

**ECONOMIC COMPONENT OF DEVELOPMENT OF THE WEB SERVICE
FOR THE SUBMISSION OF ANNOUNCEMENTS, IMPACT ASSESSMEN
OF THE INFORMATION ENVIRONMENT ON THE ECONOMY**

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The article provides information on the economic part of developing a web application for posting ads. The information on the main stages of application development, types of work and their economic component is also provided.

The methodology for designing information systems describes the process of creating and maintaining software in the form of a life cycle. The life cycle of software development is a period of time that begins from the moment when a decision on the need to develop a system is made and ends when it is completely out of use by all users. The software is the end product of the system development process.

Traditionally, the following main stages of the software life cycle are distinguished:

- requirements analysis and design (task setting, obtaining technical specifications, development of specifications, development of decision algorithms);
- implementation (coding of the designed system);
- testing and debugging (checking the program for compliance with all the requirements for it, identifying defects);
- acceptance by the customer and revision (final acceptance tests, correction of identified errors).

At the stage of analysis and design, drawing up a specification of the requirements for software is one of the most important goals. Without this, it is impossible to proceed to the next steps. Components should be described with such precision that would allow their implementation to begin. Because of its importance, this work is considered as a separate phase and takes about 20% of the time allotted for the completion of the thesis (2.5 weeks).

At the implementation phase, a software code is compiled which is based on the software project created at the design stage. The division into components creates the prerequisites for the division of labor, i.e. when the team of programmers is involved in coding systems. Its implementation takes 7 weeks (58.33% of the allotted time).

The testing and debugging phase is essentially a system reliability check, where the main goal is to find out if the created system meets the user's requirements. This stage implies a series of tests designed to identify errors in the implementation of the project. If the latter are discovered, they must be corrected. This stage is allocated 12.5% of the time, i.e. 1.5 weeks.

At the final stage: the stage of sending the application to the customer, acceptance tests are carried out. Based on the results of these tests, the customer can voice some wishes, make minor adjustments, according to which the system should be finalized. At this stage, the remaining week of working time is allotted.

A graphical representation of the proportion of time spent for each of the stages of developing a web service for submitting ads in total is presented in Figure 1.

Types of work

In addition to dividing the life cycle into stages and phases, eight types of work can be distinguished that are performed in the process of creating a software product:

1. Requirement analysis and planning. It ensures the development of specifications, analysis and modification of functional, technical, and interface requirements.
2. Designing products. It includes the definition, specification, analysis and modification of the hardware and software architecture of the project program and database.
3. Programming. Detailed design, coding, autonomous debugging and integration of individual program components, as well as programmer work planning, database development, documentation of individual components and organization of programming at the component level.
4. Planning for debugging.
5. Verification. The process of checking the correctness of requirements, debugging products and acceptance tests.
6. Project management. Project planning and control, control and regulation of contracts, communication with users.
7. Quality control. Development and control, standard and technical checks of software tools and development processes.
8. Documentation. Development and adjustment of user manuals and operators.

