

**MINISTRY OF DEVELOPMENT OF INFORMATION
TECHNOLOGIES AND COMMUNICATIONS
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**TASHKENT UNIVERSITY OF INFORMATION TECHNOLOGIES
NAMED AFTER MUHAMMAD AL-HORAZMI**

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**Methods and software for paid services in automated information-library
institutions**

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Dissertation

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Rakhmatullaev M.A.

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**MINISTRY OF DEVELOPMENT OF INFORMATION
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ANNOTATION OF MASTER DISSERTATION

on the theme

**METHODS AND SOFTWARE FOR PAID SERVICES IN AUTOMATED
INFORMATION-LIBRARY INSTITUTIONS**

The relevance of the topic. The relevance of the topic. Today, using modern information and communication technologies in libraries, introducing new library services such as online services, starting of use online payment systems for library services considered as one of the most important issues for librarians.

Objective of research. By introducing modern information and communication technologies into library sphere set up new paid services, as a result the efficiency of information and library services would be increased and the coverage of users would be expanded.

Research tasks. To achieve this goal, we need to solve the following tasks:

- To analysis of methods and means for paid services in the information-library institutions;
- To develop model and algorithms of paid services system for automated information-library institutions;

- To develop practical aspect of paid services system for automated information-library institutions.

The object of the study is the developing process of paid services in information-library institutions.

The subject of the study is methods, algorithms and software for providing paid services in information-library institutions.

Research Methods and Techniques. Analysis, synthesis, induction and deduction, social survey.

Scientific novelty. The formation of a database of paid services, the development of models and algorithms for the paid service system, and the paid service system based on them.

The practical significance and application of research results. It contributes to the expansion of the electronic resources use, the efficiency of additional information and library services. Implementation this system to all libraries in Uzbekistan allows for remote use library funds and pay them online.

Composition of dissertation work. This dissertation work consists of introduction, three chapters, conclusions and references. The body of the work is _____ page.

The main results of the work. System for paid services, particularly, delivering e-resources remotely and pay for them implemented into practice.

A brief overview of conclusions and recommendations. Every library and information institution should develop additional library services depending on its specificity, especially remote services and establish online payment.

Science supervisor

(sign.)

Master

(sign.)

Content

Introduction.....	
Chapter I. Analysis of methods and means for paid services in the automated information-library institutions.....	
1.1. Analysis of information-library services in the automated library-information institutions.....	
1.2. Analysis of payment systems which can be used to pay for library services.....	
1.3. Integration of e-commerce into the library sphere.....	
Summary for chapter I.....	
Chapter II. Model and algorithms of paid service system for automated information-library institutions.....	
2.1. Information model of paid service system for automated information-library institutions.....	
2.2. Description of web interface and structure of paid service system for automated information-library institutions.....	
2.3. Algorithm blocks of paid service system for automated information-library institutions.....	
Summary for chapter II.....	
Chapter III. Practical aspect of paid service system for automated information-library institutions.....	
3.1. Functional structure and issues scheme of paid services system for automated information-library institutions.....	
3.2. Organizational structure of paid services system for automated information-library institutions.....	
3.3. User guide for paid services system for automated information-library institutions.....	
Summary for chapter III.....	
Summary.....	
References.....	
Applications.....	

Introduction

Relevance of the topic. The sphere of library services is being transformed nowadays, adapting to the changing needs of readers, which invariably enhances the status of the library as an information and education center. The introduction of information and communication technologies in the library science and the ability of libraries to respond to public needs plays an important role in improving the quality and quantity of information and library services.

Users expect from the modern library more than it is aimed in its standard functionality, and are ready to pay for it. Therefore, the development of paid services should be considered as a kind of reality that arose in the course of the development of libraries. By developing online services, libraries receive new categories of users - remote (or virtual), those who use the services of the library from distance.

Today, users want to get accurate and reliable information quickly and efficiently. In order to ensure this, it is important to improve the system of distant library services, introduce innovative information and library services, and start to use national and international payment systems in the field of a library.

According to the Law of the Republic of Uzbekistan on “Information and library activity” funding information-library institutions is carried out at the expense of:

- state budget of the Republic of Uzbekistan;
- funds of founders;
- funds received from the provision of paid services;
- other sources not prohibited by law.

While maintaining free basic traditional forms of library services, expansion of the range of paid library services provided to organizations, businesses and individual readers is becoming an urgent topic. Paid services should be services and products that have a non-traditional nature of users’

requests, as well as traditional, but related to the provision of additional services[1].

Services and products that have a non-traditional character of users' requests, as well as traditional, but related to the provision of additional services should be paid [1].

Library legislation allows all types of libraries to provide paid services while maintaining a mandatory set of free services [7]. Paid services can be one of the additional sources of libraries funding to support their development processes, improve the quality of library service and provide convenience of library services [3].

By decree of the Republic of Uzbekistan President on February 19, 2018 "On measures for further improvement of the sphere of information technologies and communications" were emphasized a number of system problems and shortcomings in the sphere of management and introduction of information technologies and communications, including not paying enough attention to the implementation of projects on information and introduction of modern information technologies and communications aimed at improving the quality and efficiency of services provided to the population, not conducting system works on e-Commerce and the introduction of payment systems. [5]

According to the resolution of the Cabinet of Ministers "On the program of development of the service sector for 2016-2020" in the paragraph "Services and education" indicated to increase of 2 times the number of paid educational services on the basis of more than 500 existing educational centers in the period 2016-2020. [6]

When it comes to paid services, the term "fundraising" comes to mind. In marketing there is such a thing as fundraising which means collecting voluntary contributions, in cash or otherwise, usually for purposes not related to the extraction of profits. This method is so much developed in foreign countries that in American libraries the search for additional funding is carried out by special employees - fundraisers and even special departments. [Library business. Archive

of magazines - № 4 (28) '05 - fundraising]. In this the main task of the librarian is to change his or her role from passive expectation of help in any form to purposeful work on forming and establishing relationships with desired and concrete funders. [18].

Today, information services are provided by libraries as well as non-governmental organizations. The constant increase on the number of such organizations, the diversity of information services provided by them, including the launch of a remote service system, make chiefs of the information-library institutions of our country to think seriously. In Uzbekistan, many websites such as "kitapolami.uz", "tarxon.uz", "referat.arhiv.uz" satisfy the information needs of users remotely.

The **object** of the study is the developing process of paid services in information-library institutions.

The **subject** of the study is methods, algorithms and software for providing paid services in information-library institutions.

The **purpose** of the research is to introduce additional paid services with implementation of modern information and communication technologies into library work, thereby increasing the efficiency of information and library services and expanding the scope of users.

Objectives of the study. To achieve this goal, we need to solve the following tasks:

- To analysis of methods and means for paid services in the information-library institutions;
- To develop model and algorithms of paid services system for automated information-library institutions;
- To develop practical aspect of paid services system for automated information-library institutions;

Scientific novelty. All the main results obtained in this dissertation work are new, the essence of which is as follows:

- information model for paid services;

- metadata for the provision of paid services;
- database structure for access to electronic resources;
- algorithms for the creation of a system of paid services for information and library institutions.

A review of the literature on the topic of research. Up to this day, different researches have been conducted within the framework of the topic "information and library services", and they had a different character (which are of different character). Researches that have been carried out by the candidate of pedagogical sciences, Apanasenko Andrey Aleksandrovich were dedicated to the topic of "Promoting library services in popular libraries". Another Russian researcher, Samoylova Elena Vladimirovna, a candidate of economic sciences, has devoted her research to the topic of "Marketing Approach to Formation of Library Services."

Doctor of pedagogical sciences Kachanova Elena Yurevna has mentioned about the role of modern technologies and library services in her scientific work on the topic of "Innovative activity of libraries".

Candidate of Economic Sciences Tishina Janna Sergeevna conducted her research work on "Improving the fundraising in the Russian education system".

Theoretical and practical significance of the research results. Theoretical significance of the research results is as follows:

- A methodology for introducing a paid service system for information-library institutions was developed;
- The organizational structure, functional structure of the paid service system, the algorithms of the system development, the scheme of the issues to be solved were developed;
- It will serve as a basis for future scientific work on this topic.

The introduction of software that is based on theoretical conclusions on the web-sites of information-library institutions allows users to use remote information and library services.

The practical significance of the results of the research is that the introduction of this system into educational sites facilitates the provision of remote services to users, which makes it easier and faster to find the required information. This in turn leads to an increase in the number of users of information-library resources, as well as the intellectual potential of young people.

Today the process of introducing the system into operation of "E-Line Press" company continues.

Composition of dissertation work. This dissertation work consists of introduction, three chapters, conclusions, references and applications. And there was developed some suggestions to information-library institutions.

CHAPTER I. ANALYSIS OF METHODS AND MEANS FOR PAID SERVICES IN THE AUTOMATED INFORMATION-LIBRARY INSTITUTIONS

The role of information-library institutions on educational sphere is increasing year by year. Rapid development of information technologies effects positively to the quality and quantity of information-library services. This chapter envisages analysis of information-library services used in our libraries and the world libraries, reviews of the payment types used for paying library-services, the issues of implementing e-commerce into library work and marketing activities of libraries.

1.1. Analysis of information-library services in the automated library-information institutions.

With the dynamics of information technology development, the classic functions of libraries such as saving data and providing it to users are no longer unique. In the past, library services were available only if users came to the libraries, but up today there is an opportunity to use a library services from distance and Internet plays a key role on dealing this issue.

The first Manifesto of IFLA about Internet was approved in 2002. This document emphasized the important role that the Internet plays in rendering library-information services and securing an opportunity for all people to get a free excess to information. That is why today most libraries try to develop their websites, create online information-library services. It means that the tendency is going toward providing online services.

In the process of library services, the various information needs of library users are met through library services. Therefore, we can highlight that information-library activity is the formation of information-library collections and information and library services on the basis of information and communication technologies.

The provision of information and library services means enabling users with an access to information-library resources.

Information-library institutions depending on their specifications provide users with information and library services of different types. In general, according to the contents of the library fund, it may be subdivided into universal and special information-library facilities. There are following types of information-library institutions in our country:

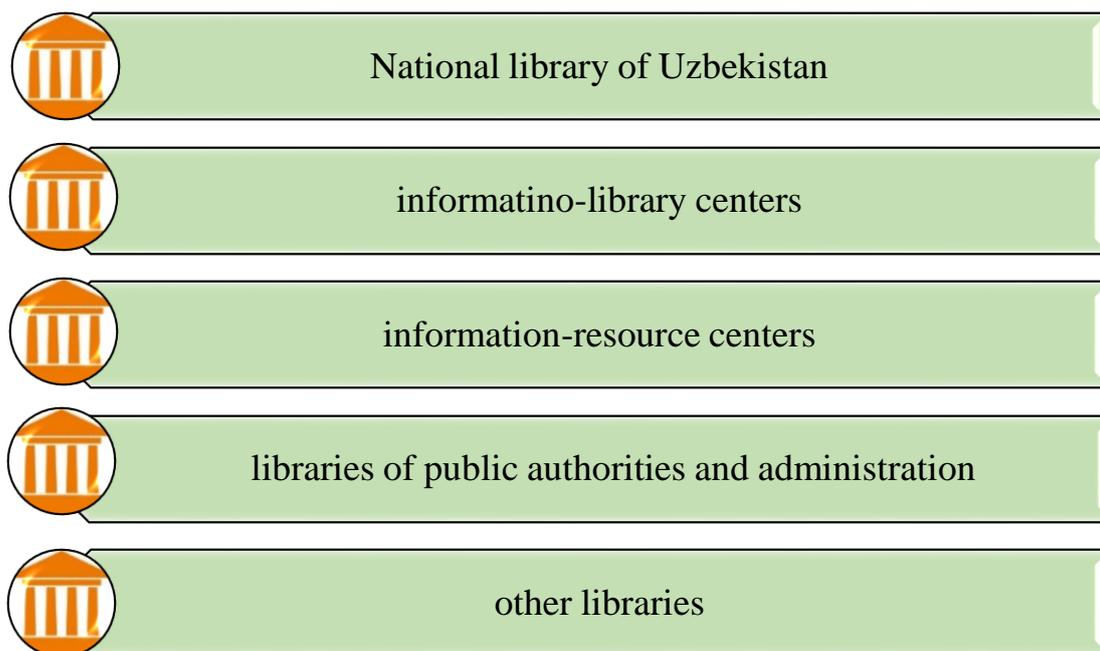


Chart 1. Types of information-library institutions

Information and library services can be divided into two types: basic and additional services. In addition, some types of services may be free of charge at some libraries, and may be chargeable at others. These services include the registration of users, excursions and others.

