

## TEACHING STUDENTS AUTOMATION OF FINANCIAL REPORTS OF THE COMPANY BY USING SPREADSHEET SYSTEM IN MS EXCEL

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### ABSTRACT

This paper indicates the automation of preparing and presenting financial, statistical accounts of the companies which are deal with the business by using the spreadsheet in MS Excel and teaching these processes to students. As well as, teaching students the subject on “Information and communication technologies and systems in economics” from economics direction in higher education institutions. Moreover, the process of creation new functions and macros on the spreadsheet in MS Excel by using VBA(Microsoft Visual Basic for Applications) is shown in this paper

**Keywords:** Automation of technological processes, electronic digital signature, educating students to assign financial accounts.

### INTRODUCTION, LITERATURE REVIEW AND DISCUSSION

Developing of information and communication technologies in our country requires preparing qualified and well-educated specialists of information technologies.

It demands high responsibilities of professors and teachers who are in higher educational institutions. According to this, as the result of sufficient educating to students in specialties, increasing of the qualification and skills, and to direct their profession are considered the main purpose. Gaining enough knowledge which belong to their profession determines the future of our country.

It is known that, an automated system is one in which a process is performed by a machine without direct participation of human workers. It is implemented using a program of instructions combined with a control system that executes the instructions. Advantages of automated system are reducing labor costs, decreasing production cycle time and to involve investments widely. According to all advantages, our president Mr. Sh.M.Mirziyoyev is declared 2019 as the Year of Active Investments and Social Development.

To achieve automation is considered the main goal by using the computer software and information and communication technologies for ensuring the economical growth of the every company and preparing and presenting financial reports for its development.

Students from economics direction of the higher educational institutions will prepare financial reports of the taxes and statistics and present to government agencies in the near future career. For this reason, we should teach to students for preparing financial reports of the companies on the computer during the lesson of “Information and communication systems in economics” [1].

Students from economics direction will be instructed how to use the standard functions of the spreadsheet in MS Excel in order to prepare financial reports in their future career [2]. It is requested that, students should learn the functions according to their majors as well as to create new functions for solving exercises additionally. The creation of the new functions on the spreadsheet in MS Excel will be as following:

1. To select “Insert”→ “Module” on the menu of the software of VBA (Microsoft Visual Basic for Applications), a program of the new function is inserted on the open window. For example, we will program as the following for a social payment of the small companies.

*Function YaIT (Sum)*

*YaIT = 0.12 \* Sum*

*End Function*

2. Every new function which is inserted by the user indicates the category of “User defined” on the “Function wizard” library.

Students will insert the single tax (4%), income-tax (12%), accumulative pension provision (1%) and others by using VBA (Microsoft Visual Basic for Applications) program of the spreadsheet in MS Excel while preparing financial reports of the small business companies. After that, students may use this information.

Moreover, they may create new functions and also macroses and functional buttons with the help of VBA (Microsoft Visual Basic for Applications) on the spreadsheet in MS Excel.

*Macros* is taken from English that means macrocommand and creates the commands which are noted the sequences of actions by the user with the help of VBA (Microsoft Visual Basic for Applications).

The users will create macrocommands for compacting the tasks that are doing on the spreadsheet in MS Excel and will achieve automation of the process.

Automation of the preparing and assigning financial reports of the small companies by using the spreadsheet in MS Excel is producing effective results. The systematic educating the standard functions in the “Functional library” plays an important role on the continuous training system.

We will explain the algorithm of the process of preparing and assigning financial reports of the autotransport business company by using standard functions which are indicated above.

1. The quarterly financial accounting turnover is taken from the bank and inserted to the spreadsheet in MS Excel for automation.

2. We will select the nine columns on the MS Excel window and will give a name for every column. They are following: the first column is the date, the second is named the works that are done by the company, the third is accounting codes, the fourth is the decoding of accounting codes, the fifth are funds which are transferred on the companies, the sixth are outgoings, the seventh are incomings. We will select the names that show the conversion of Uzbek soum in currency on the next columns and we will insert the formulas by the help of  $f(x)$  functions row on the decoding column.