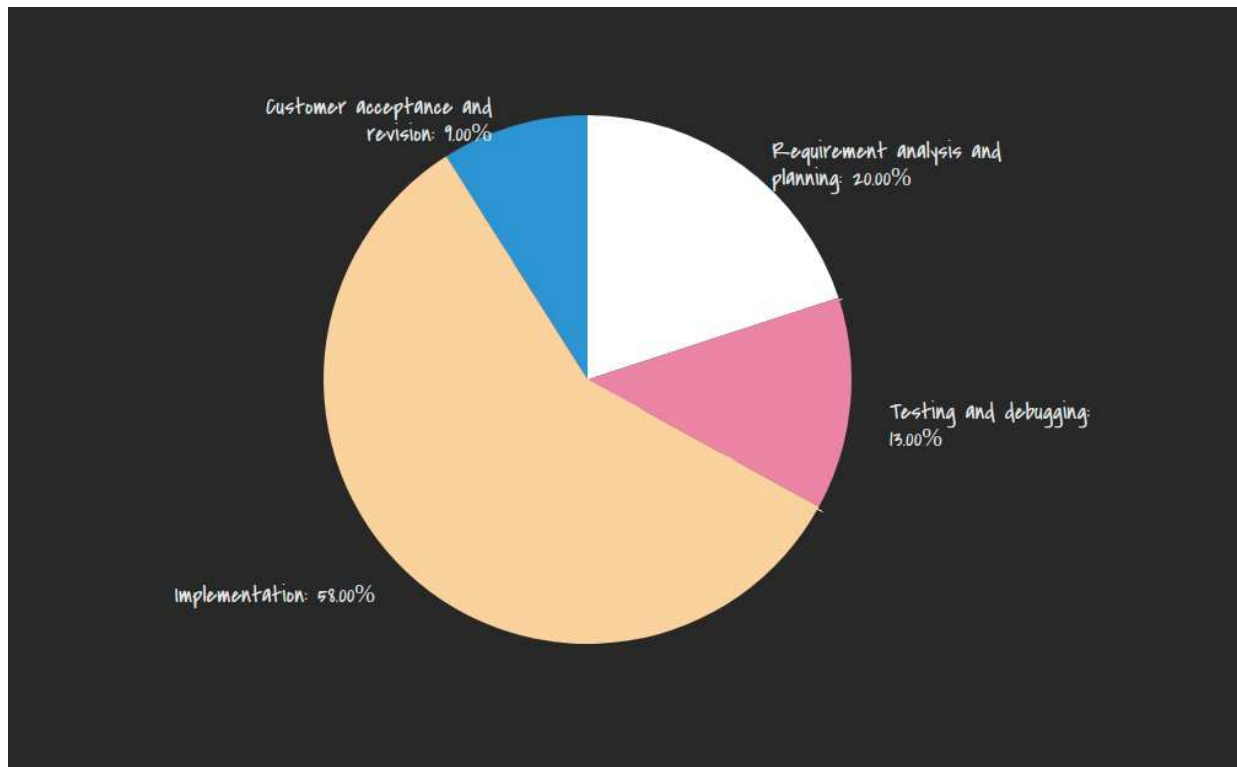


Figure 1. – Diagram of the distribution of time during project development

The division of the software life cycle into stages, phases and stages, as well as a more detailed description of the work performed during their development, production and operation, is necessary for a detailed determination of the costs required for these purposes.

Product costing

Assessing the cost of software and determining the economic effect of the developer involves the preparation of cost estimates, which, according to the Decree of the Ministry of Economy of the Republic of Belarus, the Ministry of Finance of the Republic of Belarus and the Ministry of Labor and Social Protection of the Republic of Belarus dated on 10.30.08, No. 210/161/151 "About the main provisions on the composition of costs included in the cost of production (work, services)" includes the following cost items:

1. Electricity - since the product is an application, when it is developed, computers that consume electricity are used;
2. Materials and components - consumables spent on creating a product;
3. The basic salary of executing agents is the cost of issuing salaries to employees working on a project;
4. Additional salary - the cost of paying premiums, risks, holidays, etc.
5. Deductions for social needs - the costs of tax fees, to the fund for protecting the population, insurance, etc.
6. Depreciation - contingency costs;
7. Costs for special equipment - costs associated with the acquisition of specialized equipment;
8. Other direct costs - the costs of preparing and acquiring various kinds of information.

The impact of cost items on the final cost of a product can be seen in the diagram shown in Figure 2.

According to the diagram presented in Figure 2, we can conclude that the main costs of the product being developed, regardless of the development time, are the payment of wages to employees.

The customer pays the developer the full amount of the costs of the project, including profit. After paying taxes from the profit, the developer remains at the disposal of the net profit from the project. Due to the fact that the software is developed for a single object, net profit can be considered as the economic effect of the developer from the implemented software.

The sale price of products is formed on the basis of the planned cost of production, all types of established taxes and profits, as well as the quality, consumer properties of the products and market conditions.