Basic library services (Free)	Additional library services (Paid)
<ul style="list-style-type: none"> ❖ Ensuring access to library funds; ❖ Reference and information service; ❖ Giving literature for temporary use; ❖ Ensuring access to electronic catalog; ❖ To teach how to use traditional digital catalog; ❖ To organize public events and meetings with celebrities; ❖ To organize exhibitions in variety of topics. 	<ul style="list-style-type: none"> ❖ To copy; ❖ To scan; ❖ To print text; ❖ Creating a bibliographic list for certain subject; ❖ Write data to electronic carrier; ❖ To send information to users e-mail; ❖ To lend laptops; ❖ To organize additional courses; ❖ Publisher services; ❖ To help users on writing text ❖ Excursion; ❖ To give resources to home; ❖ To write a scenario for public events; ❖ Download data from distance

Chart 2. Type of information-library services

Those services that require significant material costs and more time for their implementation with the use of multiplying devices, computers, other technical means become mainly paid [2].

Paid services and services are provided by libraries to individuals and legal entities in order to realize their right to meet additional needs, expand the range of effective assistance to users, improve comfort, intensify the use of existing means and attract additional resource potential, strengthen the economic interest of employees, improve the material and technical base of the library [3].

A survey was conducted among the users of the National Library of Uzbekistan named after Alisher Navoi. The goal of the survey was to investigate

the user's attitude towards additional paid services. For the question "How do you look at the introduction of additional paid services in libraries?" 60% of the respondents answered "that would be good" and 32% answered "it depends on the type of service". For the next question: "Do you want to use online library services?" 80% of respondents chose "yes".

For the question "How do you feel if online library services require extra costs?" - 76% of the respondents answered, "if the service satisfies me", 16% respondents answered "I will look at service fee" and 8% respondents answered "no need".

For the next question "Would you use a virtual library assistant service on the library web site?" - 84% of respondents chose "yes, of course", and 16% respondents answered "no need".

Answers mean that users are ready to pay for library services if the demands of users will be taken into the consideration. The most interesting part of the survey was the final question for the users' personal opinion - "What additional services would you have if you were the director of the library?", and the participants made the following suggestions:

№	Library services
1	To rent separate rooms
2	To organize different courses in the library
3	Organize meetings with psychologist
4	Increasing number of foreign literature
5	Digitizing all resources and put them to online usegae
6	To rise internet connection speed
7	Opening some cafeteria in the library
8	Expanding the scope of the library wifi system
9	to start selling e-resources
10	To put ATM for various payments
11	To create a temporary rest rooms
12	To launch online assistant service on the web-site
13	To give opportunity to pay online for library services

14	To create e-catalogs for foreign resources
15	To start selling books in the libraries
16	To ease using common catalog
17	Improve skills of librarian
18	To organize trainings with participation of foreign experts

Chart 3. Offers of users in the National library of Uzbekistan

If we conclude from the results of the survey, it is clear that users want to implement online library services, purchase electronic forms of resources, and make payments using different payment systems.

A number of additional information and library services have been introduced, including the creation of scenarios for public events, training of users on the basics of computer literacy in the "Bilim"(Knowledge) library, which is the central information-library center of Tashkent city. In addition, users of library can take home books for temporary use [9].

At the Tashkent University of Information Technology named after Muhammad al-Khorazmi, a separate room for renovation will be provided at the University's IRC for convenience of users.

In the regional information-library center named after Ahmad Farghoni, a number of additional services are provided, which includes: copy; writing documents to electronic readers; renting of the library reading rooms on holiday, weekend and nighttime; creation of complex bibliographic lists on orders; search and submission of information in order from press releases; delivery of literature to the home or workplace on the order, rental of the hall, etc.

With the purpose of comparative analysis of information and library services, Trinity College Library in Dublin, Ireland; Boston Mass Library in Massachusetts, USA; National Library of Uzbekistan named after Alisher Navoi and Tashkent University of Information Technologies named after Al-Khorazmi were chosen as the information and resource centers.

The Trinity College Library in Dublin is the largest library in Ireland and was founded in 1592. Since 1801, Ireland and the United Kingdom started collecting the compulsory copy of collection of printed publications. Currently, the fund has more than 6.5 million printed and more than 410 e-books [12].

Boston Public Library is one of the largest public libraries in the United States. It was opened in 1895. There is an inscription above the central entrance of the library "FREE TO ALL". It is the second largest library in the US after the Library of Congress. There are more than 23 million items of storage in its collection, among which are incunabula (books published in Europe before 1501), the first editions of Shakespeare, private collection of John Adams, the second president of the USA.

The National Library of Uzbekistan named after Alisher Navoi is one of the most popular libraries. According to statistical data for 2017, the library fund makes up 7,303,476 pieces. In accordance with the Provision "On provision of information and library services to users in the National Library of Uzbekistan named after Alisher Navoi", free and paid services are provided to the users [4]. According to the Order of the Library dated January 25, 2017, 82 types of additional services are listed in the pricelist of paid information and library services [5].

The Information Resource Center of the Tashkent University of Information Technologies named after al-Khorazmi was founded in 1955 and has more than 325 thousand copies.

Name of information-library services	Name of organization			
	Library of Trinity College	Boston public library	National library of Uzbekistan named after Alisher Navoi	Information-resource center in Tashkent university of information technologies named after Muhammad al-Khorazmi

Internet, wi-fi	+	+	+	+
Service such as printing, scanning and copying	+	+	+	-
Use of consolidated electronic catalog services	+	+	+	+
Publisher services	+	+	+	-
Sent data to user's e-mail address	+	+	+	-
Reference and information service	+	+	+	+
Special services for people with handicap	+	+	+	-
Bibliography services	+	+	+	+
Excursions	+	+	+	+
To lend laptops	-	+	+	-
Children room	-	+	+	-
Variety of additional courses	+	+	+	-
Courses to learn foreign languages	+	+	+	-
Reservation of rooms for group use	+	+	-	+
Selection of publications and preparation of bibliographical lists for dissertation, diploma and scientific works	+	+	+	+

Membership to scientific and educational databases (Such as Ebsco, Springer, JStor, ..)	More than 350	More than 100	33 та	3та
Creating e-library	+	+	-	-
Service of Specialists (Scientist, Professor, Lawyer, Psychologist, ..)	+	+	-	-
Make online payments	+	+	-	-

Chart 4. Comparative analysis of information-library services

The "Booking Rooms as a group" service allows you to work independently, without interfering with other users in large reading rooms of small groups. These rooms should be equipped with an electronic board, an internet connection computer, projector and other necessary equipment.

If the service "Selection of Bibliographic Record and Selection of Bibliographic Lists for Dissertation, Diploma and Research" in the table will be introduced into the information and resource centers of all higher educational institutions of our country, it would be a great help for graduate qualification work and magistracy dissertation.

The "Subscription to Scientific and Educational Databases" service is also one of the most popular services available today. It is important for the country to share information with international organizations to ensure the progress of science and to be aware of the latest developments. For this purpose, Uzbekistan is a member of several major scientific and educational databases, including EBSCO Host, eLIBRARY.RU, East View, ProQuest, JSTOR, Library Press Display. However, we can see that the use of scientific and educational databases of other major libraries in the world is much higher than ours. It is necessary to

promote these scientific and educational databases and to develop the skills of working with young people in reliable sources in all educational institutions of the country. At the same time, through using the experience of leading countries, we need to create a national scientific and educational database and provide it to other countries around the world.

The table states that the largest libraries in the world have the service of creation of electronic libraries for organizations or individuals. As we can see, information-library institutions are also offering services to software developers that are well-aware of the library system.

Engaging High-class Programmers in Library Work provides a more perfect creation of the library system. Another type of service is to use the services of scholars, professors, academics in the library business. Working with scientists, professors and academics in information-library institutions will lead to an increase in the scientific potential of the information-library establishment.

Online payment of library payments is becoming more and more popular today. An achievement of online payments is the development of the product or service in the way that is not related to the time and place.

World experience

According to the Association of American Libraries, libraries in the world can be divided into 4 categories [11]. Among them:

- ✓ Academic libraries;
- ✓ Public libraries;
- ✓ School libraries;
- ✓ Private libraries.

Other sources point out that "School Libraries" will be included in the "Academic Libraries" and replaced by "National Libraries".

San José Public Library, placed in San Jose (the capital of the Republic of Costa Rica), has created a mobile application. It is a free interactive guide or an electronic San Jose guide for mobile devices. Information on 31 sightseeing objects, including their images from library collections, is included in the routes

of the three historical excursions of the electronic guide. Thus, the library popularizes its unique historical collections and makes them widely available. The motto of the librarians now reads: "We are for you, wherever you are, whatever device you use." Development and implementation of mobile applications in library work provides an excellent opportunity to popularize the cultural heritage accumulated by the library. They can be used to expand access to both print and digital library collections, unique materials and local history collections, integrate library resources in the modern information environment [14].

Also, the experience of the National Library of Germany regarding the installation of the free application "The Treasure Guide of the Bavarian Library" to new gadgets has raised the level of people's awareness about the library.

A new platform for submitting information about new activities is social networks. Informative content in social networks is the quality information that attracts attention and significantly shortens the time for information delivery.

Today, users want to get answers to their questions quickly and efficiently. To do this, you need a universal specialist that will help the user to navigate in a variety of information, a subtle psychologist who is able to listen and hear the interlocutor, and most importantly, a person who is a generator of bold ideas and unusual projects. Virtual reference is a promising direction in the work of modern libraries. The Virtual Reference Service (VRS) is a reference service that operates electronically, often in real time. There are two main types of this interaction: asynchronous, implemented via e-mail and web-form queries, and synchronous, real-time implementation based on chat technologies, as well as video and teleconferencing. The requests received by the service are archived for further analysis. Queries that are of a repeating nature are identified to form the FAQ (Frequently Asked Questions) block [14].

In foreign libraries, the most common type of library services is electronic document delivery (EDD). Electronic document delivery system is a software and technological complex based on converting the flow of requests in the form of secondary information into a full-text form. Also, this system deals with the

fulfillment of orders for electronic copies of articles and fragments of books from library collections for collective (library, organization) and individual users. An important factor affecting the operation of EDD is the need to comply with copyright rules.

Which book is a web service that helps readers select books for different emotional and other important criteria for them (happy-unhappy, funny-serious, ordinary-unusual, etc.), as described the main character (origin, age, sex, etc.), the plot, the scene. Whichbook Automated System creates millions of combinations of these factors, and then recommends books that most closely match the needs of a particular reader. They also offer thematic lists of literature. You can search for the author, the book title, as well as books similar to those previously read [14].

The next kind of library services is renting an individual user cabinet. In the Internet room of the Russian State Library (RSL), you can work in a separate room, which allows you to work alone or in a team (up to four people). The cabinet is equipped with a personal computer with Microsoft Office programs and Internet access (including the ability to communicate in Skype), where you can install your programs, if necessary.

Psychological assistance and professional counseling. In the psychological assistance hall of the Russian State Children's Library (RSChL), in addition to more than 700 books on general, social, pedagogical and age psychology, it is possible to get assistance from qualified psychologists.

In the Tambov Regional Universal Scientific Library named after A.S. Pushkin, there are such services as provision of a place on the library server (hosting), development of network information resources, administration of websites. In addition, the ICT staff of the "Solntsevo" Central Library System in the Western Administrative District of Moscow are engaged in 3D technologies: they have organized 3D technologies class for teaching children and have the opportunity to conclude agreements with organizations for the preparation of 3D-videos [15].

