the possibilities of the new version. First of all, it was decided to strengthen the objective capabilities of the language, which allowed using it for the implementation of fairly large projects. Work on the creation of version 5 took a long time, they were attended by a record number of specialists, of which I would like to highlight Sterling Hughes (Sterling Hughes) and Marcus Berger (Marcus Boerger).

And finally, in July 2004, the official release of PHP 5 is released. First of all, as planned, the whole mechanism of working with objects was processed. And if in previous versions of object-oriented programming in PHP was possible to a minimum, which is why it was not used in practice often, PHP 5 has a great potential for implementing object programming. In addition, PHP has enriched a number of valuable extensions to work with XML, various data sources, graphics generation, etc.

All the major libraries for working with XML, which were available in PHP 4, have been subjected to serious processing. Popular extensions such as SAX, DOM and XSLT now use the libxml2 tool, which makes them even more efficient. PHP 5 also includes two new extensions - SimpleXML and SOAP.

SimpleXML makes it much easier to work with XML data by presenting the contents of an XML document as a PHP object. It has never been so easy to work with XML in PHP.

The SOAP extension allows you to build PHP scripts that exchange information with other applications using XML messages over existing web protocols, such as HTTP. There is an opportunity to integrate PHP applications with the most popular web services today. The SOAP extension for PHP 5 provides developers with the ability to quickly create efficient SOAP clients and SOAP servers.

The new PHP 5 MySQLi extension (MySQL Improved) is designed to work with the MySQL server version 4.1.2 and higher, implementing not only a procedural, but also an object-oriented interface to MySQL. Additional features of this module include - SSL, transaction control, replication support, etc.

The SQLite extension allows you to build applications that store data in ordinary files, with the ability to use the SQL interface to them. The main advantage of SQLite is its exceptional ease of use. SQLite along with procedural also has powerful object-oriented capabilities for working with data. Other distinguishing features of SQLilte are high speed, the absence of complex

administration mechanisms, easy portability, etc. Many experts predict the great popularity of this extension PHP.

Connecting HTML and PHP

Embedding PHP code in HTML, PHP must be specified separately, using the PHP start and end tags. The PHP tags tell the Web server where the PHP code begins and ends. The PHP analyzer recognizes three variants of the start and end tags.

XML style

```
<?php
    echo "The first line of the PHP programming
    language";
?>
```

The first version of the PHP tags is called XML-style tags and is the preferred style. It works in Extensible Markup Language (XML) documents. This method should be used when connecting PHP with XML and HTML documents. The examples in this tutorial use this XML tag format.

Short style

```
<?
    echo "PHP programming language in the second row!";
?>
```

The abbreviated style is the simplest, however, it is not recommended, because it conflicts with declarations of XML documents.

Script style

```
<script language="php">
echo "PHP programming language in the third row!";
</script>
```

This style uses the longest record and is similar to the style of tags used with Java Script ?. This style is preferable when using the HTML editor, which does not recognize other styles of tags. Since most new HTML editors recognize the style of XML tags, the use of this style is not recommended. The script blocks can be placed anywhere in the HTML document, at the point where the script creates and displays its output.

The following HTML example illustrates the use of three formats for script tags.

```
<html>
    <head>
        <title> the first written PHP page </ title>
    </head>
<body>
<p><?php echo "first written in the PHP code"; ?></ p>
<p><?php print "- this is great!"; ?></ P>
<p>
<script language="php">
    $myvar = "Hello World!";
    echo $myvar;
    </script>
    </p>
</body>
</html>
```

In the previous example, three PHP blocks are included in the HTML document. The first block uses the opening and closing tags <? Php ...?>. The code segment uses the PHP echo statement to display the string "This is the main PHP document" in the browser window.

The second block applies the <? ...?>To mark the beginning and end of the PHP code. This section uses the PHP print statement (another echo statement name) to display the text "PHP is great!".

Finally, the third block uses the script block <script language = "php"> ... </ script> to determine the beginning and end of the PHP code. In the code, the string "Hello World" is assigned to the variable $ myvar, and the echo statement displays the value of $ myvar in the browser window.

Figure 1. *The first program in the programming language PHP*

An example of the code shown above includes HTML tags, PHP tags, PHP statements, and delimiters. When a user requests a PHP page, the server processes all PHP code. When a PHP page is viewed in a browser window, only the text between the opening and closing HTML or PHP tags is displayed. No real PHP code is visible when viewing the source code in a browser window. The reason is that the PHP interpreter executes the script on the server and replaces the code with the output of the script output. Only this output is sent to the browser. This is one of the characteristics that makes PHP a server-side scripting language, unlike Java Script, the client's scripting language.

PHP programming language syntax

PHP and other programming languages, such as the implementation of the program during all process variables. The main difference between PHP programming language and other programming languages, PHP is not the concept of the team. PHP variables selected for the $ sign in front of the name of an identifier. PHP programming language such as C ++, C # and Java programming languages are used for the completion of the operator. If you're forgotten during the sign "Parse error" syntax error screen. To declare variables are such as:

```
<?
    $whole number = 1;
    $string = "Hello";
    $array = array ("one", "two", "three");
?>
```

In PHP, like other programming languages, we can fully use arithmetic operations .Arithmetical operations ,their signs and functions are listed in the table below.

Table-1.1. *Arithmetical operations*

Signs	Comment	Example
+	Add	$k + 1
-	Subtract	$k – 2
*	Multiply	$k * 10
/	Divide	$k / 10
%	Percentage	$k % 10
++	Increment. Increases the amount with increment	$k++
--	Decrement. Decreases the amount with decrement	$k--

PHP and other programming languages, such as to write in full view of the variety of arithmetic, they can also short phrase. As an example of operations in the following examples can be mentioned.

Table-1.2. *Short and full view expressed arithmetic actions*

Operator	Example	Equivalent
+=	$k += 10;	$k = $k + 10;
-=	$k -= 10;	$k = $k – 10;
*=	$k *= 10;	$k = $k * 10;
/=	$k /= 10;	$k = $k / 10;
%=	$k %= 10;	$k = $k % 10;
++	$k++;	$k = $k + 1;
--	$k--;	$k = $k – 1;
.=	$k = .$c;	$k = $k .$c;

The sum of the two numbers program code is written as follows. example

```
<?php
    $a = 10;
```

```
    $b = 5;
    $C = $a + $b;
        echo $c; // Result: 15;
?>
```

During the PHP programming language application developers may need to use a variety of mathematical functions. PHP, C ++, C # and Java programming languages are available for the use of mathematical functions. Some of these functions are shown in the table above.

Table-1.2. *Mathematical functions*

№	The name of the function	Description of the function
1	number abs(mixed number)	|x| module
2	float floor (float value)	Small returns an integer argument
3	float ceil (float value)	Arguments for greater returns an integer
4	float round (float val [, int precision])	Used to rounding
5	mixed max (number arg1, number arg2 [, …]) mixed max (array numbers)	Big amount returns
6	mixed min (number arg1, number arg2 [, …]) mixed min (array numbers)	Small amount returns
7	int rand ([int min, int max])	The random number between min and max returns
8	float sqrt (float arg)	Root

The mathematical function of a number of component applications. For example:

```
<?php
    $a = 25;
    $a = sqrt($a);
```

```
        echo 'Root= '.$a;
?>
```

In PHP language, both non-constants, constants can be useful. Constants also store information. The main difference between constant and non-constant is non-constant unchangeable after the its announcement. It is possible use non-constants as simple constants, but "$" is not used in front of non-constants.

For example:

```
$directory = ROOT_LOCATION;
```

PHP constants for the right to use the following 4 main things you need to know. These are as follows:

- Constants define the key word;
- $mark is not used whilst referring to the constants;
- The value of the work program can not be changed;
- It is agreed to write letters in upper case . If you type in lowercase letters can not be wrong. However, it is against to the agreement of professional programmers work.

PHP introduced a number of constants, called the Magic magic constants. The bottom line is written in front of and behind side. This is not the same as the other constants. The following table shows the change in the magic of PHP programming language (PHP's magic Constants).

1.3-Table. *Magical constants*

Magical constants	**Description**
LINE	File number of the current row
FILE	Shows a way to the file name. If is used via "include" the added file will be returned.
DIR	Returns the catalog name .Works the same as dirname(_FILE_) Added from PHP 5.3.0 version.
FUNCTION	Returns the function name. Since PHP5,it is returned as it appears. PHP4 uses only lower-cases .Added from PHP 4.3.0 version

CLASS	Returns the class name. .Since the announcement of PHP5,it is returned as it appears. PHP4 is returned only in lower-cases. Added from PHP 4.3.0 version
METHOD	Returns the method name. Method id returned as it is announced .Added from PHP 5.0.0 version
NAMESPACE	Returns the current namespaces. It is detected during the constant compilation. Added from PHP 5.3.0 version

The following use of PHP can be changed and consider the matter. For example:

```
<?php
    define('PI', '3.14159697');
    $r = 10;
    $l = 2 * PI * r;
        echo $l;
?>
```

PHP programming language, depending on the value of variables during the program that has to accept one of the results. This in return leads to the branching of the program. Sector program is accepted, depending on the which part of the fulfillment of certain conditions. In such cases, we must use the operator ”if” . PHP has several kinds, those are:

- if(logical expression) operator logical expression of this view is true, without any need to be used for the implementation of the code;
- if(logical expression) ... else - must be done in a logical expression of this view is true, the operator code, “if””, if one is used for the implementation of the code;
- if(logical expression) ... else if (logical expression) ... else - operator prior to this view, lies which are then checked.

