ICT1007 Operating System

Module assignment 1:
Study of Various Published CPU Scheduling Algorithm

In this assessment task, 5 IEEE conference papers are given and each of you are required to work **individually** to implement one conference paper each (for the team that has 4 members, please choose 4 out of the 5 papers). As a **group**, the team needs to conduct a perform analysis (for example, average waiting time, average turnaround time) and come out with explanation on the performance of the algorithm in the 5 (4 if you have 4 members) papers. The team members need to decide among themselves who is to implement each of the conference paper. All the 5 papers (4 if there are only 4 team members) are to be implemented.

The weightage of the **individual component is 60%** and **group component is 40%.** However, there is a requirement for you to implement the algorithm in the paper to be awarded marks for the group component. Implementation of the conference paper and getting at least "**ATTEMPTED**" is a hurdle for getting "group component" mark for this assignment. For example, **if you did not implement the algorithm in the conference paper OR awarded marks for at least "ATTEMPTED" in individual component, you will get zero mark for the category "PERFORMANCE ANALYSIS AND DISCUSSION" and "PRESENTATION"**.

In the unfortunate event that there are members in the group fail to implement the conference paper algorithm, the remaining group members only need to analyse those that they have implemented and will be assess accordingly. That is, there is no penalty on the remaining members.

Implementation

The algorithm needs to be implemented in C language. **No mark will be awarded** if implemented in other languages (for example, C++ is not acceptable). The 5 IEEE conference papers can be downloaded from LMS.

Reports

Report should not be more than **12 pages with minimum font size 12**. Source codes with comments (**compulsory**)are to be attached as appendix and not counted towards the 12 pages. In addition, both title and content page(i.e. the single page that indicate the content of the report) is not counted as part of the 12 pages. The report needs to clearly state each member's contribution. The report will be graded by your tutor. Hence, for any query, please approach your individual tutor.

Deadline

19 March 2021 (Friday) @2359 hrs 00 sec. All report and source code must be uploaded to Dropbox before the deadline. You can zip them into a single file. **Late submissions will be penalized.**

Assessment Criteria

	POOR	ATTEMPTED	GOOD	EXCELLENT	POINTS
ALGORITHM IMPLEMENTATION (INDIVIDUAL) The extent to which the source codes are well comment and explain. Algorithm is implemented correctly.	The algorithm produces inaccurate result.	The algorithm produces correct result. Poor or no comment on the source codes.	The algorithm produces correct result. Source codes are well explained and comment.	The algorithm produces correct result. Source codes are well explained and comment. Extensive efforts are demonstrated to consider many different scenarios.	60
PERFORMANCE ANALYSIS AND DISCUSSION The extent to which the performance of the schedulers is analyzed and explained	Results are presented. Little comparison is performed. No analysis is made.	Performance of the schedulers are compared. Little or no analysis is presented	Reasonable analysis on the schedulers with intuitive reasons on their performance.	In depth analysis on the scheduler performance. Excellent arguments and reasons explaining the performance of the scheduler.	30
PRESENTATION e.g. Professional, consistent format that is free of errors	More than 12 pages.	There are **some issues** with presentation in terms of consistency, layout, use of font, spacing.	The work is mostly consistent with only **one or two minor issues** in terms of layout, use of font, spacing, appendix and structure	The Presentation is **exceptional**. The work is consistent and professional in length, layout, use of font, spacing, appendix and structure	10