The official mobile application "My Library" of public libraries in Hong Kong (PRC) makes it possible to use library services with the help of its mobile devices at any time and in any place. In the mobile application, there are many popular features that include:

- Access to a personal library account;
- Search, reserve and update library materials;
- Locate the nearest library using GPS, as well as the addresses and contacts of all libraries;
- Personalized notification services, for example, the time limits of books issued for temporary use;
- Create a custom list of library materials and work with it.

In San Francisco Public Library (USA), annual sales of printed books and multimedia materials in Fort Mason Center (the city exhibition center) are arranged. More than 500,000 printed books and multimedia materials are put up for sale at reduced prices - from \$ 3 or less [16].

By studying the world experience, you can formulate a list of additional information and library services:

№	Library services
1	Mobile app - free interactive guide
2	Guide to the library treasures
3	Promotion information about library services in social networks
4	Virtual reference service
5	electronic document delivery
6	A web service that helps users to choose the right books
7	Rent of an individual user cabinet
8	<u>Use electronic resources</u>
9	Organize meetings with psychologist
10	Provision of a place on the library server (hosting)

11	Learning 3D-technologies
12	Development of network information resources
13	Site administration
14	Mobile app «My Library»
15	Annual sales of printed books and multimedia materials

Chart 5. Experience of foreign libraries. Information-library services

In order to introduce additional services in information and library institutions, it is essential that the users' needs must be explored. Any library can provide library services either in the library or at a distance, due to its capabilities.

Today, the most up-to-date information and library services are to deliver resources to remote users. This, in turn, allows users to expand their coverage and ensure that the information they need is timely and non-space.

1.2. Analysis of payment systems which can be used to pay for library services.

Today's user chooses to pay from the bank account rather than in cash. In this case various payment systems come to the aid. The number of users offering a variety of alternative ways of payment for information and library services, based on the demand of users, will increase. In general, payments for rendered services can be made in the following forms:



Chart 6. Types of payments

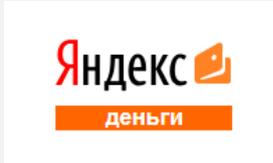
The payment for the services rendered using various payment systems has become commonplace today. Nowadays, payment for information and library services is made by cash or on a contractual basis.

The payment system is an integral part of e-commerce. The development of the economic sphere of any country is impossible without an effective payment system with efficient payment mechanisms. The payment system is a system of exchange of transactions and mutual settlements between the parties-participants of the system, which are banks, retail outlets, service enterprises, etc.

Recently, worldwide development of payment systems is characterized by a gradual narrowing of the scope of use of cash and paper payment documents, the transition to new payment instruments and modern payment technologies. All civilized countries are trying to minimize the number of cash transactions in cash in circulation. The introduction of electronic payment systems causes profound changes in the areas where the transformation takes place, and encourages the transition to a higher and qualitative level [17].

There are several payment systems in the world, and some of them can work in a single country. Much more profitable are those that can work anywhere in the world. These include Visa and MasterCard. At the same time, in some countries there are their own payment platforms, for example, UPAY, Click, Mbank, Payme and others in Uzbekistan, UnionPay, Alipay in China, JCB in Japan, QIWI and Yandex Money in Russia, and well-known WebMoney. Some of them today claim to be global and enter the international market. Below is an overview of various payment systems.

№	Name	Description and purpose	Symbol and web address
1	Webmoney	Was created in 1998 and its symbol was a winking ant. The system works with different currencies, but the most popular are ruble and dollar purses. As of January 2018, the number of registrations in the WebMoney system exceeded the mark of 36 million accounts. The	

		system is used in payment for goods, services, money transfers and other purposes.	www.webmoney.ru
2	Яндекс Деньги (Yandex Money)	Was launched in 2002. Yandex Money uses only rubles, that is, this system is oriented mainly to Russia. Yandex Money can be transferred to a bank account in any country. The notification of receipt of funds to the account comes to the e-mail. There is no commission for payment. Using Yandex Money you can pay for goods or services.	 money.yandex.ru
3	Visa Qiwi Wallet	It appeared in 2008. Qiwi Wallet is needed when you participate in various investment projects on the Internet, as well as in various projects. There is no commission for payment. At the moment, the number of active users of QIWI Wallet exceeds 20 million. It is possible to make payments around the world in trading companies that accept Visa for payment.	 qiwi.com
4	Paypal	Was created in 1998, and in 2002 it was purchased by E-bay. As of 2017, PayPal operates in 202 countries, has more than 200 million registered users, and operates with 25 national currencies. It is oriented, first of all, to representatives of small business and small retail dealers. The payment system will charge a commission of 2.7 percent of the payment amount.	 www.paypal.com

5	Perfect Money	<p>Was created in 2007. The system is often used by various financial pyramids and investment projects. Perfect Money works with Euro, US dollar and the equivalent of gold. You can use it in receiving payments in various business projects, pay for goods and services in online stores, Purchase Bitcoin, Gold, USD and EUR currencies online and others.</p>	 <p>www.perfectmoney.is</p>
6	RBK Money	<p>The system was created in 2002 in Ukraine. Ordinary users can create an electronic wallet for online shopping. The system serves over 7 million users. You can pay for goods and services on the Internet.</p>	 <p>rbkmoney.com</p>
7	MasterCard	<p>MasterCard is an international payment system, a transnational financial corporation that unites 22,000 financial institutions in 210 countries. The basic trade mark of MasterCard International is the basic one in visual communication with the participants of the payment system, customers and trade and service companies around the world.</p>	 <p>mastercard.ru</p>
8	Visa	<p>Visa is the classic payment system in America. Its main currency is the US dollar. The annual trade turnover on Visa cards is 2.5 trillion US dollars. Visa cards are accepted for payment in retail outlets of more than 150 countries. This is a global payment system that allows consumers, businesses, banks and government agencies to make electronic payments.</p>	 <p>www.visa.com.ru</p>

9	China UnionPay	China UnionPay is the National payment system in China. It was established in 2002 as an association of Chinese banks. UnionPay is the world leader in the number of cards issued. There is no commission for currency conversion.	 unionpayintl.com
10	Alipay	Alipay is one of the largest payment systems included in the Alibaba Group. It was founded in 2004. You can make payment for goods and services. Users are offered more opportunities to order goods and pay for purchases. Developers plan to soon expand the geography of the presence of the payment system. AliPay has a modern level of security, including digital signatures, certificates and dynamic passwords.	 alipay.com
11	JCB	JCB is one of the leading international payment systems, founded in Japan in 1961. In 1981, JCB became the first payment system in Asia, which entered the international market. Currently, JCB cards are issued in 23 countries.	 global.jcb
12	Click	The company "CLICK" LLC was founded in November 2011. This is a mobile banking system that allows individuals to pay by mobile phone or the Internet for the services of cellular operators, Internet providers, transfer money to other individuals, trade and service companies, make online purchases in online stores directly from their bank account.	 click.uz

13	Woy-Wo'	<p>The Woy-Wo' payment system was launched in 2016. It is enough to send a request to the short number *899# with the keyboard of the mobile device and you can pay for utilities, insurance, IT services, online stores and services, medicine, education, without Internet connection. At the same time, all users of the Uzcard payment system, previously registered in my.uzcard.uz, can use their login and password to use all the services of the new payment system.</p>	 <p>woy-wo.uz</p>
14	Upay	<p>The universal e-payment service UPAY was developed to implement the Law of the Republic of Uzbekistan "On electronic payments" to promote the development of e-commerce. The advantage of UPAY is the ability to make non-cash payments only through any mobile communication or the Internet, but also through SMS messages.</p>	 <p>http://u-pay.uz</p>
15	MBank	<p>At the end of 2013, the payment system MBank was launched. With the help of the payment system, everyone can pay for services and goods on the site https://oplata.uz/ or through the MBANK application using the Uzcard payment card of any bank in Uzbekistan.</p>	 <p>www.mbank.uz oplata.uz</p>
16	Payme	<p>Payme is a payment tool using which you can manage your plastic card Uzcard Online. With the help of the system you can make transfers, pay for goods and services. The payment system does not charge any commission.</p>	

			payme.uz
17	Websum	<p>Websum is a system of Internet - retail payments, a tool for online sales of goods / services over the Internet. "WEBSUM" allows e-commerce participants to instantly purchase / sell goods / services via the Internet using bank plastic cards registered in the UzCard and Visa Sum system and operates throughout the territory of the Republic of Uzbekistan.</p>	 websum.uz
18	Oson	<p>Oson is a payment system that allows you to easily manage money on plastic cards. OSON users can buy in both online and off-online stores, pay for goods and services, transfer money and much more. All financial transactions are available to cardholders of any bank in Uzbekistan.</p>	 oson.uz
19	ALPay	<p>ALPay is an own payment system of JSC "Aloqabank". The mobile application "ALPay" allows you to repay loans to JSC "Aloqabank", transfer money from card to card, pay for the services of mobile operators and digital television, Internet providers, etc.</p>	 aloqabank.uz
20	Hamkorbank	<p>Hamkor Mobile is a mobile application for individuals to provide banking services through mobile phones. With the application "Hamkor Mobile" you can make contactless transfers from card to card, making one-off payments for retail services, repaying loans and other payments.</p>	 hamkorbank.uz

21	Ipak Yuli Mobile	Mobile application "Ipak Yuli Mobile for Business" is a software service for a mobile device designed to provide remote banking services to the Bank's customers. Remote payment of utility and other services is carried out in 24/7 mode via online cards UzCard.	 <p data-bbox="1182 421 1457 454">ipakyulibank.com</p>
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Chapter 7. Description of some payment systems

Relations in the field of electronic payments are regulated by the law of the Republic of Uzbekistan "On electronic payments" adopted in 2005. Currently, more than 3.7 million cardholders use mobile application systems. The study showed that payment systems such as CLICK, Payme, M-bank, as well as mobile applications of some banks such as Hamkorbank, Ipak Yuli Bank are the most famous and widespread payment systems in Uzbekistan.

In order to increase the effectiveness of information and library services and ensure frequent and qualitative use of information by users it is necessary to provide access to international and local payment systems. Organizations need to have foreign currency account to be able to provide services in foreign currency. Or the local payment systems need to be integrated into international payment systems. In some sense this requires introduction of e-commerce into the library services.

1.3. Integration of e-commerce into the library sphere.

E-commerce, or electronic commerce, is the exchange or transfer of funds via the Internet or a local area network. With another words ecommerce is a financial transaction conducted over the Internet between a buyer and a seller. Making transactions successful and secure requires the coordinated effort of a complex network of financial institutions and processors. Merchants must connect their store to this network of banks, processors, and other financial institutions so

that payment information provided by the customer can be routed reliably, and confirmation of the availability of funds can be obtained in real time.

Before committing to e-commerce, a library should decide what it hopes to achieve:

1. Improved patron service
2. Increased revenue
3. Improve the efficiency of dealing with suppliers to the library
4. Greater staff productivity
5. Reduced cost

There are two types of e-commerce: patron e-commerce, also known as business to customer e-commerce, and vendor e-commerce, also known as business to business e-commerce.

Patron e-commerce enables library patrons to make electronic payments for fines, program fees, facilities rentals, printing/copying, interlibrary loan, access to electronic content, etc. When outside a library, the access is via the Internet; when inside a library it may be via the Internet or via the library's LAN (local area network).

Online payments can include payment for goods and services delivered online or by mail as well as in the library. It improves service to patrons because it gives them the option of making payments from home or office when they do not want to take the time to come into the library.

Payment can be by credit or debit card—in which case, the library has to contract with a credit/debit card processing service. A processor is a company that handles the card transactions electronically. The processor can be a bank or a third-party agent such as Payme or Click. If it is a third-party agent, the processor makes deposits to the library's bank.

Authentication of users and a secure connection are essential components of patron e-commerce because identity theft is a serious problem in the online environment. As libraries collect cash as well as receive credit card payments, integrating all of the financial transactions can be a real challenge.

The first general release of a patron e-commerce product from a vendor of integrated library systems did not become available until mid-2004. It was introduced by Innovative Interfaces and supported only the payment of fines, fees, and donations. As of mid-2006, it had been enhanced to allow patrons to purchase books from the library, an affiliated vendor, or products from other partner merchants.

Vendor e-commerce involves the interfacing of a library's integrated library system with those of book jobbers and serials subscription agencies for online ordering and claiming, and receipt of vendor reports and invoices.