=IF(ISBLANK(C5); “”; VLOOKUP(C5; Accodes; 2; FALSE)

=IF(ISBLANK(C6); “”; VLOOKUP(C6; Accodes; 2; FALSE)

=IF(ISBLANK(C7); “”; VLOOKUP(C7; Accodes; 2; FALSE)

=IF(ISBLANK(C8); “”; VLOOKUP(C8; Accodes; 2; FALSE)

=IF(ISBLANK(C9); “”; VLOOKUP(C9; Accodes; 2; FALSE)

=IF(ISBLANK(C10); "";VLOOKUP(C10; Accodes;2;FALSE) and etc. can continue as necessary.

When the codes related to the accounting are inserted on the column of the accounting codes, the decoding reflects automatically.

On the next step, we will insert the formulas with the help of functions f(x) row which are indicate the columns of incoming and outgoing funds separately [3].

= SUMIF(G5; "<0"; G5)

= SUMIF(G5; ">0"; G5)

= SUMIF(G6; "<0"; G6)

= SUMIF(G6; ">0"; G6)

= SUMIF(G7; "<0"; G7) and etc. as necessary.

After these formulas are inserted, inserting, outgoing and incoming funds are reflected separately on the column funds that are done by companies and bank. (Figure 1).

|    |            |  |                  |                                    |                                  |            |                        |   |
|----|------------|--|------------------|------------------------------------|----------------------------------|------------|------------------------|---|
| 2  |            |  |                  |                                    |                                  |            |                        | - |
| 3  |            | <b>Enterprise "IQBOL PORLOQ TRANS"</b>   |                  |                                    |                                  |            | <b>Account balance</b> |   |
| 4  |            |  |                  |                                    | 2019 year                        |            | <b>2 753 600,00</b>    |   |
| 8  | Date       | Name of work performed by the enterprise | Accounting codes | Decoding of the accounting codes   | Funds involved in the enterprise | expenses   | Incomings              |   |
| 12 | 06.12.2019 | Payment for electricity                  | 9420             | Administrative expenses            | -150 000                         | -150 000   | 0                      |   |
| 13 | 06.12.2019 | Turon bank monthly fee                   | 5110             | Payment account                    | -25 000                          | -25 000    | 0                      |   |
| 14 | 06.12.2019 | Incoming                                 | 5010             | Cash in national                   | 752 000                          | 0          | 752 000                |   |
| 15 | 06.12.2019 | Payments for servicing the bank          | 5110             | Payment account                    | -2 400                           | -2 400     | 0                      |   |
| 16 | 06.12.2019 | Incoming                                 | 5010             | Cash in national                   | 1 050 000                        | 0          | 1 050 000              |   |
| 17 | 06.12.2019 | Insurance contributions of citizens      | 9420             | Administrative expenses            | -320 000                         | -320 000   | 0                      |   |
| 18 | 07.12.2019 | Personal income tax                      | 6410             | Physical income tax                | -445 000                         | -445 000   | 0                      |   |
| 19 | 07.12.2019 | Depayment to the INPS                    | 6414             | Deduction to INPS                  | -26 000                          | -26 000    | 0                      |   |
| 20 | 07.12.2019 | Unified social payment                   | 6510             | Single social payment              | -1 250 000                       | -1 250 000 | 0                      |   |
| 21 | 07.12.2019 | Salary                                   | 6710             | Settlements with staff for payment | -650 000                         | -650 000   | 0                      |   |
| 22 | 08.12.2019 | Incoming                                 | 5010             | Cash in national                   | 550 000                          | 0          | 550 000                |   |
| 23 | 09.12.2019 | Incoming                                 | 5010             | Cash in national                   | 725 000                          | 0          | 725 000                |   |
| 24 | 10.12.2019 | Incoming                                 | 5010             | Cash in national                   | 650 000                          | 0          | 650 000                |   |
| 25 | 11.12.2019 | Incoming                                 | 5010             | Cash in national                   | 635 000                          | 0          | 635 000                |   |
| 26 | 12.12.2019 | Statutory fund                           | 8510             | Statutory fund                     | 2 050 000                        | 0          | 2 050 000              |   |
| 27 | 13.12.2019 | Single tax payment                       | 6411             | Single tax payment                 | -1 535 000                       | -1 535 000 | 0                      |   |
| 28 | 14.12.2019 | Incoming                                 | 5010             | Cash in national                   | 745 000                          | 0          | 745 000                |   |

