

System Programming 2021

Assignment 2

Instructions for Submission:

1. This is an individual assignment of 20 marks.
2. The submission should be a single zipped folder with the naming convention - *A2_Lastname_Firstname.zip*, e.g., *A2_Doe_Jane.zip*
3. The submission will consist of the following files -
 - a. Code files wherever required. Naming convention to be followed is *Q1_A2.sh*, *Q2_A2.c*..and so on
 - b. One pdf document containing solutions of all questions and screenshots of the output. Naming convention to be followed is *A2_Report.pdf*
4. The files need to be well commented and explanations of each command with the options used need to be written

Ques1: Write a script which displays “Good morning”, “Good afternoon” or “Good evening”, on the monitor, depending on the system time of running the script.

[5 marks]

Ques2: Run Gcov on the given file (que2.c) and submit a document (fullname_file2.docx) containing the screenshot of the command and your inferences based on the result. Also submit the generated output file.

- 1) Normal execution of Gcov on the given code.
- 2) To get the branch and call counts after each block of code.

[5 marks]

Ques3: Compile and run Fibonacci Program (fib.c) and generate a text file (fullname_fib_analysis.txt) containing profiling information of the given c program. Optimize your code on the basis of your understanding from the profiling information and submit the optimized code as well as a text file (fullname_fib_new_analysis.txt) containing profiling information of the optimized code.

[10 marks]

Link (fib.c and que2.c):

<https://drive.google.com/file/d/1pow5XHukrOUrYD9j-g8AYMKjQ7g99Zjf/view?usp=sharing>