Usually the payment process includes:

1. The customer, the buyer;
2. Organization providing goods or services;
3. Bank as guarantor of the legitimacy of payment;
4. Processing company, as a technology intermediary between all parties to the transaction.

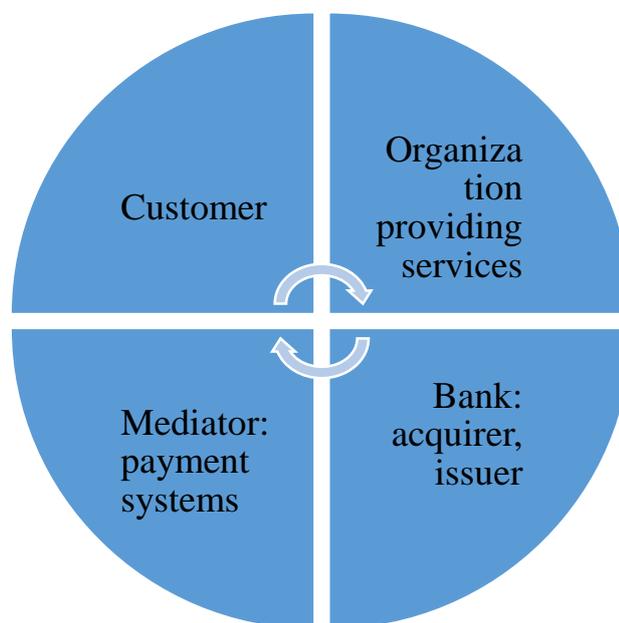


Chart 8. Participants of payment process

The chain between the buyer and the seller includes: the acquiring bank (the bank that provides the technical possibility of paying cards at the outlet), the actual payment system, the card issuing bank (the bank that issued the card), with

which money is written off, and also the settlement bank, where mutual settlements between participants of the system are made.

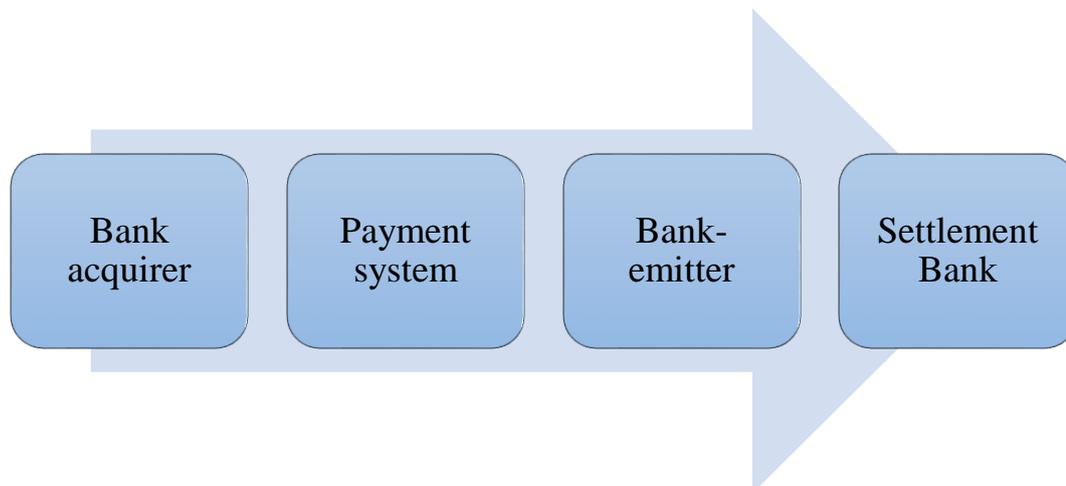


Chart 9. Payment process

When a customer uses a card to pay for goods or services, a complex multi-stage process takes place in a split second. First, the payment terminal sends information to the acquiring bank, which through the payment system contacts the issuing bank and checks the availability of funds on the customer's account, the status of the card and other parameters necessary for the transaction. If payment is possible, the required amount is blocked on the customer's card, and information about it is sent back along the same chain to the payment terminal in the store, a check is printed. After that, the purchase is considered completed.

When you buy an item or you are provided with a service via the Internet, the process of performing an operation looks much the same. Instead of a POS terminal, special software is used. The online store also accesses the issuing bank through the acquirer bank (or payment aggregator) and blocks funds on the customer's card. The connection takes place via secure channels.

Payment systems protect payment transactions in order to avoid making payments by intruders. First, encrypted protocols are used. Secondly, each payment is often protected by confirmation with the help of code sent by SMS to the phone number registered by the customer. Thirdly, in the case of Internet payments using plastic cards or e-wallets, transactions in the payment system can be additionally protected by binding to a specific computer or IP address, as well

as limited time-based authorization methods. This helps to avoid entering another system user on public computers.

Connecting to payment systems helps increase sales and expand the audience. To become a partner of the payment system, that is, to accept payments from users from your website or public payment application, you need to conclude an agreement with this system. To do this, the organization intending to organize it should be a legal entity or individual entrepreneur, have its own website or another website in the Internet from which the sales will be made. For example, let's see the mechanism for delivering an electronic document online. To do this, the user registers on the library's website, selects the required resource and clicks on the "pay" button. If the user has enough funds on the account, the required amount is charged from the account and the electronic version of the resource is presented to the user. And if there is not enough funds in the account then the user chooses a way to replenish the account. When choosing an approaching payment system, the library's website automatically sends the buyer to the payment system website. Having identified himself/herself, the user pays the necessary amount and the system "returns" his/her to the library's website, where he/she can acquire the necessary information by pressing a button "buy" an electronic resource.

Conclusion

The first part of the dissertation is devoted to the analysis of methods and means of payment services in information and library institutions, analysis of the following issues was carried out in the process of research:

- Comparative analysis of information and library services provided to users in a number of information and library institutions in Uzbekistan and in the world;
- Paid services provided to users at information and library institutions in the world;
- The survey was conducted in the National Library of Uzbekistan named after Alisher Navoiy with the purpose of studying the attitude of users to additional paid services;
- Methods of payment for information and library services and analysis of payment systems in Uzbekistan and the world;
- Introduction of e-commerce into library work and expected results, stakeholders and their role in this process.

Rendering of paid services by libraries will result in the following achievements:

- realization of the right of users to more fully satisfy the needs;
- increasing the comfort and usefulness of their services;
- increasing the efficiency of using library resources;
- obtaining additional financial resources to strengthen the material and technical base of libraries;
- will lead to increased staff productivity and increased incomes.

CHAPTER II. MODEL AND ALGORITHMS OF PAID SERVICE SYSTEM FOR AUTOMATED INFORMATION-LIBRARY INSTITUTIONS

Establishment of a paid service system for automated information and library institutions is one of the pressing issues today. This system would enable provision of information and library services not only in the library location, but also remotely. This chapter provides modeling and algorithms of paid services for automated information and library institutions.

2.1. Information model of paid service system for automated information-library institutions.

Establishment of a paid service system for automated information and library establishments begins with the creation of an information model. The model of information implies formation of a system database. The paid service system, designed to solve the problems of remote use of electronic resources and their payment, includes the following databases:

1. User database - collects all information about users;
2. Social Type database - allocates users to certain categories;
3. The "type of publications" database - shares resources by type of publications. At least, they include newspapers and magazines;
4. The "electronic resources" database is the main database that stores all data related to electronic resources;
5. Publication language database - define the languages of the publication;
6. The "rubric" database, which stores information about the rubrics of electronic resources;
7. The "publications" database, which contains information about publications;
8. The "subscription type" database is needed to select a subscription. It can be access to one resource or an annual subscription. Also there is a "super

subscription", which gives the opportunity to have access to all electronic resources in a certain period of time.

9. The "payment systems" database, which contains information related to payment systems;

10. The payments database collects data on all payments made.

We will focus on the characteristics of all the databases listed above.

Table 1

Database of Users

ID	Full name	Date of birth	Social class. id	Address	Phone number	E-mail	Number of reading card	Date	Balance

Description metadata of the users database

№	Name of metadata	Description of metadata
1	ID	Identification number of each user
2	Full name	Users full name
3	Date of birth	Users date of birth
4	Social class	The social class where the user belongs. Metadata would be taken from database "Social class"
5	Address	Address of user
6	Phone number	Phone number of user
7	e-mail	E-mail of user
8	Number of reading card	Number of users reading card
9	Date	The date of registration
10	Balance	The balance of user
11	Status	Status of user: low, middle, high

		<p>Low – New registered user.</p> <p>Middle – User that had registered more than two years ago. This type of users can take advantage of range of opportunities such as buying new two newspapers for free, have a 10% discount on each resource. Also they can take a loan from the company for certain period of time for buying e-resources.</p> <p>High – User that had registered more than 5 years ago. This type of users also can take advantage of range of opportunities such as buying new five newspapers for free, have a 20% discount on each resource. Additionally they can take a loan from the company for certain period of time for buying e-resources.</p>
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Table 2

Database Social class

ID	Social class

Description metadata of the social class database

N^o	Name of metadata	Description of metadata
1	ID	Identification number of each social class
2	Social class	Types of social class. It includes: pupils, students, teachers, researchers, workers, pensioner, foreigners and others. Dividing users into different classes helps to give them different opportunities.

Table 3

Database type of publication

ID	Type of publication

Description metadata of database publications type

N^o	Name of metadata	Description of metadata
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1	ID	Identification number of each type of publication
2	Type of publication	Type of publication: newspapers, magazines, books, mp3, mp4 files and others

Table 4

E-resources database

ID	Name of e-resource	Type of publication .id	Publisher.id	Rubric.id	Language .id	Date	Subscription type .id	Subscription price	User.id

Description metadata of e-resources database

№	Name of metadata	Description of metadata
1	ID	Identification number of each e-resource
2	Name of e-resource	Name of e-resource
3	Type of publication.id	Type of publication. Metadata would be taken from database "Type of publication".
4	Publisher.id	Which publisher is released this resource. Metadata would be taken from database "Publisher".
5	Rubric.id	The resources rubric. This information will be taken from "rubric" database.
6	Language.id	Information about resources language will be taken from language database.
7	Date	Released date of e-resource
8	Subscription type.id	Types of subscription which can be chosen by users. All information will be taken from subscription type database

9	Subscription price	Subscription price. It depends on subscription type, e-resource and other aspects.
10	User.id	This metadata will be serve to get information from users' database. Information about which user use e-resources

Table 5

Languages database

ID	Language of publication

Description metadata of languages database

N _o	Name of metadata	Description of metadata
1	ID	Identification number of publication language
2	Language of publication	Language of publication: uz, ru, en, uz/ru

Table 6

Database of rubric

ID	Rubric

Description metadata of rubric database

N _o	Name of metadata	Description of metadata
1	ID	Identification number of rubric
2	Rubric	Name of rubric: news, economy, business

Table 7

Database of publisher

ID	Name of publisher	Address	Chief of publisher	Responsible person	Phone number

Description metadata of publisher database

№	Name of metadata	Description of metadata
1	ID	Identification number of publisher
2	Name of publisher	Name of publisher
3	Address	Address of publisher
4	Chief of publisher	Chief of a publisher
5	Responsible person	Responsible person from publisher
6	Phone number	Contact numbers

Table 8

Database of subscription type

ID	Type of subscription	Description of subscription

Description metadata of subscription type database

№	Name of metadata	Description of metadata
1	ID	Identification number of subscription type
2	Type of subscription	Type of subscription: Subscription to one issue, Annual subscription, Super subscription: during a month users can use any e-resources.
3	Description of subscription	Description of subscription

Table 9**Database of payment systems**

ID	Title	Description	Link

Description of metadata

№	Name of metadata	Description of metadata
1	ID	Identification code of payment systems
2	Title	Name of the payment system
3	Description	Description of the payment system
4	Link	Link to the payment system