One example of the need to strengthen the knowledge of the operator's history. For example, the following:

```
<?php
//variable that will put a number, the application must
identify the even number or odd number
$a = 11;
    if($a % 2 == 0){
    echo $a.'An even number’;
}
    else{
        echo $a.'Odd number';
    }
?>
```

PHP management of the transmission operator is to choose another operator. According to the operator to select more than one variable value, select the value and values in accordance with the management transfer. Overview of the operator to select:

```
{
switch (<variable>)
    case <constant sample1 operator>: <1>; break;
    case <constant sample2 operator>: <2>; break;
    ...
    case <constant expression>: <N> operator; break;
    default: operator N + 1;
}
```

Selection is transmitted in accordance with the operator to manage the variable value and the operator will be launched. The default operator is not acceptable to any variable value. You can leave the default operator during the use of the program. In this case, the program operation error.

The same calculation process is called a repeated cycle. PHP There are several types of the operator of the cycle. These are:

- cycle for operator;

- do ... while the cycle operator;
- cycle while operator;
- for each cycle operators.

PHP programming language written for the cycle operator has the following syntax.

```
for (<sample1>; <sample2><sample3>);
    <Operator or block;
```

PHP for cycle operator is to comply with the performance of <ifoda1. Then repeat the steps.<sample2> is performed in each step> In contrast, if the result is 0 or true (true), the body of the cycle - the operator or the end of the block is performed and <sample3> be done, otherwise the operator repeats the next transmitted to the operator. The body of the cycle - as the block operator or an operator, including the operator or operators block.

This cycle should be repeated throughout the complex cycle of operators is called the body. The body of the cycle can be used as one of or more operators. If you use more than one operator in the body of the cycle, this must be between the operators {} block. For an example, we will see that the operator of the cycle. 1 to 10 numbers, which make the application to the screen.

```
<?php
    for ($i = 1; $i <= 10; $i++){
        echo $i. " ";
    }
?>
    Results: 1 2 3 4 5 6 7 8 9 10
```

The second cycle at PHP operator is do-while operator. Do-while cycle operator records the following syntax.

```
<?php
    do{
        operator;
    }while(condition);
```

```
?>
```

Here words Do and While service (mandatory) for the body after the completion of the cycle, the cycle has been (logical expression). do-while operator works as follows. The application process is performed after the words do service operators, while after the employee must be checked after the word. If the condition is true (true) if the result is performed after word do service operators. You do need to re-evaluation of this process lies (false) value, do-while managing operator is transmitted to the operator. The above cycle for operators now do while working through the cycle operator.

```
<?php
    do{
        $k++;
            echo $k. ' ';
    }while($k <= 10);
?>
```

Now it is time to take a closer look to the PHP programming language on the third cycle operator. while the cycle operator syntax is as follows:

```
<?php
    while(){
        cycle_body;
    }
?>
```

PHP while the format of the cycle operator. If (condition) is true (true) value, cycle body done. When the value is false (false) if the cycle ended. If you (do not) true value, once in the body of the cycle will not be executed. Above, the program, that we worked with do-while cycle,is done by working via while

```
<?php
    while($k < 10){
        $k++;
            echo $k.' ';
```

```
    }
?>
```

PHP and other programming languages, such as in the same expression, the process of re-calculation comes to re-calculation. So that is the most effective way of solving the problems of this function. Programming languages, and the memory of a computer programmer to write the program in order to save time, this repetitive process, it will be eligible for the program, the chance to make contact.

Refer to any part of the program, there are a few operators can use a group called function. PHP programming language employed in a variety of nearly 1,000 of its function. In addition, each developer has to write to the function and can be used as wanted. These functions are called PHP functions.

It is very necessary to pay attention while working with the followings:

- function name can be started with Latin letters or the beginning of the bottom line (_).can't be started with numbers ;
- during the function it performs is recommended meaning of that name;
- function to write the name of the great and small significance.

PHP programming language is to strengthen the function of the understanding, let us consider a few examples.

```
<?php
//function to write the uppercase and lowercase letters
are not
    Greet function(){
        echo "Hello future programmer! </ br>";
}
    Hello();
    Hello();
    HELLO();
?>
THE RESULT:
    Hello future programmer
```

```
    Hello future programmer
    Hello future programmer
```

PHP functions are mainly divided into two types. These are the parameters and settings functions.

Setting functions of the main program (called function) will not receive any variable. For this reason, it is called a parametric function.

If you need a function to send a setting, parameter function may change as a function parameter value desires.If the function is one of a number of parameters, they are written by commas. The following parameters feature, for example. For example:

```
<?php
    function hello ($name) {
        echo "Hello $name!", which flew;
}
    Hello ('Saodat');
    hello ('Sabohat ');
    HELLO ('Jamshid’);
?>
THE RESULT:
    Hello Saodat!
    Hello Sabohat!
    Hello Jamshid!
```

The program will come to work on the creation of values, and these values must be a variable. In this case we can massive.

The array is in the same category, a finite set of values. Areas such as mathematics courses can be a vector, matrix. A massive array element through an index, it is called a one-dimensional array. PHP three categories of roads, which are as follows:

- **Indexed arrays.** Indexed corridors. The index numbers of the array index. Through the element of the array;

- **Associative arrays.** Link. In other words, the array elements are tied to a keyword. Through this key element of the array, massive is contacted;
- **Multidimensional arrays.** Multi-dimensional blocks.

PHP programming language corridors to get to know an indexed array (Indexed Arrays) arguments will begin. PHP array array() function to make sure that we use. Indexed array to make sure that there are 2 different ways. The first is:

```
$cars = array ("Malibu", "Captiva", "Orlando");
```

The second method is as follows.

```
$cars[0] = "Malibu";
$cars[1] = "Captiva";
$cars[2] = "Orlando";
```

In addition, the PHP count () function to determine the number of array elements. This is done as follows:

```
<?php
    $cars = array ("Malibu", "Captiva", "Orlando");
echo "$cars array elements count=count ($cars.");
?>
THE RESULT:
    The number of cars of the array elements is 3.
```

PHP link housing (Associative Arrays) are tied the words of the key elements of an array. Array elements are key words. Link to be laid to make sure that an array is an indexed so you can make sure that in two ways. The first method is as follows:

```
    $cars = array ("Malibu" => "99 750 000”, Captiva"
=> "93 001 500", Orlando => "76 200 000");
```

or the second method is as follows.

```
    $cars ['Malibu'] = "750 000";
    $cars ['Captiva'] = "001 500";
    $cars [‘Orlando’] = "200 000";
```

Link to the array elements of a simple echo print are carried out by the operator. For example:

```
echo $ cars [ 'Malibu'];
```

In addition, the link to an array for each operator can also print out of the cycle. This is done as follows. For example:

```
<?php
    $cars = array("Malibu" => "99 750 000”, “Captiva" => "93 001 500",” Orlando” => "76 200 000");
    foreach ($cars as $keyword => $value) {
        echo $keyword. " fee". $value. " sum";
    }
?>
THE RESULT:
    Malibu costs 99 750 000
    Captiva costs 93 001 500
    Orlando costs 76 200 000
```

In addition to the PHP programming language, one-dimensional massive size can be massive. PHP array elements are optional categories (points, lines, objects). As an element of the array can be more massive.In this multi-dimensional array.

To create a multi-dimensional array using the array () structure. At the same time the mass of each element of the array. Below is an example of a two-dimensional array.

```
<?php
$matrix = array (
    array (1, 2, 3)
    array (4, 5, 6)
    array (7, 8, 9)
);
    print_r ($matrix);
```

?>

In addition, working with blocks in the programming language PHP functions are also available, which features the work of the developer more efficient. Array of working with the most frequently used function in this table.

Table-1.4. *Functions*

The name of the function	**Description**
sort()	Function allocates the massive in ascending order
rsort()	Function allocates the massive in descending order
asort()	Function is linked to complications array value is ascending order
arsort()	Function is linked to complications array value is descending order
ksort()	Function array keywords associated with the order of ascending scale
krsort()	Function array link keywords in descending order
shuffle	Shuffle is used to mix the elements of the array
is_array	Is_ used to verify that the constant is massive or not
Explode	Row explode function allows you to highlight words array
extract	Massive function is used to extract values for variables
compact	The function is used to create a compact array variable

1.2. MySQL database

Nowadays people often talk about databases. Computers are an integral part of modern society, so you can often hear phrases like "I'll look for your entry in the database." And it's not about large boxes, where heaps of folders are stored, but about computer systems designed to speed up information retrieval.

