**ECONOMIC PART**

**Characteristic of an economic case of the project**

Diploma project ‘Automated Mobile Payment System’ is an application which provides payment services for both merchants and users. The system relies on today’s widely used mobile phone as payment client. Downloading the application, users can start transactions with registered merchants while merchants can request payment from users. Furthermore, importing and exporting balance from the current common credits card system(eg. Master card, Visa) into the mobile payment system is also available.

1. **Calculation of cost of materials for project accomplishment**

The estimate of costs for carrying out of scientifically research work settles payments under following clauses. Calculation is performed under the formula:

Where; K*TP* – the coefficient considering hauling expenses

(K*TP* from 1.0 to 1.10) for the project we accept K*TP =* 1*;*

H*pi –* norm of the expenses a material kind on the project;

C*i* – unit of selling price of material kind, ruble;

N – Quantity of applied kinds of materials.

Table 1 - Calculation of costs for materials

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| № п/п | The name of materials | Unit of measure | The price, ruble. | Quantity | The sum, ruble. |
| 1 | Paper format А1 | Sheet | 0.7 | 50 | 35 |
| 2 | Paper format А4 | Sheet | 0.15 | 200 | 30 |
| 3 | Stationery | - | - | - | 70 |
| 4 | Materials for experiences and designing | - | - | - | 120 |
| The sum of expenses | | - | - | - | 255 |

The estimate of costs for carrying out of scientifically research work settles payments under following clauses:

1. **Calculation of a base salary of the personnel occupied with accomplishment of works under the project.**

The size of costs settles payments under the formula:

Where; T*ci* – a wage rate for a day, categories of workers, ruble;

N*i* – quantity of workers of a category;

t*i –* time of actual work of the worker of a category under the project, day;

K*np -* coefficient of awards on bonus systems

(K*np* from 1.10 to 1.40) for the project we accept K*np = 1.2;*

Calculation of the produce in the table:

Table 2- Base salary calculation

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| № п/п | The name of categories of workers and posts | Quantity of units, the people | Salary for one month, ruble. | Coefficient of bonus surcharges | Expenditures of labour, months | The sum, ruble. |
| 1 | The supervisor of studies of the project | 1 | 1000 | 1.2 | 3 | 3600 |
| 2 | The engineer | 2 | 750 | 1.2 | 3 | 5400 |
| 3 | UI designer | 1 | 800 | 1.2 | 3 | 2880 |
| The sum of expenses | | - | - | - | - | 11880 |

1. **Calculation of an additional salary of the contractors, including the various payments provided by the labour law, under the formula:**

Additional wages include a variety of performers stipulated by the labour legislation of the payment and is calculated according to the formula:

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Where, Hnw – the specification of an additional salary,

Hnw from 10 to 25%, for the project it is accepted Hnw = 25%.

= 2970 ruble

1. **Calculation of deductions to social insurance under the formula:**

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Where, Hoc – rate of deductions on social ensurance (tax), Hoc = 30.0%

= 4455 ruble

1. **Calculation of expenses on scientific business trip under the formula:**

We calculate the other expenses for materials scientific and technical information and the fee for the use of internet and telephone, etc.

The cost is calculated according to the formula:

,

Where, H*kom* – the specification on scientific business trip expenses,

H*kom* from 5 to 20%, for the project we accept H*kom* = 20%.

= 11880 = 2376 ruble

1. **Calculation of common enterprise expenses under the formula:**

Indirect cost includes the cost of management and overhead cost, calculated according to the formula”

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Where, Нkос - the specification of indirect expenses, Нkос ≈ from 50 to 100 %, for the project it is accepted Нkос = 90 %

11880 = 10692 ruble

1. **Calculation of the complete cost value of the project:**

The total cost of scientific and technical products is determined as the sum of all cost in all respects (clauses 1-6) as according to the formula:

Cn = Pm + Pow + Pnw + Poc + Pkom + Pkoc

Cn = 255 + 11880 + 2970 + 4455 + 2376 + 10692 = 32628 ruble

1. **On level of profitability in percentage of the complete cost value the profit settles payments:**

At the average level of profitability in percent of the total cost is determined by the target profit unit of scientific and technical products according to the formula:

Pr =

Where, Yp - profitability level, Yp ≈ from 10 to 30 %, for the project we accept Yp = 20 %.

Pr = 32628 = 6525.6 ruble

1. **Calculation of the price of the project under the formula:**

To determine an approximate (estimated) wholesale price of scientific and technical products according to the formula,

Bn =

Bn = 32628 + 6525.6 = 39153.6 ruble

1. **Calculation of the tax to value added (VAT) under the formula:**

The Value Added Tax is determined by the formula:

VAT =

Where, Hvat - the tax rate on vat (the tax), Hvat = 20%.

VAT = 39153.6 = 7830.72 ruble

1. **Calculation of the price of the project taking into account the VAT under the formula:**

To determine the selling price of scientific and technical products with VAT according to the formula:

B= Bn +VAT

B = 391.53 + 7830.72 = 46984.32 ruble

Calculation of costs for the project and the project price are resulted in   
table 3.

Table 3 - The Estimate of costs for the project

|  |  |  |  |
| --- | --- | --- | --- |
| № | Clauses of costs | Calculation | The sum, ruble. |
| 1 | Materials () | Table 1 | 255 |
| 2 | Base salary () | Table 2 | 11880 |
| 3 | The additional salary () |  | 2970 |
| 4 | Deductions in population social insurance fund () |  | 4455 |
| 5 | Scientific business tripexpenses () |  | 2376 |
| 6 | Common enterprise expenses (Ркос) |  | 10692 |
| 7 | Total the cost value (Cn) | 255 + 11880 + 2970 + 4455 + 2376 + 10692 | 32628 |
| 8 | Profit () |  | 6525.6 |
| 9 | The project price () | 32628 + 6525.6 | 39153.6 |
| 10 | The value-added tax () |  | 7830.72 |
| 11 | The price from the VAT () | 39153.6 + 7830.72 | 46984.32 |

Conclusions: Automated Mobile Payment System where users can conduct secure mobile transactions and merchants can receive transactions has been achieved. Costs for development of such system have constituted 46984.32 ruble.