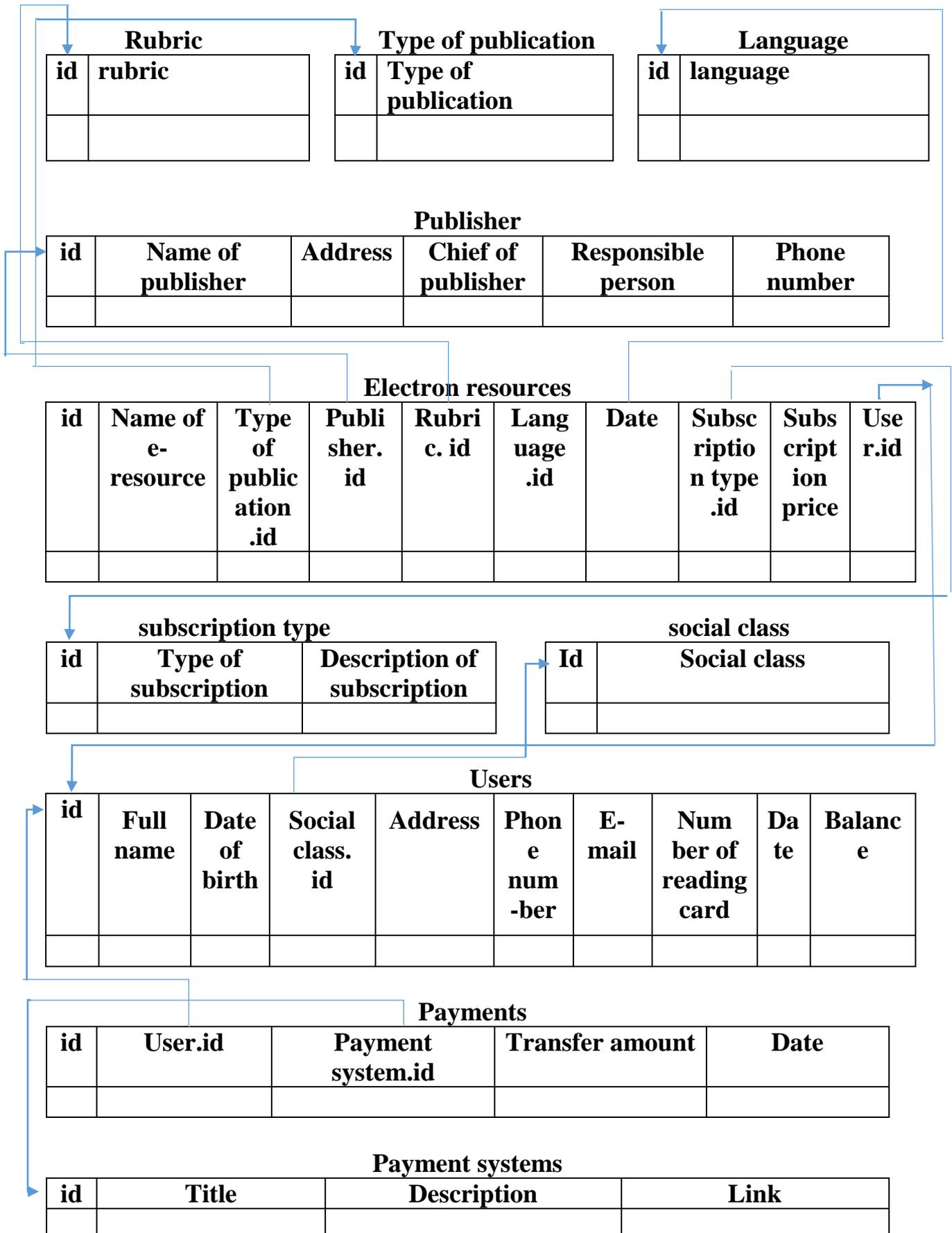
Table 10**Database of payments**

ID	User.id	Payment system.id	Transfer amount	Date

Description of metadata

№	Name of metadata	Description of metadata
1	ID	Identification code of payments
2	User.id	Shows which user made the payment
3	Payment system.id	Through which payment system the transfer was implemented
4	Transfer amount	Transfer amount
5	Date	Date of transfer

The mutual relation between databases



2.2. Description of web interface and structure of paid service system for automated information-library institutions.

After the development of the paid service system information model for the automated information and library establishments, all necessary metadata have been identified. Based on this information, the system interface is structured as follows:

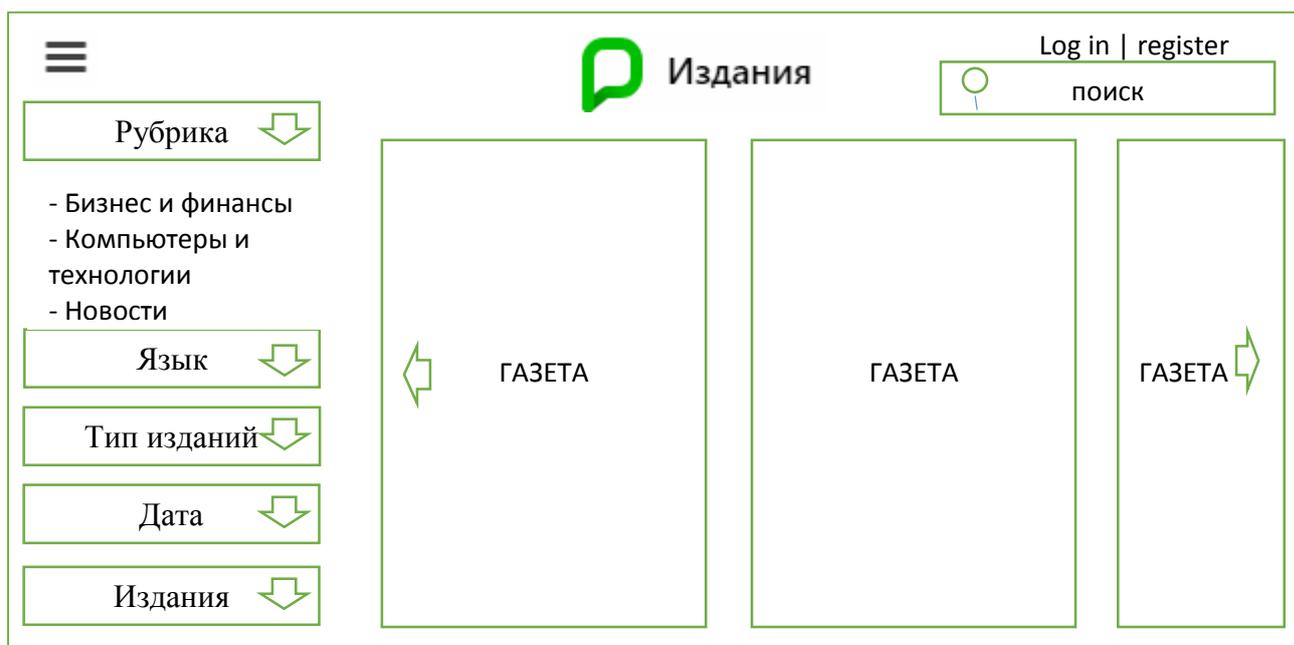


Chart 10. Interface

The web interface of the paid service system for automated information library facilities is given in Chart 10. On the left side of the interface there is a "main menu" panel, which contains information about the project, feedback, timeline, user's personal cabinet. At the bottom of the main menu there is a "filter" designed to make search easier, and enabling search by title, language, publication type, date, and specific edition. The main part of the interface provides with timeline of all newspapers available in the database. At the top right of the interface there is a search bar, which allows you to search for the keywords, titles and data you want. Above the Search bar, there is a registration bar. Registered users will need to log by using their e-mail address and password. New users will be offered a sign up form.

Registration

Name:

Surname:

Date of birth:

Social origin:

Address:

Tel:

E-mail:

Number of reader card:

Chart 11. The form of registration

The next page opens when user clicks on the desired e-resource. On the next page only first page of the selected newspaper will be seen, to see the rest of the resource payment will be required. On the left side of the webpage price info will appear, when clicking on it or clicking on the page lock you will be asked to subscribe. If the user agrees and the funds in the user account are sufficient, then the required amount will be deducted from the user account and the user will be given access to the e-resource. If the funds are insufficient, the user will be automatically referred to the personal cabinet, where they will be able to replenish their account by selecting the proper payment system.



Chart 12. Short information about e-resource

Users will be able to refill their account by logging in their personal cabinet.
 Personal cabinet will look like following:

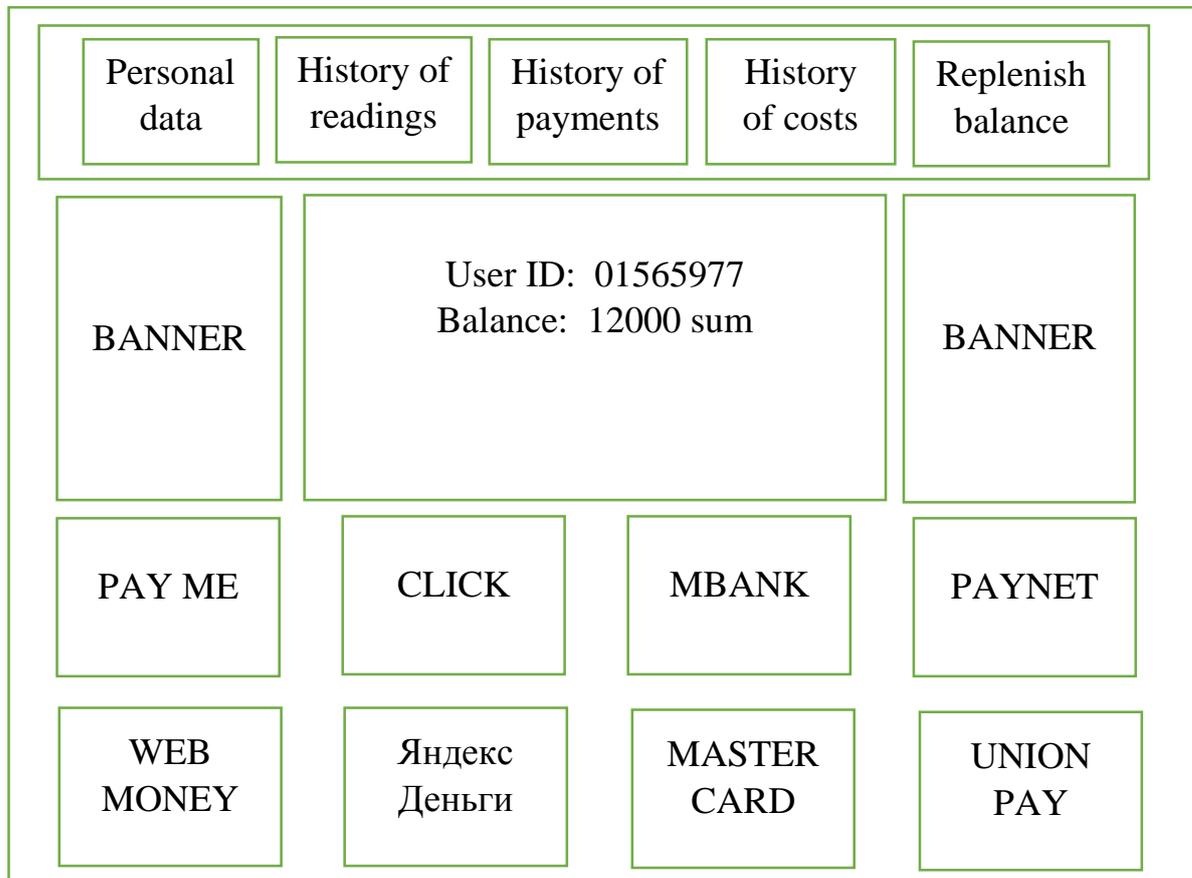


Chart 13. Personal cabinet

The user personal cabinet shall contain the following information:

Personal data. Information entered during registration. Users can also make changes to them.

History of readings. List of all used e-resources since their registration;

History of payments. Information on payments made;

History of costs. By specifying a date, you can obtain information about expenditures.

When clicking on the Replenish Balance button , the payment systems at the bottom of the page will move up and the user will be able to replenish their account through any of them. The more contracts with different payment systems, the more opportunities for attracting users.

For the automated information and library establishments, after developing the information model of the paid service system and the web-interface, algorithm for each process shall be developed.