Computers are so firmly embedded in our lives because they can be programmed to perform tedious, repetitive operations and solve problems that we ourselves would not be able to solve without their computing speed and the capacity of information carriers. Putting information on paper and developing a scheme for storing papers in folders and card files is a fairly well-established process, but many sighed with relief when the task was reduced to moving electronic documents to folders on the hard disk.

One of the functions of databases is the ordering and indexing of information. As in the library card file, you do not need to view half the archive to find the desired record. Everything is done much faster.

Not all databases are created on the basis of the same principles, but traditionally they use the idea of organizing data in the form of records. Each record has a fixed set of fields. Records are placed in tables, and a set of tables forms a database.

To work with a database, you need a DBMS (database management system), i.e. A program that takes care of all the concerns associated with accessing data. It contains commands that allow you to create tables, insert records into them, search and even delete records.

MySQL is a fast, reliable, openly distributed database system. MySQL, like many other DBMS, operates on a "client / server" model. This means a network architecture in which computers play the role of clients or servers. In Fig. 1.1 depicts a scheme for transferring information between the client's computer and the server's hard disk. The scheme of data transmission in the architecture of "client / server"

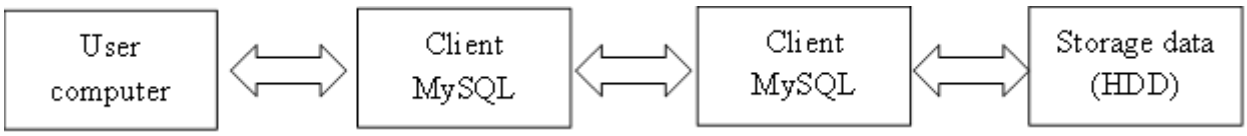

Fig. 1.1. *The scheme of data transmission in the architecture of "client / server"*

A DBMS manages one or more databases. The database is a collection of information organized in the form of sets. Each set contains records of a unified form. The records themselves consist of fields. Usually, sets are called tables, and records are called rows of tables.

This is the logical model of the data. On the hard disk, the whole database can be in one file. In MySQL, a separate directory is created for each database, and three files correspond to each table. Other DBMSs may use different principles of physical data storage.

The rows of tables can be linked to each other in one of three ways. The simplest relation is "one to one". In this case, the row of the first table corresponds to one single row of the second table.

A one-to-many relationship means a situation where the row of one table corresponds to several rows of another table. This is the most common type of relationship. In the diagrams, it is expressed by a 1: N record.

Finally, for the many-to-many relationship, the rows in the first table can be associated with an arbitrary number of rows in the second table. This ratio is written as N: M.

DBMS

A programmer working with a database does not care about how this data is stored, and applications interacting with the DBMS do not know how to write data to disk. "Outside" only a logical image of the data is visible, and this allows you to change the DBMS code without affecting the code of the applications themselves.

Such data processing is carried out through the fourth generation language (4GL), which supports queries that are written and executed immediately. Data quickly lose its relevance, so the speed of access to them is important. In addition,

the programmer should be able to formulate new requests. They are called ad hoc, because they are not stored in the database itself and serve highly specialized purposes.

The fourth generation language allows you to create schemas - precise definitions of data and relationships between them. The schema is stored as part of the database and can be changed without affecting the data.

The scheme is designed to control the integrity of the data. If, for example, it is declared that the field contains integer values, then the DBMS will refuse to write floating-point numbers or strings into it. The relationship between the records is also clearly controlled, and uncoordinated data is not allowed. Operations can be grouped into transactions that are "all or nothing".

DBMS provides data security. Users are granted certain rights of access to information. Some users are only allowed to view data, while other users can change the contents of the tables.

The DBMS supports parallel access to the database. Applications can access the database at the same time, which increases overall system performance. In addition, individual operations can "parallelize" to further improve performance.

Finally, the DBMS helps to restore information in the event of an unforeseen failure, invisibly for users creating backup copies of data. All changes to the database are logged, so many operations can be undone and re-run

File management systems

The simplest database is organized as a set of ordinary files. This model resembles a document organization of documents, in which folders are stored in boxes, and in each folder a certain number of pages are filed.

File management systems cannot be classified as a DBMS, since they are usually part of the operating system and do not know anything about the internal contents of the files. This knowledge is embedded in application programs that work with files. An example is the UNIX user table, stored in the / etc. / password file. Programs that access this file know that in its first field there is a user name

that ends in a colon. If the application needs to edit this information, it must directly open the file and take care of the correct formatting of the fields.

This database model is very inconvenient because it requires the use of third generation language (3GL). As a result, the programming time for queries increases, and the programmer must have a higher qualification, since he needs to think not only the logical, but also the physical structure of data storage. This leads to a close connection between the application and the file. All information about the fields of the tables is encoded in the application. Another application that accesses the same file is forced to duplicate the existing code.

As the number of applications increases, the complexity of managing the database grows. Changes in the data schema lead to the need to change each software component for which this is relevant. The formation of new requests takes so much time, which often loses all meaning.

File management systems cannot prevent duplication of information. Worse, there are no mechanisms to prevent data inconsistencies. Imagine a file containing information about all employees of the company. In each line there is a field where the name of the chief is written. Under the guidance of one boss there are many employees, so his name will inevitably repeat. If somewhere this name is written incorrectly, it will formally turn out that the employee has another boss. When replacing the chief, his name will have to be "caught" throughout the database.

The security of ordinary files is controlled by the operating system. A separate file can be blocked for viewing or modification by a user, but this is done only at the operating system level. At a specific point in time, only one application can write to a file, which reduces overall performance.

Hierarchical databases

Hierarchical databases support the tree-like organization of information. Links between records are expressed as ancestor / child relationship, and each record has exactly one parent record. This helps maintain referential integrity. When a record is deleted from the tree, all of its descendants must also be deleted.

Hierarchical databases have a centralized structure, i.e. Data security is easy to control. Unfortunately, some knowledge of the physical order of storing records is still necessary, since the ancestor / child relationship is implemented as physical pointers from one record to another.

This means that the search for a record is performed by the method of direct traversal of the tree. Records located in one half of the tree are searched faster than in the other. Hence the need to correctly organize records so that their search time is minimal. This is difficult, since not all relations existing in the real world can be expressed in a hierarchical database. One-to-many relationships are natural, but it is almost impossible to describe the many-to-many relationship or the situation where a record has several ancestors. As long as applications in the data structure of the data are encoded, any changes to this structure will threaten to recompile.

Relational databases

In comparison with the models considered above, the relational model requires a much higher level of complexity from the DBMS. It attempts to free the programmer from performing routine data management operations, so characteristic of the hierarchical and network models.

In the relational model, the database is a centralized table storage that provides secure simultaneous access to information from many users. In the rows of the tables, some of the fields contain data related directly to the record, and some refer to the records of other tables. Thus, the relationship between records is an inherent property of the relational model.

Each record in the table has the same structure. For example, in a table containing descriptions of cars, all records will have the same set of fields: manufacturer, model, year of manufacture, mileage, etc. Such tables are easy to depict in graphical form.

Information and structural independence is achieved in the relational model. The records are not related to each other so that the change in one of them affects the rest, and changing the structure of the database does not necessarily result in a recompilation of applications running with it.

In relational DBMS, the SQL language is used, which allows you to formulate arbitrary, unregulated queries. This is the language of the fourth generation, so any user can quickly learn how to make requests. In addition, there are many applications that allow you to build logical query schemes in a graphical form. All this is due to the tightening of the requirements for the performance of computers. Fortunately, modern computing power is more than adequate.

Relational databases suffer from differences in the implementation of the SQL language, although this is not a relational model problem. Each relational DBMS implements some subset of the SQL standard plus a set of unique commands, which complicates the task of programmers trying to move from one DBMS to another. You have to make a difficult choice between maximum portability and maximum performance. In the first case, you need to adhere to the minimum common set of commands supported in each DBMS. In the second case, the programmer simply concentrates on working in this particular DBMS, taking advantage of its unique commands and functions.

MySQL is a relational database management system, and this training course is devoted to the study of the relational model. But the theory of databases does not stand still. New technologies are emerging that expand the relational model.

Main Features of MySQL

The MySQL client program is a command-line utility. This program connects to the server over the network. Commands that are executed by the server are usually associated with reading and writing data on the hard disk.

Client programs can work not only in command line mode. There are also graphical clients, for example MySQL GUI, PhpMyAdmin, etc. But they are the subject of a separate course.

MySQL interacts with the database in a language called SQL (Structured Query Language).

SQL is designed to manipulate data stored in Relational Database Management Systems (RDBMS). SQL has commands that allow you to retrieve, sort, update, delete, and add data.

SQL can be used with such RDBMS as MySQL, mSQL, PostgreSQL, Oracle, Microsoft SQL Server, Access, Sybase, Ingres. These RDBMS systems support all important and common SQL statements, but each has many of its own proprietary operators and extensions.

SQL is the common query language for several databases of different types. This course examines the MySQL system, which is an open source RDBMS that is available for download on the MySQL.com site. This is how MySQL developers describe it.

