National University of Sciences & Technology School of Electrical Engineering and Computer Science Department of Computing

CS 213: Advanced Programming (3+1): BSCS 6AB Fall 2018

| Assignment 2: Multithreaded Application | | |
|--|--|--|
| CLO: Understand and apply various code management tools and techniques | | |
| Maximum Marks: 50 | Instructor: Abid Rauf | |
| Announcement Date: 28th September 2018 | Due Date: 1st October 2018 11:55 pm on LMS | |

Instructions:

- Upload a zip file containing your code folder and results.
- The assignment is Individual

Tasks:

You need to develop application using threads in Java. Read a long file (> 500,000 characters ASCII) and develop a frequency distribution of characters. You may use any design pattern if you feel comfortable.

Compare your results when the same program is run without Threading. Show your results in a table clearly mentioning the running time.

Clearly show the results in the below two tables.

| Characters | Frequency count |
|------------|-----------------|
| Α | |
| В | |
| С | |
| @ | |
| # | |

| File Size (Bytes) | Time (ms) Without Threading | Time (ms) With Threading |
|-------------------|-----------------------------|--------------------------|
| | | |
| | | |