2.3. Algorithm blocks of paid service system for automated information-library institutions.

Algorithm is a set of instructions describing the order of the user's actions to achieve a certain result. First, a common algorithm shall be developed, and then the algorithm for each process shall be developed. The following is a general algorithm for creating a paid service system:

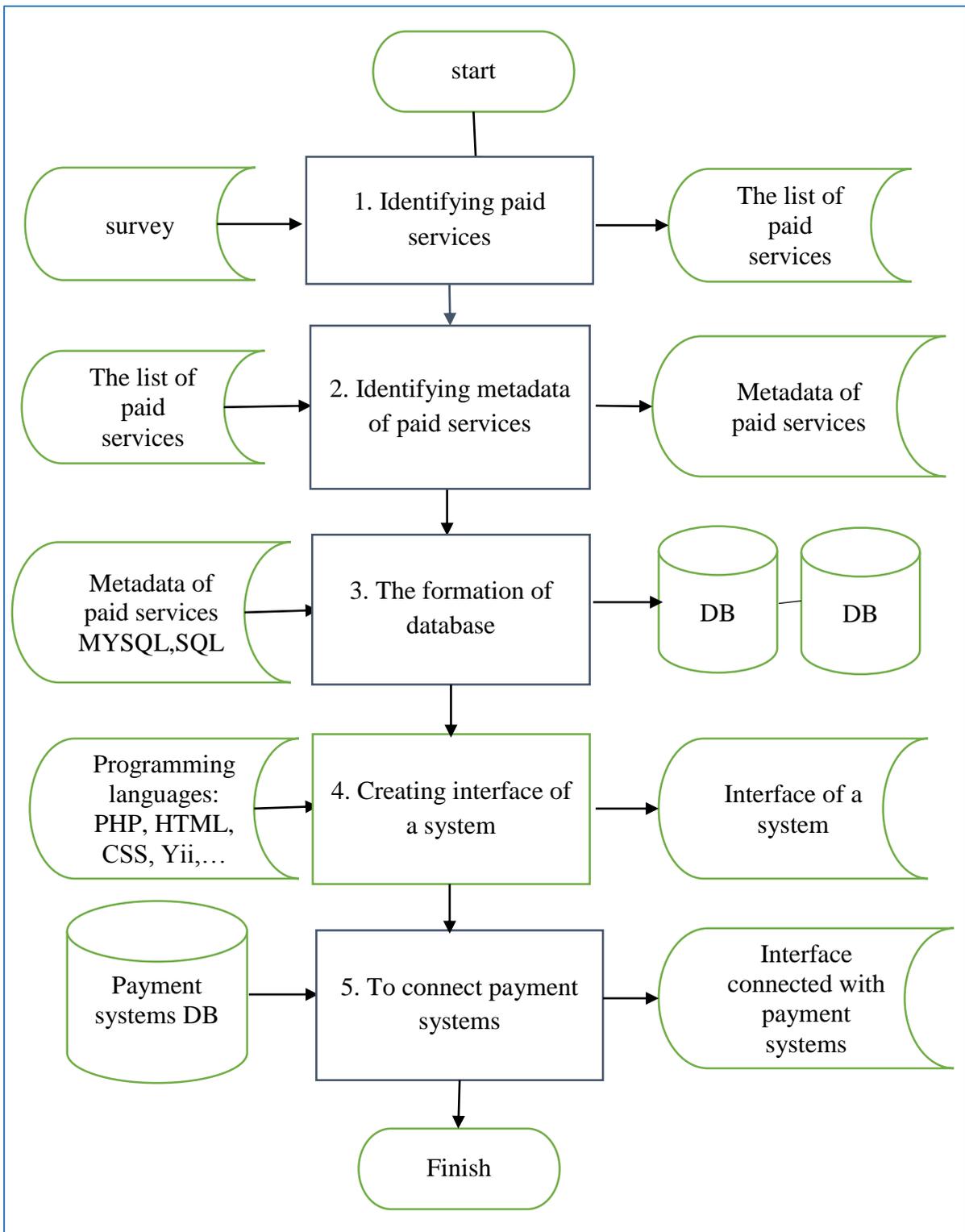


Chart 14. The General algorithm of the paid services system

1. Firstly, the type of additional service to be introduced will need to be identified. For identifying this public survey may be conducted. Based on the results of the survey and economic status of the information and library establishment a list of additional services will be formed.

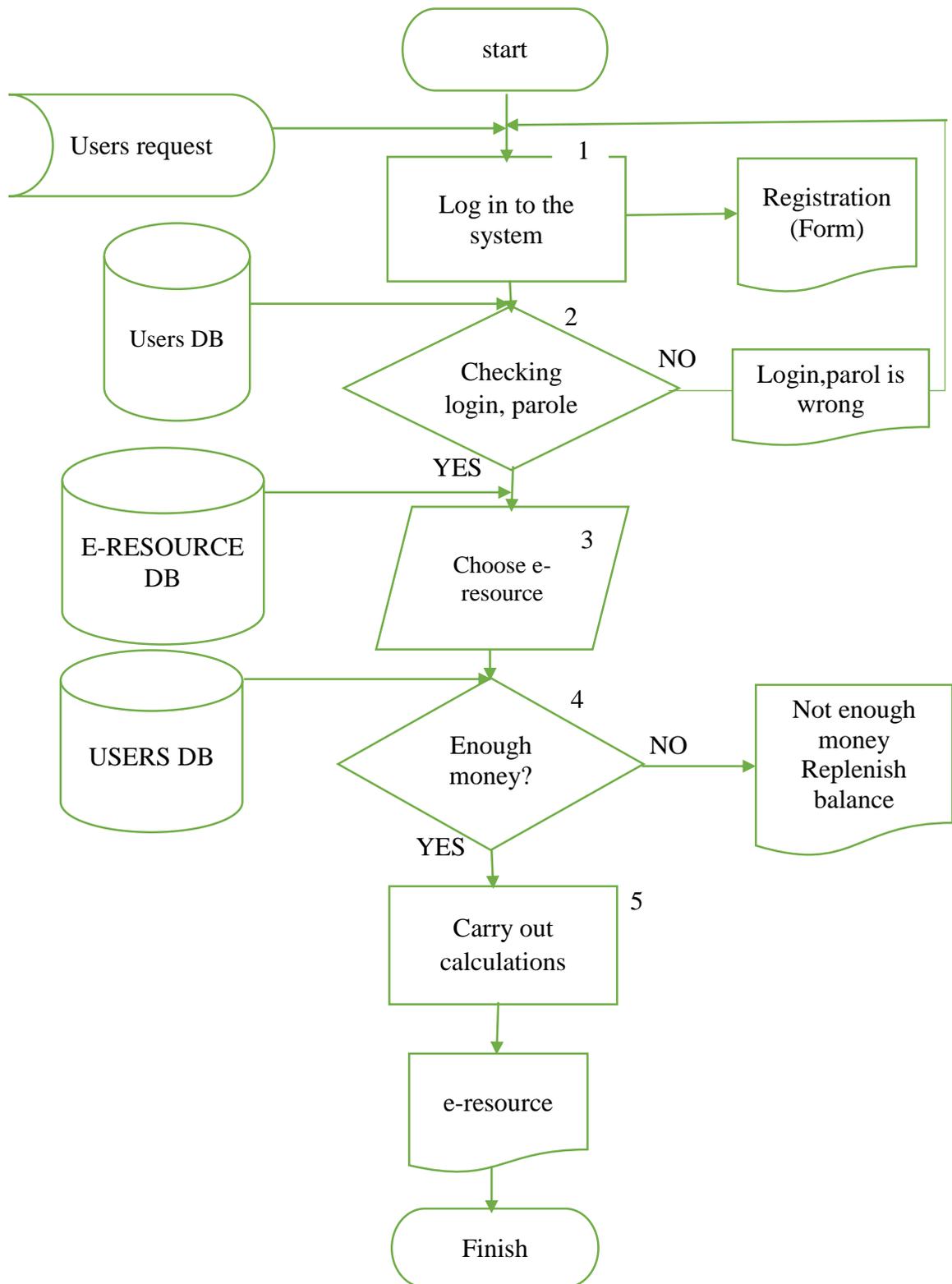
2. After identifying additional services, metadata shall be defined. In addition to common metadata, each additional service type will have its own unique metadata. Paragraph 2.1 of the present study provides metadata for the use of e-resources services.

3. Databases are formed on the basis of identified metadata. The database shall consist of several tables, and links between the tables must be reasonable.

4. Once the database is formed, the system interface shall be created. Web technologies to be used to create a system interface.

5. After additional services database is ready the paid service system will be connected to payment systems in order to enable payments for additional services.

In the below there was given algorithm of using paid services system for automated information-library institutions.



Algorithm 15. Algorithm of using system

1. Log in. To do so, click the "Log in" button at the top right of the interface, and enter the login and password in the window that appears. Unregistered users will need to be registered by clicking the "Register" button.

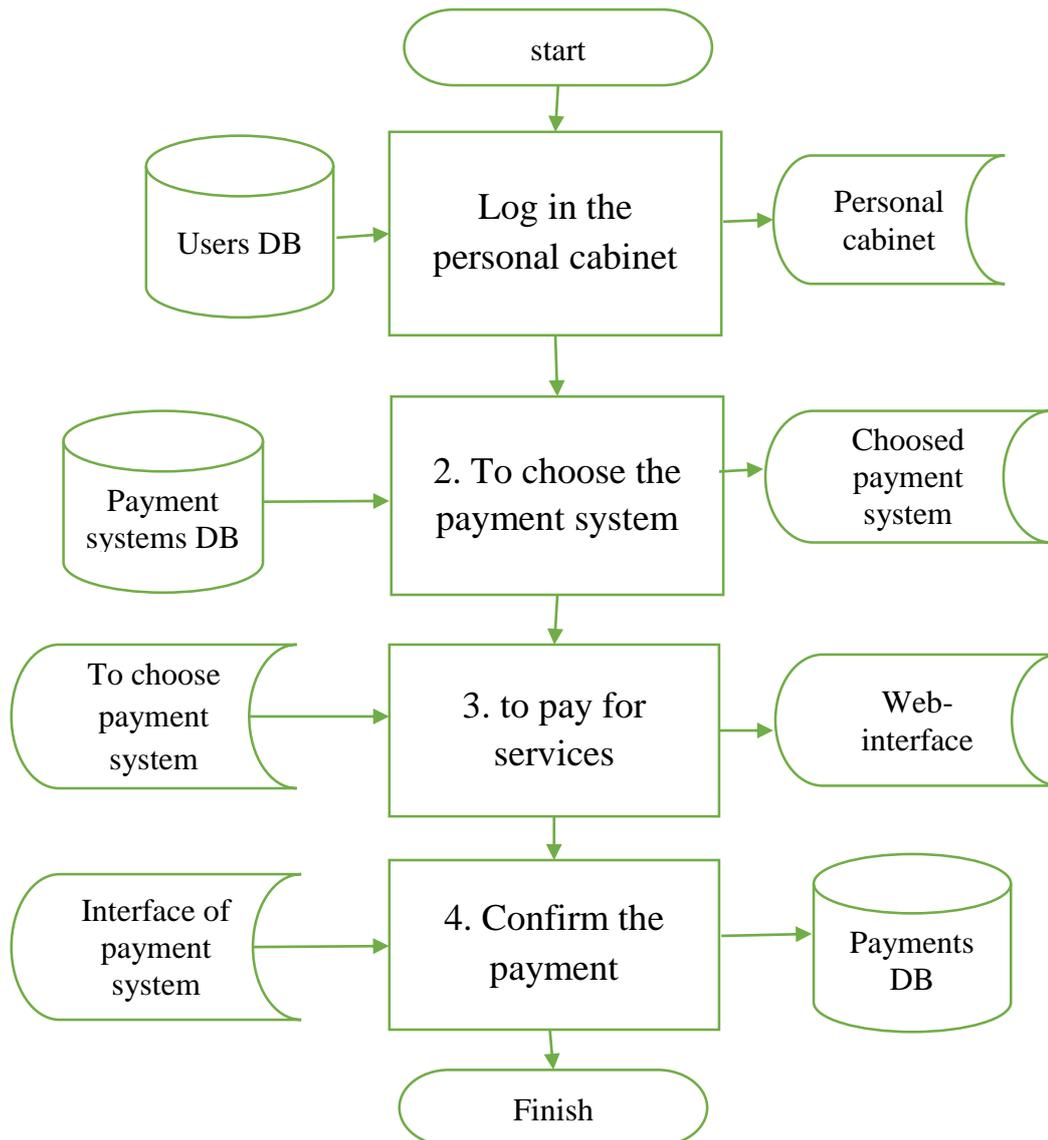
2. The logins and passwords of registered users are checked. If you enter the data correctly, you will be logged in. Otherwise login or password error window will pop up and the user will be asked to reenter their login and password.

