Team Name

Code Breakers

Problem statement title

Method - Trace Analyser

Role of each Team Member

1. Anupriya Singh:
   - Primarily involved on working on the, goal, “Compare two trace files: one from failing and passing case each and find out the anomaly”.
   - Used Xtrace commands to generate trace files (.trc) and convert it into log files with the help of Command Prompt.
   - Developed a java code to read the log files line by line and determined whether or not the exception is present or not.
   - Displayed anomalies in the stack trace files
   - Integration of all the modules into single code
   - Managed and coordinated the working of other members
2. Jyoti Pandey
   - Designing a Graphical User Interface(GUI) for Method Tracer using WindowBuilder
   - The GUI consists of text fields etc and is the part where user can interact.
   - Integration of all the modules into single code.
   - Worked on writing code to print commands directly in the command prompt.
   - Worked on running the appropriate java file from the GUI

Role of each team member cont

3. Nidhi Wadhwa

- Primarily worked towards the goal, “Parse one or more trace files and create a tabular view for the number of times each method is invoked”. Calculated the count of number of times a method is invoked in class and displayed the same in a tabular view
- Helped in calculating and displaying entry time , exit time and execution time of each method in the Java file
- Further, displayed which of passing or failing case takes longer to execute and by how much

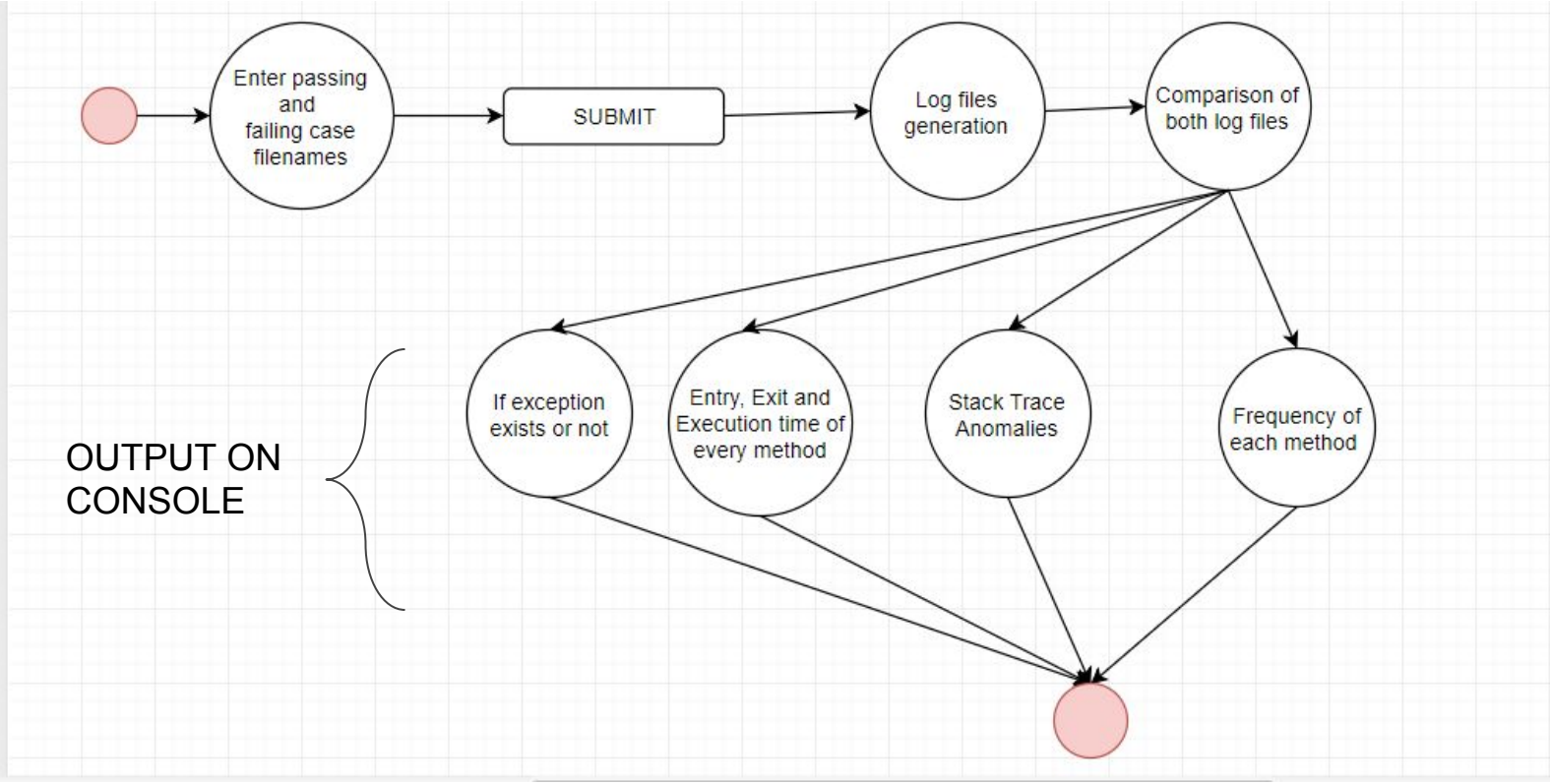
4. Ronika Das

- Involved in generating stack trace of Java files and suggesting ideas to implement the same
- Suggested ideas and helped in implementing the module to detect exception /anomalies in the generated log files
- Integration of all modules into a single code

Tools used for Method-Trace Analyser

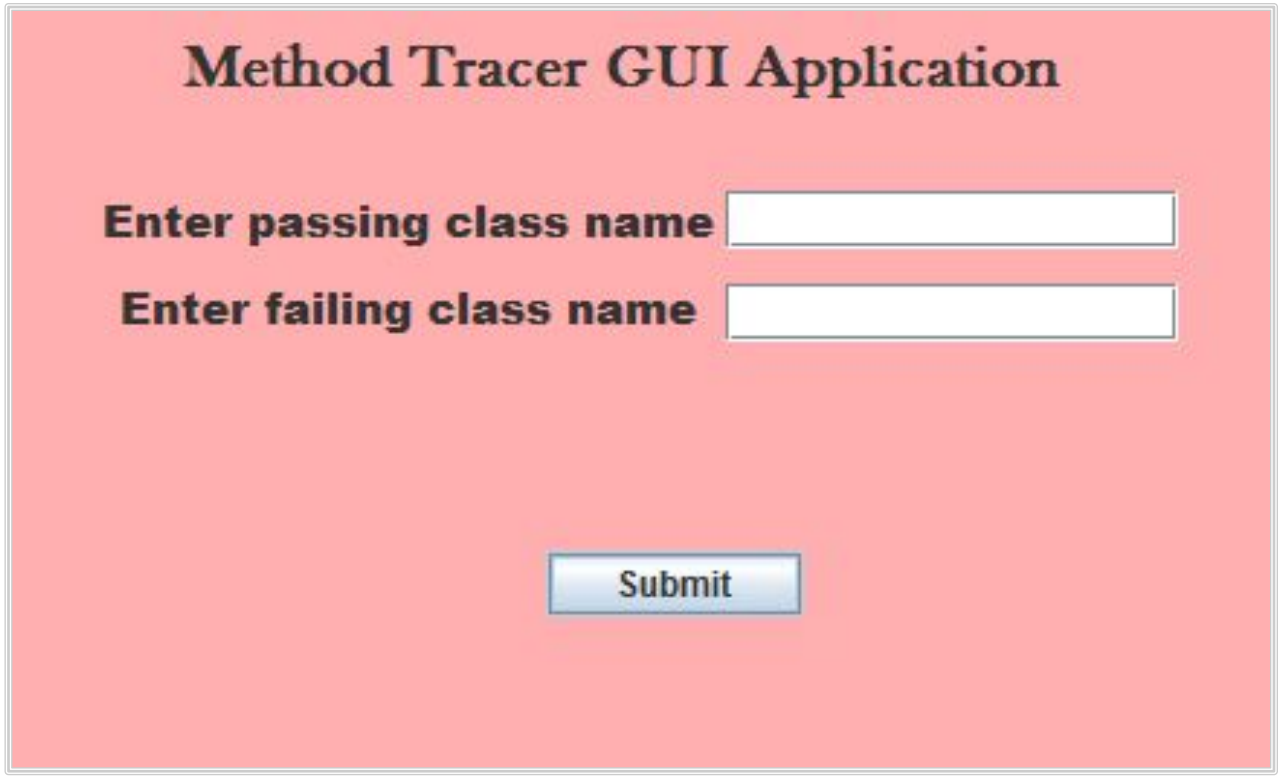
- Eclipse Photon
- WindowBuilder
- Open JDK with OpenJ9

