**Operating systems 2 project documentation**

**Project description:**

The project asked to build GUI to browse a computer and choose certain directory (may include subdirectories) of textual type and apply some statistics which are find the occurrences of present verb to be in every file on its own, find the longest and shortest word in every file on its own and in the whole directory, and the number of words per file/directory.

**What we have actually done:**

we established four classes in java which are GUI class to create Graphical User Interface with buttons, checkboxes, and text areas, New\_Class class that obtain a path array for textual files and assign each file to a certain thread, My Run class that provides a method for running the threads, and My Project class to do the statistics that are mentioned.

**Team Members Roles:**

Gowaher: created and assigned a threat to each file.

Rodina: find “txt” files and save them in an array.

Thanaa: word statistics functions.

Yossef: connecting the classes to each other and testing the code.

Sara: project documentation.

Zeina: gui.

**Code documentation:**

-GUI class imports several classes from java.awt and javax.swing packages then uses them to create the frame, panel, buttons, textarea and table model.

-New Class contains a method that creates an array that holds the file paths.

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-Read the files content using “BufferedReader “:

Which is a class which simplifies reading text from a character input stream. It buffers the characters in order to enable efficient reading of text data.

-calls My Run (BTW My Run class has a method for running a thread) to start a thread for each file.

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Calls My Project class to apply the statistical aim, which is count longest and shortest words,

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number of occurrence (you, is, are),

Number of words in each file and the longest and shortest word in the whole directory(and subdirectories).

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The output will look like this.

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And as we can see in the following image each thread handles a file and return the required values.

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