3. The user selects the required electronic resource. Enquiry to the e-resource database will be made.

4. If the user wants to buy any e-resource, the price information will be displayed when clicking on the resource. When clicked on the Purchase button, the system checks for the availability of funds in the user's account.

5. If there is enough money in the user's account, information will appear on the screen for confirmation. When confirmed by the user, the required amount will be deducted from their account and the user will be provided with e-resource they have selected.

In the below there is given an algorithm of user account refilling.



Algorithm 16. User account refilling

1. Logging in personal cabinet. Users will need to log in their personal cabinets for refill their account. To do this, the "Log in" button at the top right of the interface need to be clicked, and login and password to be typed in the window that appears. The system will check the entered user login and password in the database. If the data is correct access to personal cabinet will be given, otherwise the user's personal cabinet will not open.

2. Payment System Selection. Payment systems are divided into two categories. First one is local payment system, normally designed for payments in

national currency. Payme Click, MBank and Upay payment systems are selected from local payment systems. Webmoney, Yandex Dengi, MasterCard and Union Pay payment systems are selected from international payment systems. When users choose one of these payment systems, they will be taken directly to the payment system's website.

3. Payment. Payment is made on the terms of the payment system. In the payment system, you select an organization to which money is to be paid and enter the required amount to be paid, and then click the pay button.

4. After confirmation of payment, the sum will be credited to the organization's account. The automated system determines which user has made the actual payment, and this amount is added to that user's account. Payment details are saved in the payments database.

Conclusion

CHAPTER III. PRACTICAL ASPECT OF PAID SERVICE SYSTEM FOR AUTOMATED INFORMATION-LIBRARY INSTITUTIONS

This chapter introduces the functional structure of paid service system for automated information-library institutions, the scheme of the issues, the organizational structure, the system requirements, and the user's guide to the system.

3.1. Functional structure and issues scheme of paid services system for automated information-library institutions.

Creating the functional structure of the system, we can identify those tasks that need to be solved. Below there is given the functional structure of the system.

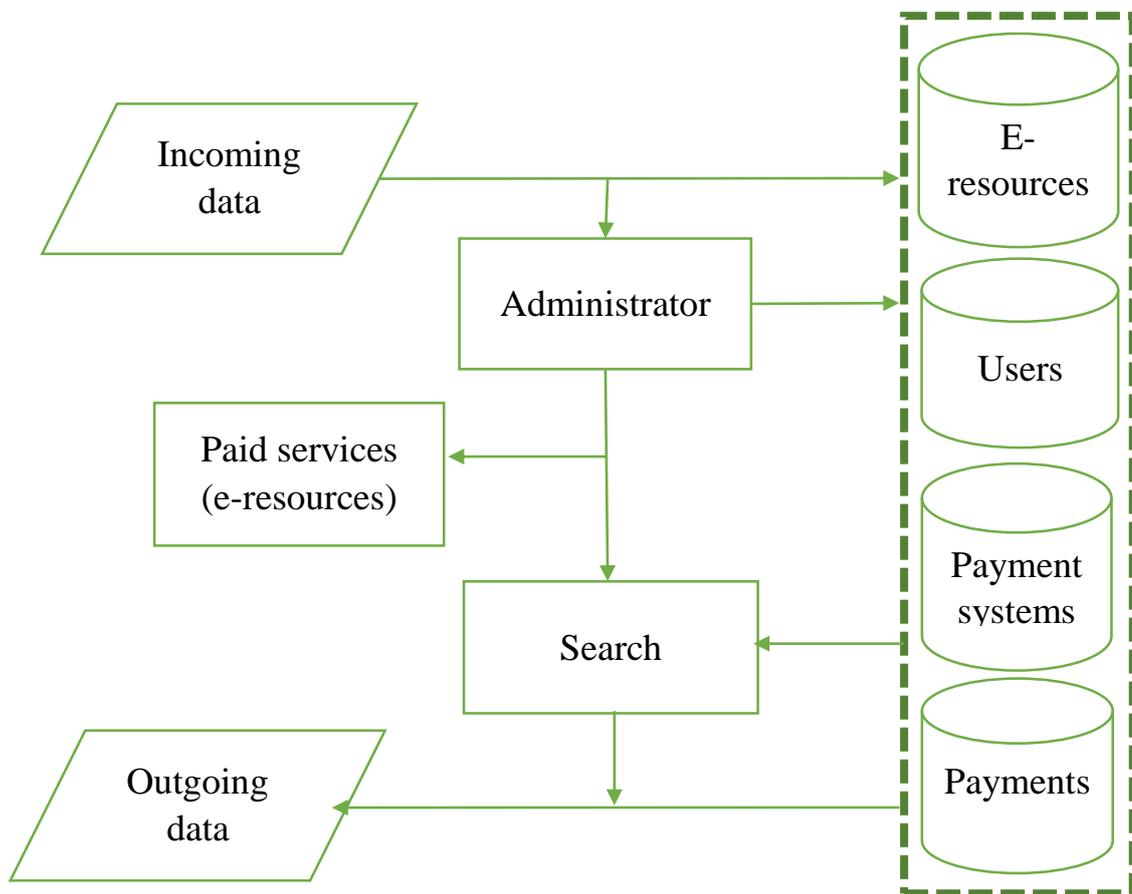
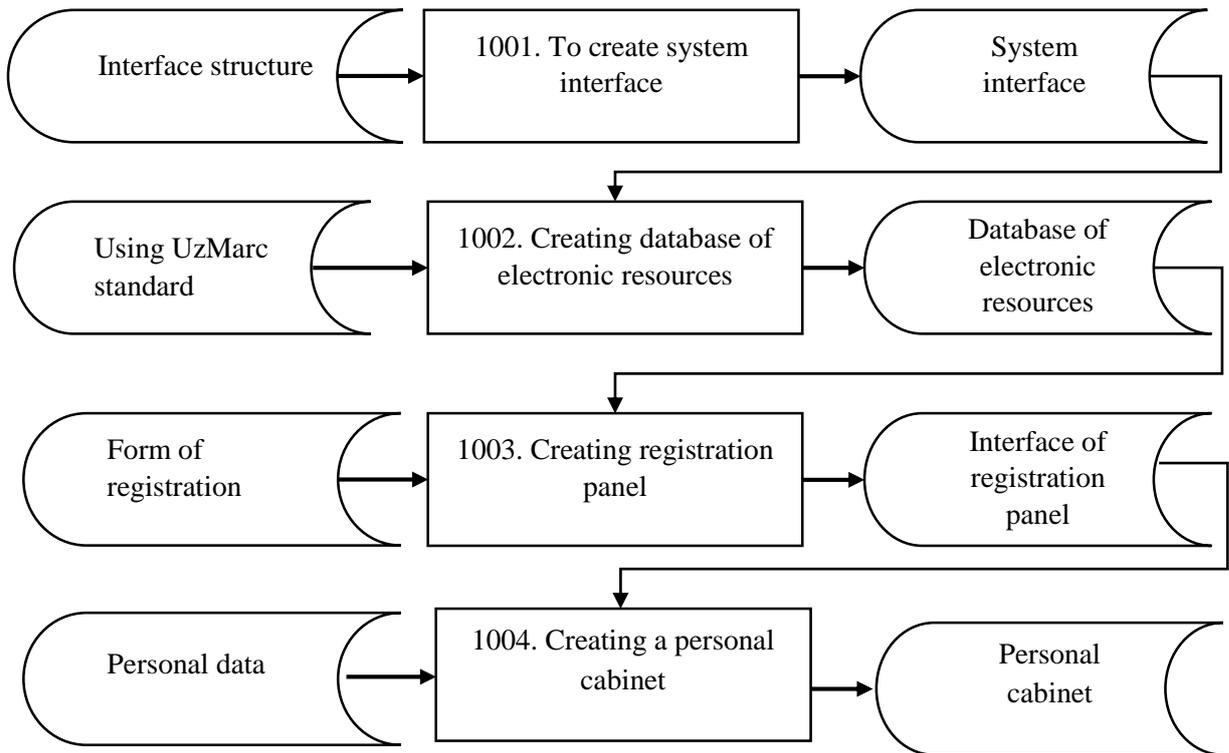
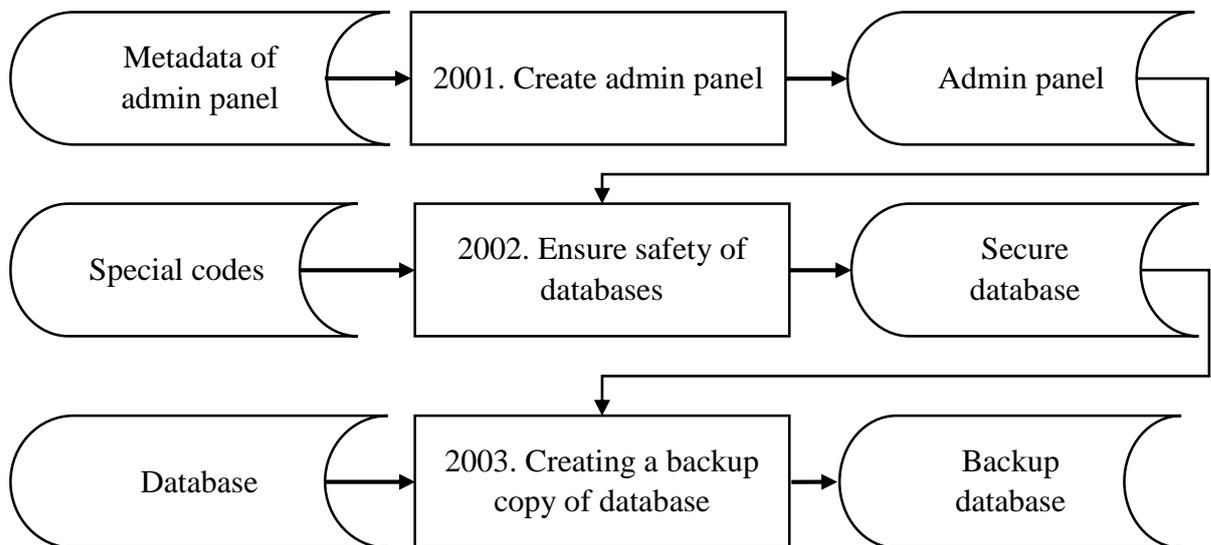


Chart . Functional structure of paid service system for automated information-library institutions