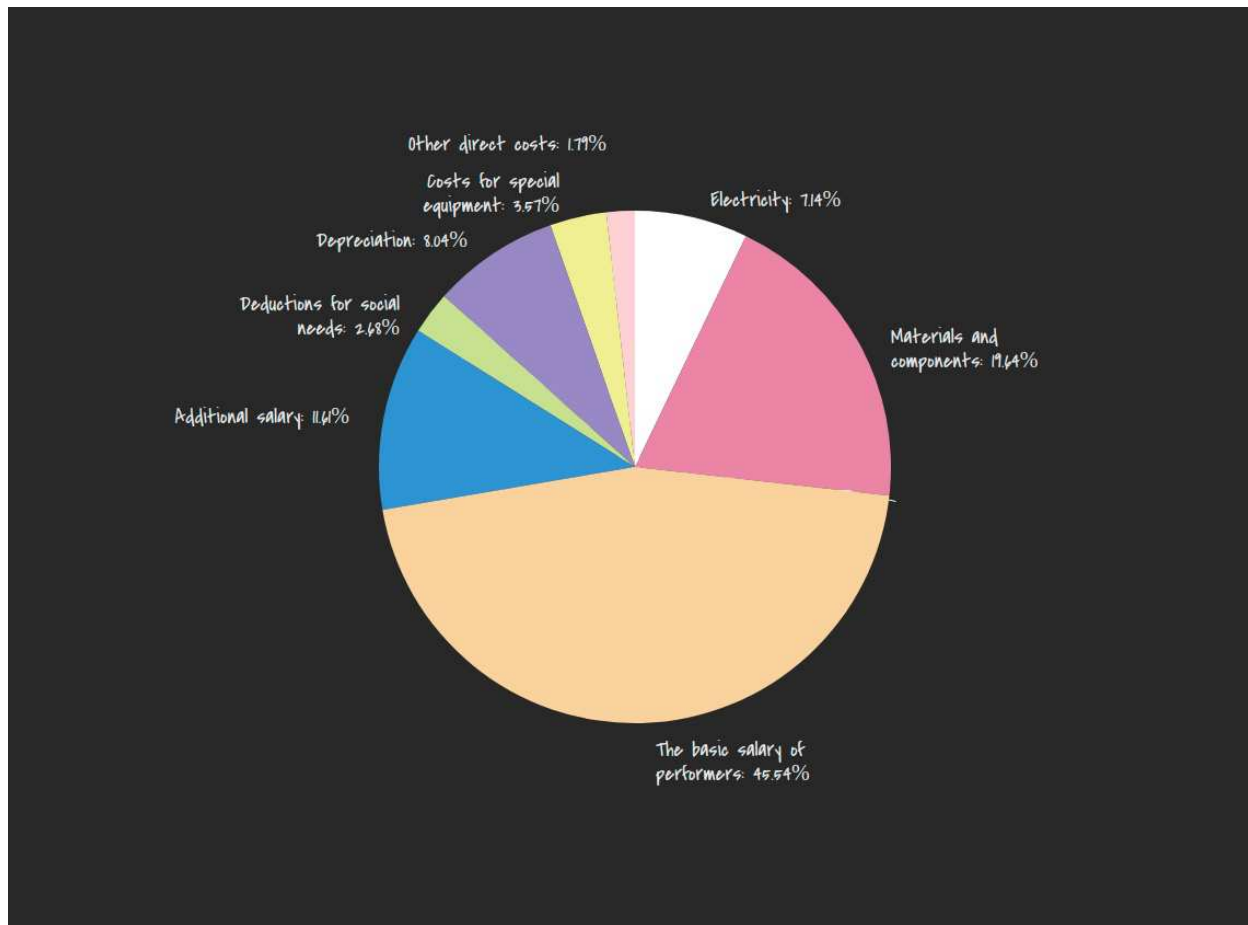


Figure 2. - Cost structure for the development of a training application

Conclusion

Thus, the cost of electricity will reach 50.67 (rubles), materials and components - 32.6 (rubles), the base salary of executing agents - 3600 (rubles), additional salary of executing agents - 360 (rubles), deductions for social needs - 1370, 16 (rubles), depreciation - 39.68 (rubles), other direct expenses - 180 (rubles), expenses for special equipment - 0 (rubles)

Thus, the cost price of this software was fixed to 5633.11 (rubles), and the selling price including VAT 7773.69 (rubles)

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