ABSTRACT

for coursework, student Pavlo Rybenko, 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, selection. Studies were carried out by both linear arrays of custom size (set by the user), and by sorting matrix rows in in descending order of their biggest elements. The development environment Visual Basic 2006 was used. A project that includes 5 forms was developed. The program allows user to sort square matrixes of any size (up to 500 items) 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. The program provides an opportunity to record that data in a file. 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 were studied. It is shown that among the studied methods the most effective is selection.

In addition, the possibilities for developing user interface of such controls as TextBox, Label, MSFlexGrid, PictureBox, CommandButton, OptionButton, CheckBox.