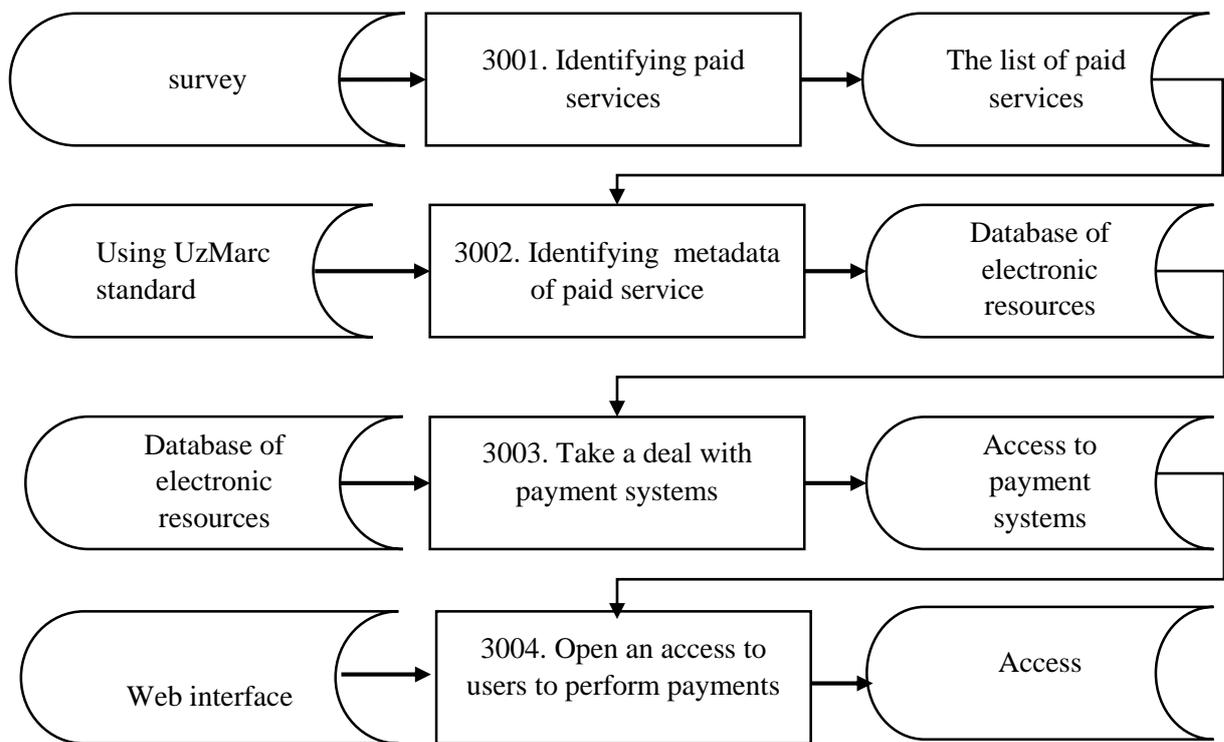
Incoming data subsystem (1000) serve to create databases. The structure of this subsystem is given below:



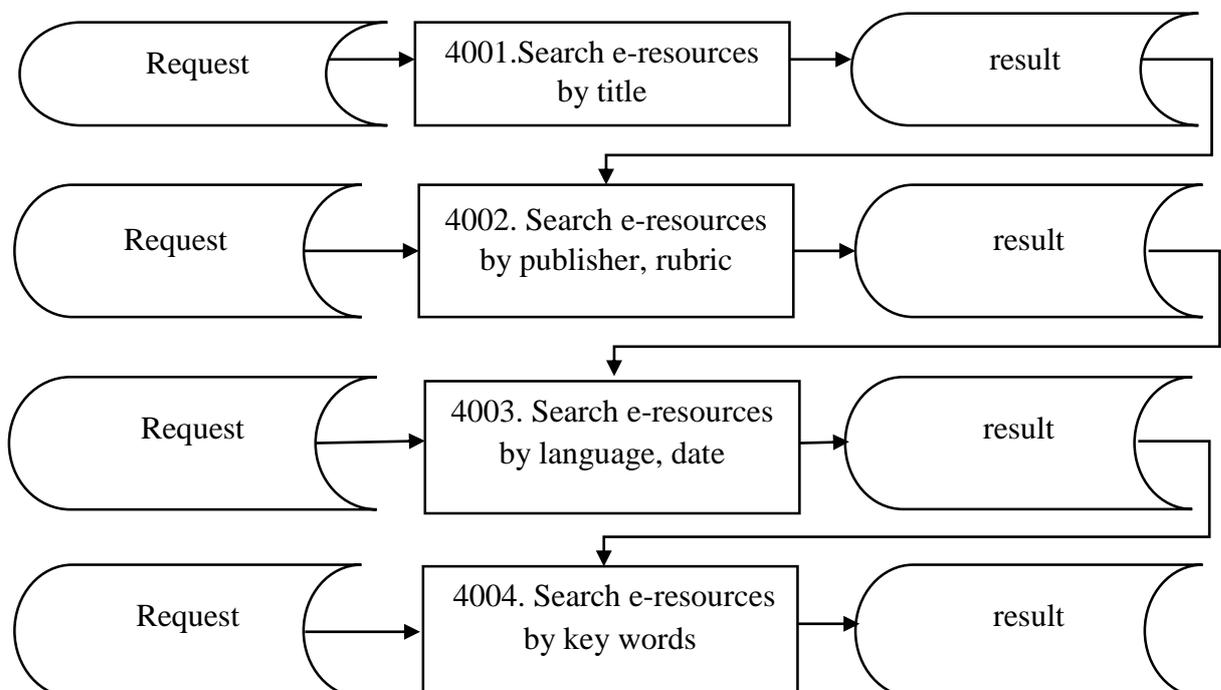
2. The administrator subsystem (2000) ensures that all functions are functional. Creates, modifies, and deletes the database. The list of issues of this subsystem may be as follows:



3. Subsystem paid services (electronic resources 3000) is used to collect all information about paid services, metadata. The list of issues of this subsystem may be as follows:

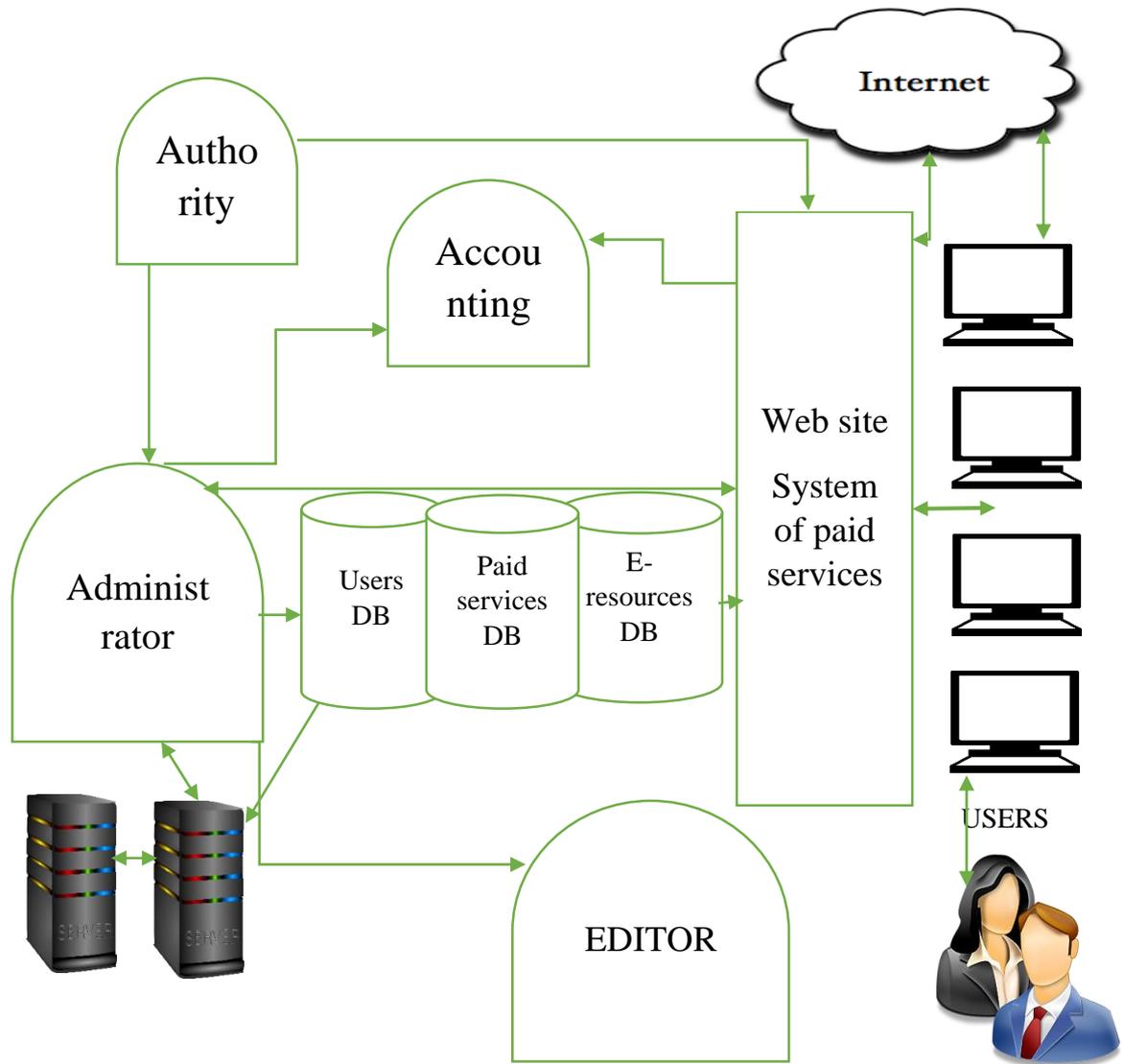


Subsystem search (4000) will serve to search information from an electronic catalog and full database. Users can search by title, publisher, language, date, rubric, type of publication or keywords.



3.2. Organizational structure of paid services system for automated information-library institutions.

In this chapter we gave an organizational structure of paid services for automated information-library institutions.



Organizational structure

Responsibilities

№	Position	Responsibility
1	Administrator	Ensures operation of the system, prevents illegal use, monitors interoperability between tables in a database
2	Editor	Hi or she is a system integrator, who plays a key role in creating an electronic catalog, binding up full text databases
3	Librarian	They provide paid services and generate statistical information
4	User	They are able to get access remotely to the paid services, fill their accounts online, and receive various statistical information.

References

Норматив ҳуқуқий ҳужжатлар:

1. “Ахборот-кутубхона фаолияти тўғрисида”ги Ўзбекистон Республикаси қонуни.-Тошкент, 2011;
2. Указ Президента Республики Узбекистан “О мерах по дальнейшему совершенствованию сферы информационных технологий и коммуникаций” 19 февраля 2018 года;
3. Постановление Кабинета Министров Республики Узбекистан “О программе развития сферы услуг на 2016-2020 годы”. Собрание законодательства Республики Узбекистан, 2016;
- 4.
5. “Муаллифлик ҳуқуқи ва турдош ҳуқуқлар тўғрисида”ги Ўзбекистон Республикаси қонуни.-Тошкент, 2006;
6. “Республика аҳолисини ахборот-кутубхона билан таъминлашни ташкил этиш тўғрисида”ги Ўзбекистон Республикаси Президентининг қарори.- Тошкент, 2006;
7. “Электрон кутубхона тўғрисидаги намунавий низомни ҳамда ахборот-кутубхона ва ахборот-ресурс марказларида ва кутубхоналарда тўлиқ матнли электрон ахборот-кутубхона ресурслари фондини яратиш режа-жадвалини тасдиқлаш ҳақида” Ўзбекистон Республикаси Вазирлар Маҳкамасининг қарори.-Тошкент, 2011;
8. Закон Республики Узбекистан “Об электронной коммерции”.-Ташкент, 2004;
9. “Алишер Навоий номидаги Ўзбекистон Миллий кутубхонасида фойдаланувчиларга ахборот-кутубхона хизматлари кўрсатиш тўғрисида” Низом. 2015;

Дарслик ва ўқув кўлланмалар:

25. Платные услуги в муниципальных библиотеках: методическое пособие практику /Владим. обл. универсал. науч. б-ка им. М. Горького, Науч-метод. отд.; сост. Н. Г. Ступина.- Владимир, 2008.- 33 с.
26. Платные услуги в библиотечной среде: Из опыта работы общедоступных библиотек: методическая консультация /Дальневосточная государственная научная библиотека, Науч-метод. отд.; сост. С. А. Горячев.- Хабаровск, 2016.- 18с.

Илмий журналдаги мақолалар:

45. Жадько, Н. В. Фандрайзинг по-русски / Н.В. Жадько // Библ. дело. — 2005. — №4 (28). - С. 12-13.
46. Коскина, Г. М. Фандрайзинг в условиях школьной библиотеки / Г. М. Коскина // Школьная библиотека. – 2001
47. Lalitha K. Sami, Rabia Iffat, Impact of Electronic Services on Users: A Study

Диссертации:

Интернет сайтлар:

70. www.libamur.ru/sites/libamur/files/platnye_uslugi_itogi_monitoringa_sayta_.rtf
71. <http://kitobolami.uz/>
72. <http://tarxon.uz/>
73. <https://referat.arxiv.uz/>