MySQL is a database management system. A database is a structured collection of data. This data can be any - from a simple list of upcoming purchases to the list of exhibits of the picture gallery or a huge amount of information in the corporate network. To record, retrieve and process data stored in a computer database, you need a database management system, which is the MySQL software. Because computers do a great job of processing large amounts of data, database management plays a central role in computing. Implemented such a management can be different - both in the form of individual utilities, and in the form of code that is part of other applications.

MySQL is a relational database management system. In the relational database, the data is stored in separate tables, thereby achieving a gain in speed and flexibility. Tables are linked together by means of relationships, which makes it possible to combine data from several tables when the query is executed. SQL as part of the MySQL system can be characterized as a structured query language plus the most common standard language used to access databases.

The MySQL software is open source software. Open source software means that anyone can apply and modify it. Such software can be obtained over the Internet and used for free. In this case, each user can study the source code and change it according to their needs.

Technical capabilities of MySQL DBMS

MySQL is a client-server system that contains a multi-threaded SQL server that supports various database computers, as well as several different client programs and libraries, administrative tools, and a wide range of APIs.

Security

The security system is based on privileges and passwords with the ability to verify from a remote computer, thereby providing flexibility and security. Passwords are transmitted when they are sent over the network when they are connected to the server. Clients can connect to MySQL using TCP / IP sockets, Unix sockets or named pipes (named pipes, under NT)

Data Capacity

Starting with MySQL version 5.6, where a new table type is used, the maximum table size is brought to 8 million terabytes (263 bytes). However, it should be noted that operating systems have their own limitations on the size of the files. By default, MySQL tables have a maximum size of about 4 GB. For any table, you can check / determine its maximum size using the SHOW TABLE STATUS or myisamchk -dv table_name commands. If the large table is read-only, you can use myisampack to merge several tables into one and compress it. Usually myisampack compresses the table by at least 50%, so you can get very large tables as a result.The MySQL client program is a command-line utility. This program connects to the server over the network. Commands that are executed by the server are usually associated with reading and writing data on the hard disk.

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Command CREATE DATABASE

The syntax of the CREATE DATABASE command is:

```
CREATE DATABASE [IF NOT EXISTS] database_name
[Specification_create [, specification_create] ...]
```

The CREATE DATABASE command creates a database with the specified name. To use the command, you must have the CREATE privilege for the database. If a database with this name exists, an error is generated. The specification_create:

- `[DEFAULT] CHARACTER SET symbol_name`
- `[DEFAULT] COLLATE match_name`

Option specification_spec can be specified to determine the characteristics of the database. Database characteristics are stored in the db.opt file located in the data directory. The CHARACTER SET construct defines the default character set for the database. The COLLATION construct specifies the default collation order.

The databases in MySQL are implemented as directories that contain files that correspond to the database tables. Since there are no tables in the database, the CREATE DATABASE statement only creates a subdirectory in the MySQL data directory.

Working with tables

Now consider the MySQL commands for creating database tables and selecting a database. Databases store data in tables.

The easiest way to view tables is to imagine yourself as consisting of rows and columns. Each column defines data of a certain type. The lines contain separate records.

A database can contain many tables, it is tables that contain real data. MySQL commands and column names do not distinguish between case letters, however table and database names can be case-sensitive in relation to the platform used (as in Linux). Therefore, you can use create table instead of CREATE TABLE.

The syntax of the CREATE TABLE command

The general format of the CREATE TABLE statement is:

```
CREATE [TEMPORARY] TABLE [IF NOT EXISTS] name [(specification, ...)] [Option, ...] [[IGNORE | REPLACE] query]
```

The TEMPORARY flag specifies the creation of a temporary table that exists during the current session. After the session is over, the table is deleted. Temporary tables can be assigned the names of other tables, making the latter temporarily unavailable. The IF NOT EXIST specifier suppresses the output of error messages in the event that a table with the specified name already exists. The

table name can be preceded by a database name separated by a period. If this is not done, the table will be created in the database, which is installed by default.

To specify a table name with spaces, you must enclose it in backquotes, for example 'courses list'. The same will be done in all the table references, because spaces are used to separate identifiers.

You can create tables without columns, but in most cases the specification of at least one column is still present. The specifications for the columns and indices are given in parentheses and separated by commas. The format of the specification is as follows:

Name type

```
[NOT NULL | NULL]
[DEFAULT value]
[AUTO_INCREMENT]
[KEY]
[link]
```

The type specification includes the type name and its dimension. By default, the columns are NULL. The NOT NULL specifier prohibits this behavior.

Any column has a default value. If it is not specified, the MySQL program will select it yourself. For columns that accept NULL values, the default value is NULL, for string columns - an empty string, for numeric columns - zero. Change this setting allows the DEFAULT clause.

Fields-counters created with the AUTO_INCREMENT flag ignore the default values, because they store sequential numbers. The counter type must be an unsigned integer. Only one field-counter can be present in the table. They do not necessarily have a primary key.

Deleting tables. The syntax of the DROP TABLE command

The DROP TABLE statement has the following syntax:

```
DROP TABLE [IF EXISTS] table [RESTRICT | CASCADE]
```

the IF EXISTS specification suppresses the output of an error message that is issued if the specified table does not exist. You can specify multiple table names by separating them with commas. The RESTRICT and CASCADE flags are designed to execute scripts created in other DBMSs.

1.3. Working with the PHP and MySQL database queries

In this section, I will introduce the standard PHP functions, through which you can easily organize the interaction of PHP scripts with the MySQL server. The general sequence of actions when interacting with the MySQL server is as follows:

a) Establish a connection to the MySQL server. If the attempt fails, print the corresponding message and terminate the process.

b) Select the MySQL server database. If the selection attempt fails, print the appropriate message and terminate the process. You can simultaneously open multiple databases for processing requests.

c) Process requests for the selected database (or databases).

d) After the request processing is completed, close the connection to the database server.

MySQL_connect()

The mysql_connect () function establishes a connection to the MySQL server. After successfully connecting to MySQL, you can proceed to select the databases that are served by this server. The syntax of the mysql_connect () function is:

```
    mysql_connect ([string host [: port] [: / path //
to / socket] [, string username] [, string password])
```

In the host parameter, the name of the host computer specified in the MySQL server privilege tables is passed. Of course, it is also used to redirect requests to the web server that MySQL is running on, since you can connect to the MySQL server remotely. Along with the host name, optional parameters-the port number, as well as the path to the socket (for the local host) can be specified. Parameters username and password must match the username and password specified in the MySQL privilege tables. Please note: all parameters are optional, because privilege tables can be configured so that they allow connection without checking. If the host parameter is not specified, mysql_connect () attempts to

establish a connection to the local host. Example of opening a connection to MySQL:

```
   @mysql_connect("localhost",    "root",    "")    or
die("Could not connect to MySQL server!");
```

In this example, local host is the name of the computer, root is the user name, and the password field is empty. Because, the user named root is super user in MySQL, so he does not have a password in the system by default. The @ sign before calling the mysql_connect () function suppresses all error messages that are thrown when an attempt to connect fails, they are replaced by the message specified when calling die (). Note that the value returned by mysql_connect () is not used in this example. If the program uses only one connection to the MySQL server, this is quite normal. But if the program establishes connections to several MySQL servers on different hosts, you should save the connection ID that is returned when you call mysql_connect () to address the subsequent commands to the correct MySQL server. Example:

```
<?
    $link1 = @mysql_connect("localhost", "root", "") or
die("Could not connect toMySQL server!");
    $linkl        =        @mysql_connect("localhost",
"testopenfile", "12345") or die("Could not connect to
MySQL server!");
?>
```

mysql_select_db( )

After successfully connecting to MySQL, you must select the database that is on the server. To do this, use the mysql_select_db () function. The syntax of the mysql_select_db () function is:

```
mysql_select_db    (string    database_name    [,int
connection_id])
```

The database name parameter specifies the database to be selected, the identifier of which is returned by the mysql_select_db () function. Note: the

connection_id parameter is optional only with one open connection to the MySQL server. If there are multiple open connections, this parameter must be specified. Example of database selection by mysql_select_db () function:

```
<?
    @mysql_connect("localhost",      "root".      "")or
die("Could not connect to MySQL server!");
    @mysql_select_db("testopenfile") or die("Could not
select database!");
?>
```

If only one database is selected in the program, it is not necessary to save its identifier. However, when multiple databases are selected, the returned identifiers are stored so that you can reference the database when processing the request. If no ID is specified, the last selected database is used.

mysql_close( )

After you have finished using the MySQL server, you must close the connection. The mysql_close () function closes the connection defined by the optional parameter. If the parameter is not specified, the mysql_close () function closes the last opened connection. The syntax of the mysql_close () function is:

```
int mysql_close ([int join_id])
example of using mysql_close ():
<?
    @mysql_connect("localhost",    "root",    "")    or
die("Could not connect to MySQL server!");
    @mysql_select_db("testopenfile") or die("Could not
select database!");
    print "You're connected to a MySQL database!";
?>
```

In this example, you do not need to specify a connection identifier, since there is only one open connection to the server at the time mysql_close () is called.

mysql_query( )

The mysql_query () function provides an interface for handling requests to databases. The syntax of the mysql_query () function is:

```
Int mysql_query (string query [, int connection_id])
```

The query parameter contains the text of the query in the SQL language. The request is passed either to the connection specified by the optional connection-id parameter, or, if there is no parameter, to the last open connection.