Figure 1. Preparing the financial reports of the company on the spreadsheet

The financial accounts which are entered to the program included information about how much money the company received during three months, how much money is paid for targeted payments (taxes, subscriptions, salary and etc.) and the payments for needs of the company.

The information that is entered on the first page is automatically displayed on the next page by the account number (Figure 2). For example, 5010 shows the daily receipts, from 5110 to 5112 are banking services, from 6400 to 6700 are targeted tax payments, from 6710 to 6712 show the salaries for employees.

| Enterprise "IQBOL PORLOQ TRANS" |                  |           |                |                                    |            |
|---------------------------------|------------------|-----------|----------------|------------------------------------|------------|
| Income                          |                  |           | Costs          |                                    |            |
| The code                        | Account          | Incomings | The code       | Account                            | Expenses   |
| 5010                            | Cash in national | 5 107 000 | 5110           | Payment account                    | -27 400    |
| 8510                            | Statutory fund   | 2 050 000 | 6410           | Physical income tax                | -445 000   |
| 9010                            | Other income     | -         | 6411           | Single tax payment                 | -1 535 000 |
| 9020                            | Previous debtors | -         | 6414           | Deduction to INPS                  | -26 000    |
| 9030                            | Work Financing   | -         | 6510           | Single social payment              | -1 250 000 |
| 9031                            | Income           | -         | 6710           | Settlements with staff for payment | -650 000   |
| Total revenue                   |                  | 7 157 000 | 9420           | Administrative expenses            | -470 000   |
|                                 |                  |           | Total expenses |                                    | -4 403 400 |

Figure 2. Reflection of the inserted information related to the accounting codes

It is given in figure 2, the displayed information related to the numbers are entered in the “Personal Cabinet” owned by the company through the electronic digital signature issued by the State tax authority.

Quarterly financial reports are submitted to the special program of the portal [my.soliq.uz](http://my.soliq.uz). The first special program is an automated program of calculating single tax. There is must be shown the value of defined 4% which is need to be payed from net proceeds from company.

As well as, sending of the income tax (12%), accumulative pension benefits (1%) and others according to the second, third and fourth automated programs is done.

In conclusion, teaching to students from economics direction in the higher education institutions is focused on the subject of “Information and communication technologies and systems in economics” and preparing and assigning financial and statistical reports will produce the following results [4]:

- ✓ increases the interests of the students on the subject of “Information and communication technologies and systems in economics”;
- ✓ develops the skills for solving other economic issues;
- ✓ forming the professional competence of the students;
- ✓ provides the professional motivation of the students;
- ✓ teaches students to evaluate their own performance and make their own decisions;

In order to achieve such results, a teacher of the subject of “Information and communication technologies and systems in economics” must have the following qualifications:

- clearly defining the purpose of the topic which is taught;
- identify the main concepts that are taught related to the purpose of the topic;
- to have knowledge about financial reports of the company;
- to have an experience in computer programs used for preparation of the financial reports;
- to provide the main concepts to students by using information and communication technologies;
- to give the appropriate tasks in practices and laboratories;
- to control the learning the tasks by students

- to provide and to introduce the normative documents of the information and communication technologies of the Republic;
- to rework with students who are failed the topic;

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