

## ABSTRACT

for coursework, student Maxim Slyzkoukh, group XA-41  
on discipline "Computer technologies and programming" on the topic of  
*"Development of the project for the studying of sorting algorithms"*

After analyzing the task, the means necessary for its implementation were determined. In the coursework, three sorting algorithms have been studied: insertion, bubble and selection. Studies were carried out by both linear arrays of custom size (set by the user), and by sorting matrix columns in increasing order of their smallest elements. The development environment Visual Basic 6.0 was used. A project that includes 8 forms was developed. The program allows user to sort square matrixes of any size with chosen method. The sorting time and the number of swaps for the selected methods can be researched. The results of sorting and research are displayed in the table and chart respectively. Each form has a reference with detailed instructions for the user.

The performance of each method and the dependence of the efficiency on the length of the array we studied. It is shown that among the studied methods the most effective are selection and insertion. Based on the obtained results it was inferred that the selection sort is less dependent on the length of the array and is generally more stable.

In addition, the possibilities for developing user interface of such controls as TextBox, Label, CommandButton, OptionButton, CheckBox, MSFlexGrid, PictureBox were discovered. Line and Point methods were used.