Inexperienced programmers often mistakenly think that the function mysql_query () returns the results of processing the request. This is not true - depending on the type of query, the call to mysql_query () can lead to different consequences. If the SQL SELECT command is executed successfully, the result identifier is returned, which is subsequently passed to the mysql_result () function for later formatting and displaying query results. If the request processing fails, the function returns FALSE. The function mysql_result () is described in one of the following sections. The number of records participating in the query is determined using the mysql_num_rows () function. This function is also described below.

Considering the above, I will give examples of using mysql_query () only after describing the functions mysql_result () and mysql_affected_rows ().

mysql_affected_rows ( )

In many situations, you need to know the number of records participating in an SQL query with the INSERT, UPDATE, REPLACE, or DELETE commands. The task is solved by the function mysql_affected_rows (). Function syntax:

```
mysql_affected_rows ([int join_id])
```

Please note: the connection_id parameter is optional. If it is not specified, mysql_affected_rows () tries to use the last opened connection. Example

```
<?
// Connect to the server and select the database
@mysql_connect ("localhost", "root". "") Or die ("Could not connect to MySQL server!");
@mysql_select_db ("testopenfile") or die ("Could not select company database!");
```

```
// Create a query
$query = "UPDATE products SET prod_name = \" cantaloupe
\ "WHERE prod_id = \ '10001pr \";
// Run the query $ result = mysql_query ($ query);
// Determine the number of updated records
print "Total row updated;" .mysql_affected_rows ();
mysql_close ();
?>
```

when this fragment is executed, the following result will be displayed:

```
Total row updated: 1
```

mysql_num_rows( )

The mysql_num_rows () function determines the number of records returned by the SELECT command. The syntax of mysql_num_rows ():

```
Int mysql_num_rows (int result)
```

Example of using mysql_num_rows ():

```
<?
//Connect to the server and select
    @mysql_connect database ("localhost", "root", "")
or die ("Could not connect to MySQL server!");
    @mysql_select_db ("testopenfile") or die ("Could
not select company database!");
//Select all products whose names begin with 'p'
    $query = "SELECT prod_name FROM products WHERE
prod_name LIKE \" p * \ "";
//Run the query
    $result = mysql_query ($ query);
    print "Total rows selected:" .mysql_num_rows ($
result);
    mysql_close ();
?>
```

Since the table contains only one product, the name of which begins with the letter p (pears), only one entry is returned. Result:

```
Total rows selected: 1
```

mysql_result( )

The mysql_result () function is used in combination with mysql_query () (when executing a query with the SELECT command) to retrieve the data set. The syntax for the mysql_resu1t () function is:

```
Int mysql_result (int result_id, int [mixed field]]
```

In the result_id parameter, the value returned by the mysql_query () function is passed. The record parameter refers to a specific record of the data set defined by the result_id parameter. Finally, in an optional parameter, the field can be passed:

- field offset in the table;
- field name;
- field name in the format name field_name_name of the table.

The mysql_result () function is useful for working with relatively small sets of data, but there are other functions that work much more efficiently, namely, the functions mysql_fetch_row () and mysql_fetch_array ().

mysql_fetch_row()

It is usually much more convenient to immediately assign the values of all the record fields to the elements of the indexed array (starting with index 0), rather than repeatedly calling mysql_result () to get individual fields. The task is solved by the function mysql_fetch_row (), which has the following syntax:

```
array mysql_fetch_row (int result)
```

using the list () function in combination with mysql_fetch_row () saves a few commands needed when using mysql_result ().

mysql_fetch_array ( )

The mysql_fetch_array () function is similar to mysql_fetch_row (), but by default the values of the record fields are stored in an associative array. However,

you can choose the type of indexing (associative, numeric or combined). The syntax of mysql_fetch_array ():

```
array mysql_fetch_array (int result identifier [, type_indexation])
```

In the result_id parameter, the value returned by the mysql_query () function is passed. The optional type_index parameter takes one of the following values:

- MYSQL_ASSOC - the function mysql_fetch_array () returns an associative array. If this parameter is not specified, this value is used by default;
- MYSQL_NUM - function mysql_fetch_array () returns an array with numeric indexing;
- MYSQL_BOTH - the fields of the returned record can be accessed by both numeric and associative indices**.**

CHAPTER II. DESIGNING OF APPLICATION

2.1. MySQL database structure design of the application

In this article we have created an application database, data, classifying tables and their field functions for a more detailed description.. The creation of a database administrator and developer to is more convenient for the general purpose of the establishment of the table. Creating a database of known principles of relational database tables, fields, each specific type of information such as the exact parameters specified in advance. For example, type the name of the field, the key is to remain empty, the default value, and so on. Therefore, the first table, consider the following types of parameters to determine the characteristics of the area.

We create the software and the data will be divided into three table. These category extensions and the Word table. In turn, these statements are fixtures in the above-mentioned database, all data is stored in the columns of the table. There may be a limited number of rows in the table. Let us read the following pillars of the category table. According to this table, we have created a system which is one of the most important parts of the application are placed in the menu. If our grid system menu database, listing system performance during any need to change the menu and if the cause of the inconvenience this developer spend a lot of time programmers are all one by one o ' can be changed out right. For this reason, we have created a system that category menu placed in the table. Category table consists of six columns, the columns in the following information. These include: names, keywords related to the department, described in the Summary section, the section is displayed on the full text of each half of unit use the page to remove the column. Planned menus are compatible with one another in order to avoid a table set counter and counter auto_increment. This property counters numbers will never be repeated, so the menu has a menu with the possibility of no longer available.

	#	Имя	Тип	Сравнение	Атрибуты	Null	По умолчанию	Комментарии	Дополнительно
☐	1	**id**	int(10)			Нет	*Нет*		AUTO_INCREMENT
☐	2	**title**	varchar(255)	utf8_general_ci		Нет	*Нет*		
☐	3	**meta_k**	varchar(255)	utf8_general_ci		Нет	*Нет*		
☐	4	**meta_d**	varchar(255)	utf8_general_ci		Нет	*Нет*		
☐	5	**description**	text	utf8_general_ci		Нет	*Нет*		
☐	6	**page**	varchar(255)	utf8_general_ci		Нет	*Нет*		

Figure 2. *Structure of category table*

1. **id** - the identity of the system menu;

2. **title** - the same title in the file menu of the system;

3. **meta_k** - department store on the keywords;

4. **meta_d** - department store a short description about words;

5. **description** - section of the full-text data stores;

6. **page** - the page from which it is defined.

Information may databases of the second table, called extensions, and this table stores information about the time required for system extensions. Let familiar with the extensions table fields will be considered. Extension field extension name. Type extension which belongs to the field is written (for example, audio files, video files, raster graphics files, etc.). Brief Description of the field Type_description file extension. Eng_description field File extensions written description of the English language. Rus_description area of the written description of the file extension in the Russian language.Uzb_description field written to the file extensions described in the Uzbek language. Open_windows area, you can open any file extensions in Windows operating system programs written information. Open_macos field extensions and MacOS operating tizimidag any written information about the possibility of open programs. Open_linux area, you can open any file extensions to the Linux operating tizimidag programs written information**.**

	#	Имя	Тип	Сравнение	Атрибуты	Null	По умолчанию	Комментарии	Дополнительно
☐	1	id	int(10)			Нет	*Нет*		AUTO_INCREMENT
☐	2	extension	varchar(255)	utf8_general_ci		Нет	*Нет*		
☐	3	type	text	utf8_general_ci		Нет	*Нет*		
☐	4	type_description	text	utf8_general_ci		Нет	*Нет*		
☐	5	eng_description	text	utf8_general_ci		Нет	*Нет*		
☐	6	rus_description	text	utf8_general_ci		Нет	*Нет*		
☐	7	uzb_description	text	utf8_general_ci		Нет	*Нет*		
☐	8	open_windows	text	utf8_general_ci		Нет	*Нет*		
☐	9	open_macos	text	utf8_general_ci		Нет	*Нет*		
☐	10	open_linux	text	utf8_general_ci		Нет	*Нет*		

Figure 2.1. *Structure of extensions table*

1. **id** - the identity of the extension;

2. **extension** - field extension name;

3. **type** - written extension which belongs to the field;

4. **type_description** - brief description of the file extension is written in the field;

5. **eng_description** - square file extensions are described in written English;

6. **rus_description** - file extensions are written in the Russian language as described in the field;

7. **uzb_description** - file extensions are described in the Uzbek language written in the field;

8. **open_windows** - the field - you can open any file extensions in Windows operating tizimidag programs written information;

9. **open_macos** - the field - you can open any file extensions MacOS operating tizimidag programs written information;

10. **open_linux** - the field - you can open any file extensions to the Linux operating system programs written information.