IMPLEMENTED COMPONENTS DEFINED FROM SCOPE OF WORK

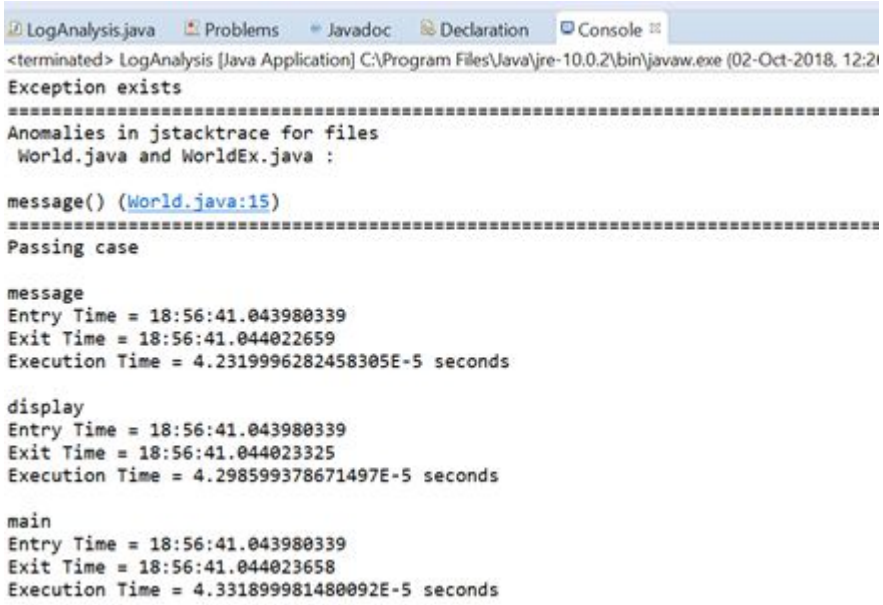


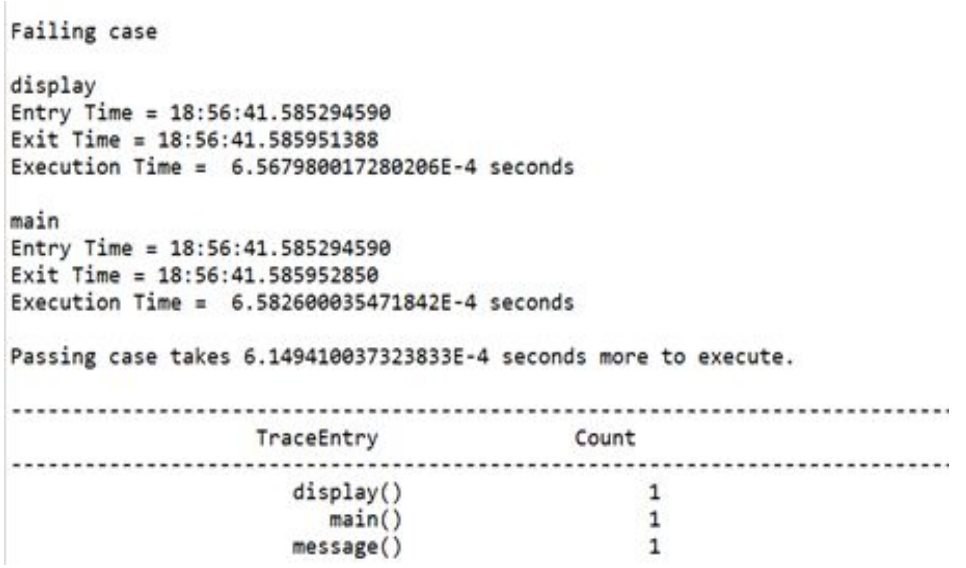
FLOW CHART OF THE PROCESS

SCREENSHOT OF GUI



SCREENSHOTS OF OUTPUT OF METHOD TRACE ANALYSIS





GUI

- The GUI component is build using WindowBuilder.
- It consists of two text fields for the class names to be compared and analysed.
- It has a submit button which when clicked will call java method to perform the following tasks:
  - Comparing the trace files, stack trace of passing and failing case for finding out the anomalies.
  - Finding out the time taken by each method for execution.
  - Showing the number of times each method is invoked in the program, in tabular form.
- The output of the tasks is shown on the console.

WORKING

- Firstly, the user needs to enter two class files' names in the given text fields. These should be the ones specifying the passing and failing case of each program.
- Press the submit button.
- This will lead to execution of the program in the background.
- The file names entered will be captured as strings in the code.
- Then, the Xtrace commands will generate trace files(.trc) for the entered files.
- After that, the command to generate the log files from the trace files will be implemented.

WORKING CONT...

- Log files of the passing and failing case are compared to determine what anomalies(exceptions) led to the failing of the program.
- Stack trace is compared to determine when and which line from the code leads to the exception.
- Time taken by each method in the class file to execute is shown, thus helping to know which method took more time.
- And lastly it will also give the count of number of times each method of the program is invoked.
- Output is then displayed on the console.

THE END