The third word is called the table in the database. This table is used in the field of information and communication technologies in a variety of concepts, terms, acronyms and terms are added to the database. Then, on the basis of this information the user during a search of the information that these statements are based on the information to the attention of the search results. More than 4,000 of the database is planned to enter in the field of information and communication

technologies in terms. Now read these words used in the fields in the table. Word_description the field of information and communication sector of the key concepts related to the written word. Eng_word field heading is written in English. Rus_word field heading is written in Russian translation. Text search words are written in accordance with the terms described in the field.

	#	Имя	Тип	Сравнение	Атрибуты	Null	По умолчанию	Комментарии	Дополнительно
☐	1	**id**	int(10)			Нет	*Нет*		AUTO_INCREMENT
☐	2	**word**	text	utf8_general_ci		Нет	*Нет*		
☐	3	**word_description**	text	utf8_general_ci		Нет	*Нет*		
☐	4	**eng_word**	text	utf8_general_ci		Нет	*Нет*		
☐	5	**rus_word**	text	utf8_general_ci		Нет	*Нет*		
☐	6	**text**	text	utf8_general_ci		Нет	*Нет*		

Figure 2.2. *Structure of words table*

1. **word_description** - the field of information and communication sector of the key concepts related to the written word

2. **eng_word** - square with the heading written in English translation

3. **rus_word** - field heading is written in Russian translation

4. **text** - area of the search words are written in accordance with the terms described.

The aforementioned statements on the basis of our system users in the field of information and communication technologies in all types of operating systems and common terms extensions For more information about how the software can open.

2.2. PHP programming language and MySQL database information

The internet to search for information in the database is now available in a variety of scripts written in the PHP programming language, network, and our search engine using SQL and PHP scripts for mankind. The following principles of this script will be given.

Currently, a simple site or a large system should be available regardless of the search engine. Because the system of the user or the system itself may face difficulties in finding the information they need. Therefore, the search for the system to start us briefly looking at HTML code. This code is the following:

```
<form class="navbar-form" method="post" action="view_search.php">
    <div class="form-group">
<input type="text" class="form-control" placeholder="Nima izladingiz?" name="search">
    </div>
    <button type="submit" class="btn btn-primary" value="Qidirish" name="submit_s">Qidirish</button>
</form>
```

The following chart looks into the search box, enter the word you are looking for in the search box to search by clicking on a search query will be:

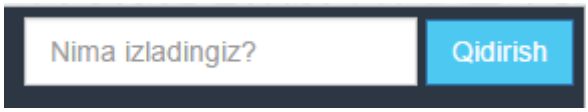


Figure 2.3. *Searching area*

There follows a search query. After pressing the word you're looking for into the search request view_search.php file. The survey for the successful implementation of the php file will have the following software code:

```
<?php
include("blocks/bd.php");
```

```
 if(isset($_POST['submit_s']))
    {$submit_s = $_POST['submit_s'];}
  if(isset($_POST['search']))
    {$search = $_POST['search'];}
   if(isset($submit_s)){
    if(empty($search)){
        exit("<p>Siz qidirish maydoniga hech nima
    kiritmadingiz. Iltimos, so'rovni qaytadan
    kiriting</p>
        <p><a href='index.php'>Bosh sahifa</a></p>");
    }
$search = trim($search);
$search = stripslashes($search);
$search = htmlspecialchars($search);
}
else{
    exit("<p>Siz fayli parametrsiz murojaat
qildingiz</p>");
    }
?>
```

Here, the following sequence of steps is performed. These are:

1. **Include() -** a set of instructions to connect to the database and the database;

2. **isset() function** - ($ _POST ['submit_s'])) using a global variable $submit_s check the availability of variable;

3. **isset() function** - ($ _POST ['search'])) using a global variable $search the availability of search variable;

4. If there is a $submit_s variables and the search blank, then $ ('You did not do anything in the search box), the result screen;

5. If the variables $search is available, then the change in the data is performed on the following sequence of steps:

1**. trim() - function** deletes unnecessary characters;

2. **strip slashes()** - function to remove unnecessary space;

3. **thehtmlspecialchars() -** function code into the HTML code of all types.

System users search for any file extensions can search for a word or a term taking into Back In the request for two in the search script. First extensions table type_description and searching the areas of extension, the second word, the Word table word_description, eng_description and searches in the areas of rus_description information.

The first form of code following a request searches for data, tables, and these extensions.

```
<?
 $result = mysql_query("SELECT * FROM extensions WHERE type_description LIKE ('%$search%') OR extension LIKE ('%$search%')", $db);
  if($result){
   if(mysql_num_rows($result) > 0){
    myrow = mysql_fetch_array($result);
     printf ("<table class='table table-bordered table-hover' style='margin-top: 5px;'>
      <thead>
        <tr class='success'>
         <th><center>Kengaytma turi</center></th>
       <th><center>Kengaytma ta'rifi</center></th>
     </tr>
    </thead>");
do{
 printf("
  <tbody>
   <tr>
    <td><a href='audio_view.php?id=%s'>%s</a></td>
```

```
    <td>%s</td>
   </tr>
  </tbody>
",$myrow["id"],$myrow["extension"],$myrow["type_descrip
tion"]);}while($myrow = mysql_fetch_array($result));
   printf("</table>");
}
else
{
   echo "<h3 style='color: #424242; text-align:
center;'>Saytda <em style='color:
#cc0000;'><u>$search</u></em> tipidagi ma'lumot
fayllari mavjud EMAS!</h3>";
}
?>
```

The second form of code following a request, the request seeks data to a word table:

```
<?
$result2 = mysql_query("SELECT * FROM words WHERE word
LIKE ('%$search%') OR word_description LIKE
('%$search%') OR eng_description LIKE ('%$search%') OR
rus_description LIKE ('%$search%') OR text LIKE
('%$search%')", $db);
 if($result2){
  if(mysql_num_rows($result2) > 0){
   $myrow2 = mysql_fetch_array($result2);
    printf ("<table class='table table-bordered table-
hover' style='margin-top: 5px;'>
 <thead>
  <tr class='success'>
```

```
   <th><center>Qidirilgan so'z</center></th>
    <th><center>Ta'rif</center></th>
  </tr>
 </thead>");
do{
 printf("
  <tbody>
   <tr>
    <td><a href='word_view.php?id=%s'>%s</a></td>
    <td>%s</td>
   </tr>
  </tbody>
",$myrow2["id"],$myrow2["word"],$myrow2["word_descripti
on"]);}while($myrow2 = mysql_fetch_array($result2));
printf("</table>");}
else{
echo "<h3>Saytda <u>$search</u> nomli termin so'zi
topilmadi!</h3>";
}
?>
```

2.3. HTML and CSS to develop the system design

You enter the necessary information into the database of the application to develop the design of the system. For this purpose we use HTML and CSS technologies. If you just create a website using HTML and CSS technologies, then you can create a static form of web efforts. In addition, the system design HTML, CSS technologies we use the PHP programming language and MySQL database. For this reason, we have created a system full dynamic appearance.

Before the creation of the site we need to frame. Our website will be 5 blocks. The block header, horizontal_menu, aside, content and footer. This clause is the basis of our system will be in full view. The following figure shows the general view of the system**.**

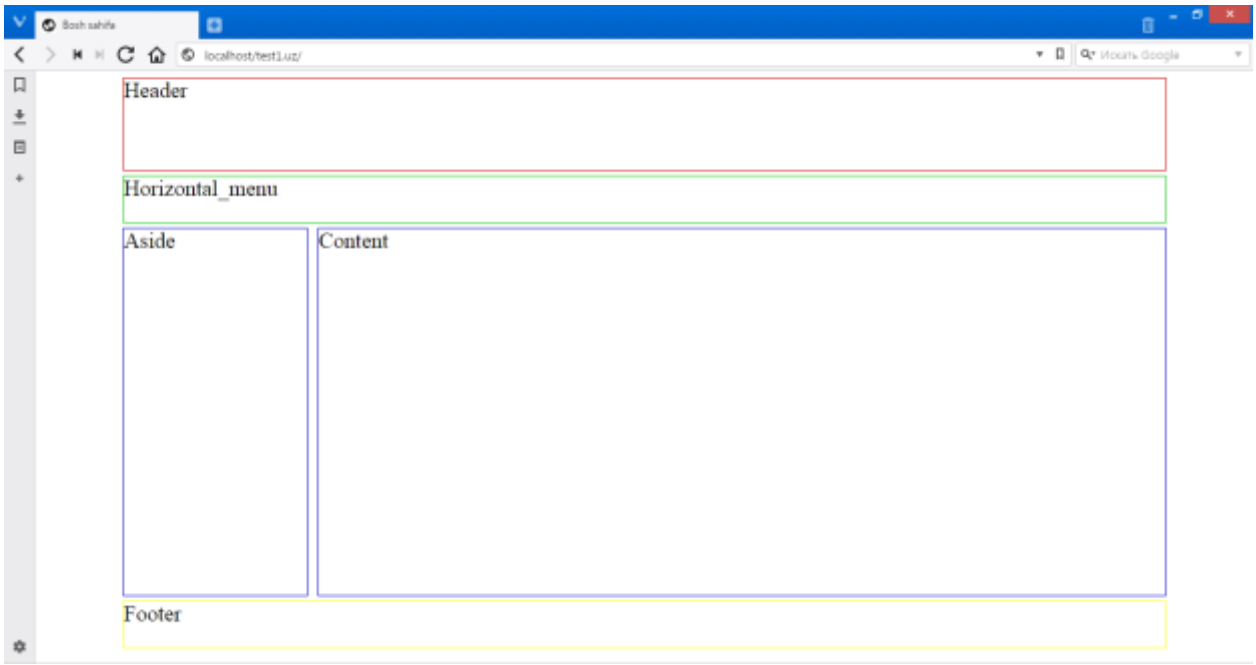


Figure 2.4. *General view of the site*

After the system frame is ready, we will take a look to what these blocks do:

1.**Header** - this is block of the cap. This block is placed on the paper title of the site;

2. **Horizontal_menu** - this block is placed on the horizontal menu on the site.

3. **Aside** - this block menu that is placed in the vertical menu on the site.

4. **Content** - is a block of the information contained on the site. In our example, this block information about the file extension will be displayed.

5. **Footer** - is a block of the site's author, organization, address and information about the addresses of social networks.

We created frame design . Now begin this frame block design. We use HTML and CSS technologies to work with site design. The first block of the block header image placement necessary HTML code below:

```
<div class="col-md-12" id="header" style="padding: 0;">
  <a href="index.php">
    <img    src="/img/openfile1.png"    style="position:
absolute; right: 8%; top: 40px;">
      <p  style="position:  absolute;  right:  13%;  top:
110px;    color:    #fff;    font-size:    14px;"><em>AKT
sohasidagi sizning shaxsiy yordamchingiz!</em></p>
  </a>
    <img src="/img/header1.png" style="float: left;">
    <img src="/img/header2.png" style="float: right;">
</div>
```

below, there is a CSS code that is used to create this header block:

```
#header{
    background-image: url("/img/header_bgl.png");
    background-position: top left;
    background-repeat: repeat-x;
    border: 1px solid #ccc;
    margin-bottom: 10px;
    height: 153px;
    padding: 15px;
    padding-top: 0;
    }
```

We need PHP redactor to use the codes above.There are so many redactors in these days.For example. PHPDesigner, Adobe Dreamveawer and so on. In addition, the PHP code can use a simple text editor. Such a text editor Sublime Text, Bracket, Notepad ++. In our example, we can design a system using the text editor Sublime Text.

Sublime Text editor for the use of the code above to open a new file and stores the names of .PHP extension through the index. CSS code will do the same process again and registered under the name style.css. After the creation of the necessary files, code pages, and do not open the browser. results will appear on the screen below

Figure 2.5. *Header block view*

The second is called the horizontal menu blog. This block is used for horizontal Views menu. This blog HTML code below:

```
<div class="col-md-12" id="horizontal_menu">
 <ul class="nav nav-pills">
  <li    role="presentation"><a    href="index.php"><img
src="/img/home.png" width="20" height="20"></a></li>
  <li    role="presentation"><a    href="add.php">Yangi
kengaytma qo'shish</a></li>
  <li                              role="presentation"><a
href="contact.php">Aloqa</a></li>
 <form  class="navbar-form"  role="search"  style="float:
right;     margin:0;     padding:0;"     method="post"
action="view_search.php">
  <div class="form-group">
   <input        type="text"        class="form-control"
placeholder="Nima izladingiz?" name="search">
```

```
  </div>
   <button    type="submit"    class="btn    btn-primary"
value="Qidirish" name="submit_s">Qidirish</button>
  </form>
  </ul>
</div>
```

Horizontal_menu blog CSS code is as follows:

```
#horizontal_menu a{
    color: #fff;
    margin-left: 0;
}
#horizontal_menu a:hover{
    color: #000;
    text-decoration: none;
}
```

The above codes are placed in the following results appear in the browser.

Figure 2.6. *Horizontal_menu block view*

Format horizontal_menu blogs and finished all the work on the unit block which is begin to create a vertical menu. Subscribe to this blog in the field of vertical menu and cloudy tags placed on the blogs. The following HTML code to reflect the vertical menu**.**

```
<div class="col-md-3" id="aside" style="padding:0;">
  <div id="menu">
   <h3 class="menu-title">Bo'limlar</h3>
    <ul class="nav nav-pills nav-stacked">
<li><a href="audio.php">Audio fayllar</a></li>
<li><a href="video.php">Video fayllar </a></li>
<li><a href="rastr.php">Rastr grafikali </a></li>
```

```
<li><a href="vektor.php">Vektor grafikali </a></li>
<li><a href="3d.php">3D-modellar </a></li>
<li><a href="arxiv.php">Arxiv fayllar </a></li>
<li><a href="web.php">Web fayllar </a></li>
<li><a href="obraz.php">Disk obrazlari </a></li>
<li><a href="tizim.php">Tizim fayllar </a></li>
<li><a href="rezerv.php">Zahiraviy nusxalash </a></li>
<li><a href="data.php">Ma'lumotlar fayllari </a></li>
<li><a href="database.php">Ma'lumotlar bazasi </a></li>
<li><a href="script.php">Skript kodlari </a></li>
<li><a href="setting.php">Sozlash fayllari </a></li>
<li><a href="font.php">Shrift fayllari </a></li>
<li><a href="shifr.php">Shifrlangan fayllar bo'limi
<li><a href="other.php">Boshqa fayllar bo'limi</li></a>
    </ul>
 </div>
```

Below, the vertical CSS menu:

```
aside{
    width: 273px;
    border: 0px solid #ccc;
    margin-right: 10px;
    margin-bottom: 10px;
}
#menu{
    border: 1px solid #ccc;
    background: #fff;
    margin: 0 0 10px 0;
    padding: 0 0 5px 0;
}
#menu li{
```

```
background: url("../img/arrow.png") 0 15px no-repeat;
    padding-left: 2px;
    height: 30px;
    margin: 0 0 0 10px;
}
#menu a{
    margin-left: 5px;
    border-bottom: 1px solid #ccc;
    padding-left: 5px;
    height: 30px;
    color: #424242;
}
#menu a:hover{
    display: block;
    font-weight: bold;
    transition: all 0.4s ease;
    background: transparent;
    border-bottom: 1px solid #ccc;
    margin-left: 15px;
    overflow: hidden;
}
.menu-title{
    text-align: center;
    background: #337AB7;
    color: #fff;
    padding: 10px 0;
    text-transform: uppercase;
    margin: 0;
}
.menu-title-top{
```

```
    text-align: center;
    background: #2D3743;
    color: #fff;
    padding: 10px 0;
    text-transform: uppercase;
    margin: 0;
```

The following menu shows that our system has currently 17 categories in which the file extensions, this menu parts shows not only information about each section but also the number of database as well. This , in return, creates additional opportunities. The results of all of the above codes appear in the browser shows the following:

2.7-figure. *aside block view*

Aside blog includes a small blog Subscribe to this blog. This blog HTML code:

```
<div id="podpiska">
  <form>
 <div class="form-group">
  <h3 class="menu-title">Obuna bo'lish</h3>
  <p>Saytdagi eng so'nggi yangiliklardan xabardor bo'ling!</p>
  <input type="email" class="form-control" placeholder="E-mail manzilingizni kiriting">
  <button type="submit" class="btn btn-primary">Obuna bo'lish</button>
  </form>
 <div>
 </div>
```

This blog CSS code below:

```
#podpiska {
border: 1px solid #ccc;
background: #fff;
margin: 0 0 10px 0;
padding: 0;
}
#podpiska p {
font-size: 13px;
font-style: Italic;
text-align: justify;
padding: 10px 10px 5px 5px;
```

2.8-figure. *The view of being a member*

Here, you can see from the browser how to be a member.

Enter the address of the site for news of their electro and simply pressing the button to subscribe to. His e-mail address to subscribe to updates on new extensions to the site and information about the terms.

The fourth blog we have referred to as the content and because most information is used to display the blog. This blog HTML code:

```
<div class="col-md-9" id="content"></div>
```

This blog CSS code is as follows:

```
#content{
    background-color: #fff;
    border: 1px solid #ccc;
    margin-bottom: 10px;
}
#content h3{
    text-align: center;
```

```
    border-bottom: 1px solid #337AB7;
    padding: 10px 0 5px 0;
    font-weight: bold;
    color: #337AB7;
}
```

Content block the appearance of browser below:

FAYL FORMATLARI VA KENGAYTMALARI HAQIDA

Fayl formati yoki yoki kengaytmasi – bu faylning asosiy nomidan nuqta bilan ajratilib yoziladigan qismiga aytiladi. Aynan fayl kengaytmasiga qarab ushbu faylda qaysi turdagi ma'lumotlar saqlanishini bilish mumkin: musiqa, video, rasm, ma'lumotlar bazasi yoki arxiv ma'lumotlar bo'lishi mumkin. Masalan, "filename.txt" faylining kengaytmasi ".txt" hisoblanadi va ushbu turdagi kengaytmalarda asosan matn ma'lumotlari saqlanadi. Ushbu faylni oddiy bloknot dasturi yordamida ochish mumkin.

Amaliyot tizimida yaratilgan har bir fayl biror dastur yordamda yaratiladi va ma'lum bir vazifani bajarishga mo'ljallanadi. Hozirgi kunda fayl formatlarin 1000 dan ortiq hisoblanadi, lekin ularning juda oz qisminigina foydalanuvchi to'g'ridan-to'g'ri ochib foydalanishi mumkin, xolos. Agar siz komyuterda ishlash davomida biror-bir fayl kengaytmasiga duch keldingiz va ushbu faylni qanday dastur yordamida ochish haqida ma'lumotni qayerdan topishingiz mumkin. Aynan shu va shunga o'xshash savollarga javob topish maqsadida ushbu sayt yaratildi. Open-file.uz sayti turli turdagi fayl formatlari haqida ma'lumotlar saqlanadi. Hozirgi kunda tizimda 200 dan ortiq fayl kengaytmalari va AKT sohasidagi terminlar haqida ma'lumotlar jamlangan. Lekin kelajakda ushbu ko'rsatgichni kengaytirib borish asosiy maqsadimiz hisoblanadi.

Ushbu saytdan foydalangan biz har bir fayl haqida batafsil ma'lumotlar keltirishga harakat qildik. Saytdan foydalanish mobaynida siz qidirayotgan fayl kengaytmangizning ingliz, rus va o'zbek tilidagi tarjimalari hamda eng asosiysi ushbu fayl formatini qaysi amaliyot tizimida va qanday dasturlar yordamida ochish mumkinligi haqida ma'lumotlarni keltirdik.

Foydalanuvchilar uchun qulaylik yaratish maqsadida har bir fayl kengaytmasini bo'limlarga ajratdik hamda sayt o'zining kichik bir qidiruv tizimiga ham egadir. Saytdagi ma'lumotlar doimiy ravishda yangilanib va yangi fayl kengaytmalari qo'shilib borilmoqda. Agar siz o'zingiz qidirgan fayl kengaytmasini topa olmasangiz, ushbu fayl kengaytmasi haqida ma'lumotlarni Yangi kengaytmalar qo'shish sahifasi orqali administratorga murojaat qiling. Sizning murojaatingiz sayt administratsiyasi tomonidan qisqa muddat ichida ko'rib chiqiladi va yangi fayl kengaytmasi sifatida tizimga qo'shiladi.

Bundan tashqari, agar sizda sayt haqida fikringiz yoki taklifingiz bo'lsa, Aloqa sahifasi orqali o'z fikringizni bizga qoldirishingiz mumkin. Sizning fikringiz biz uchun MUHIM!

Sayt administratori

Figure 2.9. *Content block view*

To create the latest blog footer block. This blog, in turn, consists of three mini blogs, mini-blogs the first of which is the author's address, e-mail address and the same as other data storage blog. This mini blog HTML code as follows:

```
<div class="row">
  <div class="col-md-4" id="contact-footer">
   <h3>Muallif haqida</h3>
    <address>
 <p>Muhammad al-Xorazmiy nomidagi <br>Toshkent axborot texnologiyalari universiteti Nukus filiali</p>
Qoraqalpog'iston Respublikasi, Nukus shahri<br>
A.Dosnazarov ko'chasi, 74-uy<br>
```

```
<abbr title="Rasmiy telefon raqami:">P:</abbr>
+99(861)-222-46-12
    </address>
    <address>
<strong>Rasmiy web-sayt: </strong><a
href="http://www.tatunf.uz"> www.tatunf.uz</a><br>
 <strong>E-mail: </strong><a href="mailto:#">
tatunf@tatunf.uz</a>
    </address>
 </div>
```

The first mini-blog CSS code is as follows:

```
#footer h3 {
text-align: center;
border-bottom: 2px solid # 4DC8F1;
padding: 10px 0 0 5px;
font-weight: bold;
color: # 4DC8F1;
font-size: 15px;
text-transform: uppercase;
}
#footer p {
text-align: center;
font-weight: bold;
}
#footer a {
Color: #fff;
text-decoration: underline;
```

```
}
#footer a: hover {
text-decoration: none;}
```

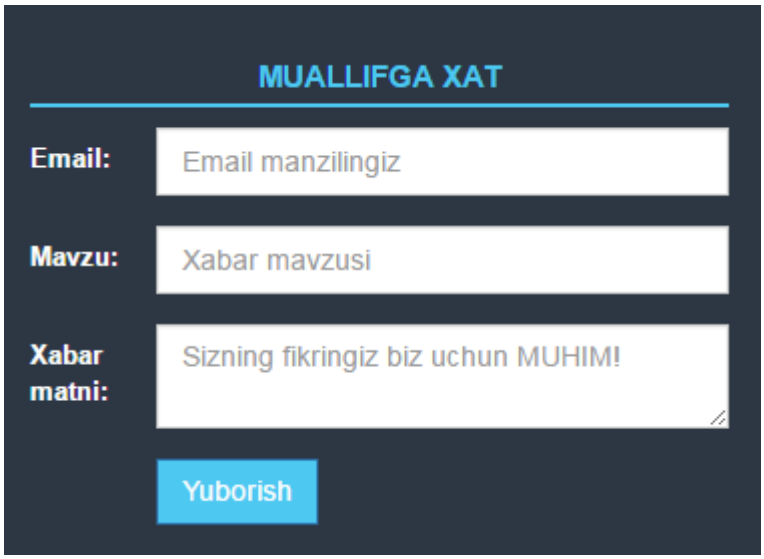
Fiaure 3. *About the author block view*

This mini blocks of data to the user organization operating in the author name, organization, address, phone number and e-mail, browser information reflected in the following form: Footer blog kkinchi mini-blog the author of a letter or a variety of proposals to help these users mini blog. This mini blog HTML code as follows:

```
<div class="col-md-4">
 <h3>Muallifga xat</h3>
  <form class="form-horizontal">
   <div class="form-group">
    <label class="col-sm-2">Email: </label>
  <div class="col-sm-10">
   <input type="text" class="form-control"
placeholder="Email manzilingiz" > </div>
  </div>
  <div class="form-group">
   <label class="col-sm-2">Mavzu: </label>
    <div class="col-sm-10">
<input type="email" placeholder="Xabar mavzusi" ></div>
     </div>
 <div class="form-group">
  <label class="col-sm-2">Xabar matni: </label>
  <div class="col-sm-10">
```

```
   <textarea class="form-control" rows="2"
placeholder="Sizning fikringiz biz uchun
MUHIM!"></textarea>
 </div>
  </div>
 <div class="form-group">
  <div class="col-sm-offset-2 col-sm-10">
   <button type="submit" class="btn">Yuborish</button>
    </div>
   </div>
  </form>
 </div>
```

The following results appear in the browser:



3.1-figure. *A letter to an author*

Back to blog on the third and final mini-blog social networks in a variety of information about the users of this system will also provide an opportunity for mini blog. This mini blog HTML code as follows:

```
<div class="col-md-4">
  <h3>Bizni kuzatib boring: </h3>
    <a href="#"><img src="../img/facebook.png"/></a>
    <a href="#"><img src="../img/twitter.png"/></a>
```

```
    <a href="#"><img src="../img/telegram.png"/></a>
    <a href="#"><img src="../img/instagramm.png"/></a>
    s<a href="#"><img src="../img/youtube.png"/></a>
</div>
```

The mini blog CSS code is as follows:

```
#footer img{
    margin: 7px;
}
```

The following results of the third footer blog mini blog reflected in the browser:

3.2-figure. *Follow the me block view*

As we all know this blog with HTML and CSS code. If all the codes together it will be offshore in the following form browser home page:

Figure 3.3. *General view of the site*

CONCLUSION

In conclusion, we can say that, in the society to a new level and it is ordinary citizens in e-government system of computer literacy skills, as the initial concepts and step-by-step implementation of the tasks responsibly.

By the government to create a variety of conditions during the Republic is now more than 33 000 web sites domain operates in the segment. This figure further development of our people and our language Uzbek language, which is the global Internet network, which can offer all kinds of different information systems, and it, will be necessary to increase the efficiency of their organization.

This simplicity of design we have created a system to provide users with the latest programming technologies and the use of the Uzbek language, is able to use this system to our ages.

This system school student, college, vocational or academic high school students, higher education institutions, student and other areas of activity of users can use, and they can answer all the questions.

Depending on the final qualifying section 2 of the work of the information and software using the following conclusions:

• This system is for all ages and can be equally effective in all areas of;

• The system's search system. This, in turn, helps the user to save time;

• The system not only provides information about the file extensions, but this can open any file extension program and a link to the official website of the program;

• The system begins to function at its full number of file extensions to 6500; the number of terms in the field of ICT provides information on more than 4500.

Overall, the design of the system currently used by professional developers, most modern programming technologies PHP programming language and MySQL database, as well as the development of HTML and CSS technologies used in the design of the system.

REFERENCES