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|  | | **ASSIGNMENT COVER PAGE** | | | C:\Users\hoching.tay\Desktop\Lincoln_UK_06092017-01.png |
| **Programme** | | | **Course Code and Title** | | |
| UCSEW | | | COS3023/N Operating System & Concurrency | | |
| **Student’s name / student’s id** | | | **Lecturer’s name** | | |
|  | | | Siti Shafrah Shahawai | | |
| **Date issued** | **Submission Deadline** | | | **Indicative Weighting** | |
| 05.06.2023 | 30.06.2023 | | | 30% | |
| **Assignment [1] title** | Analysis of Mobile Operating System and CPU Scheduling Algorithm | | | | |
| This assessment assesses the following course learning outcomes | | | | | |
| **# as in Course Guide** | **UOWM KDU Penang University College Learning Outcome** | | | | |
| CLO1 | Describe the architecture of an operating system (OS) and its services and evaluate its implementation in a variety of scenarios. (C2, PLO1) | | | | |
| CLO2 | Discuss the process model, scheduling, IPC and synchronisation services and its behaviour in multitasking system. (C2, PLO3) | | | | |
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| **# as in Course Guide** | **University of Lincoln Learning Outcome** | | | | |
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| **Student’s declaration** | | | | | |
| I certify that the work submitted for this assignment is my own and research sources are fully acknowledged. | | | | | |
| Student’s signature: | | | | | |
| Submission Date: | | | | | |

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| **Dates and Mechanisms for Assessment Submission and Feedback** | |
| **Mechanism for handout to students** | OpenLearning LMS/ MS Teams |
| **Mechanism for submission of work by student** | *Softcopy online submission via OpenLearning/MS Teams* |
| **Date by which work, feedback and marks will be returned to students** | 14.07.2023 |
| **Mechanism for return of assignment work, feedback and marks to students** | Feedback will be provided by a marking template. This will be available to students via OpenLearning/MS Teams. The discussions at the walkthroughs will also provide informal feedback |

# COURSEWORK SUBMISSION GENERAL INFORMATION

# Academic Integrity Statement

You must adhere to the university college regulations on academic conduct. Formal inquiry proceedings will be instigated if there is any suspicion of plagiarism or any other form of misconduct in your work. Students must **NOT** collude with other groups of students or plagiarize their work.

**We practice zero tolerance towards plagiarism, and we use Turnitin to evaluate the similarity index. Your similarity index score must not exceed 20%.**

**Your tasks must be your own work. Unless the use of Artificial Intelligence (AI) is permitted in your assessment task, using AI to complete your assignment is a form of plagiarism.**

# Nature of the submission required

A softcopy of your assignment in **PDF version** should be submitted to lecturer, no later than the date and time stipulated on the cover sheet. In addition, an electronic copy of your work must be submitted to Turnitin. The first page of your report, immediately after the cover page, must be a page from Turnitin clearly showing your name and your Originality Score (Please refer to [submission arrangement](#_Submission_arrangement)).

Diagrams may be used where they are helpful to support your arguments or description. If they are not your own work, the source must be referenced. Please help us to handle and mark your work efficiently.

Please take note for group submission, only **one submission per group**. This will contain both the group and individual elements. The individual element must be clearly labelled to indicate which group member completed the task.

# Documentation guidelines

Student is required to submit a **SOFTCOPY** of the report and ensure that it use the following formatted styles: 1) Font type: **ARIAL**, 2) Font size: **11** **pt**., 3) Line spacing: **Single spacing** and 4) Page layouts: **Justify**. Please make sure you have proper format alignment for all paragraphs, following standard writing style and use **HARVARD CITATION STYLE** for citation. Please include a **HEADER** with the following information: **Student ID, Student name, Course code and Assignment type**. Please also include a proper cover page for your submission which contains information about the students, assignment, course, and department with UOWM KDU Penang University College and University of Lincoln (UoL) logos on top (Please remove the UoL logo from the UCSWW programme). Also include page number at the footer page and list of references, which is shown in the last page.

# Penalties for Late Submission

For late submission of this Assignment, a penalty of a reduction by 10% of the maximum mark may be applicable for each Calendar Day or part thereof that the submission is late. An Assignment submitted more than **TEN** Calendar Days after the deadline will have a mark of zero recorded for this Assignment.

# Submission arrangement

1. Cover page
2. Turnitin similarity report
3. Table of Content
4. Main Report
5. Reference List or Bibliography List (whichever applicable)
6. Marking Rubric (in landscape orientation)

# File naming convention

Please make sure you save your filename with the following format:

* <Student Name>\_coursecode\_A1\_May23.pdf

# Assignment instructions/Background

**Description**

This assignment is an **individual and group assignment.**

**Group Size**: The assignment is designed for a group of 4 students.

**Grading Assessment:** Group Task (60%) and Individual task (40%). Please refer to the marking rubric for the assessment.

**Task**

1. **Group Task : 60% (CLO1)**

Mobile operating systems are used by millions of people worldwide to run a variety of devices, including smartphones, tablets, and wearable technologies. These devices provide users with a wide range of functionality, such as calling and messaging, internet and cellular data connectivity, the ability to multitask, interactive user interfaces, and access to a wide variety of third-party applications and services to further improve the user experience.

The Apple iOS operating system for the iPhone and the open-source Google Android operating system are two of the most popular mobile operating systems available today. The mobile operating system and end-user experience are approached differently by these two mobile OSes.

You are required to write a detailed report according to this research scope:

Analyse and differentiate Apple iOS operating system and Google Android operating system in terms of its history/evolution, architectures/structures, features, types/examples and its advantages and disadvantages.

Based on the analysis, discuss which mobile operating system that you preferred. Provide your reason to support your answer.

You may creatively include an infographics or figure in this report using your own drawing or illustration. You are not allowed to plagiarize any figure/infographics from internet and other sources. The maximum page limit for this report is 10 pages excluding the table of contents, figures, diagram, and references.

Please manage your content and plan the structure of your report according to the scope of this topic research. Your report should have sufficient number of in-text citations and a minimum of 12 high-quality references to back up your write-up.

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1. **Individual Task : 40% (CLO2)**
2. CPU (Central Processing Unit) scheduling algorithms are used in operating systems to determine the order in which processes are executed on a CPU. These algorithms play a crucial role in managing the allocation of CPU time to different processes efficiently.

There are various CPU scheduling algorithms, each with its own approach and characteristics.

Select one of the scheduling algorithms that you have learned in lecture sessions and discuss the selected scheduling algorithm in terms of its characteristics, advantages, and disadvantages. Provide an example that demonstrates the allocation of processes using the selected scheduling algorithm.

Your report should have sufficient number of in-text citations and a minimum of 3 high-quality references to back up your write-up.

Include this individual discussion in the group report.

1. **Peer Evaluation:**
   * Please access the peer evaluation form through the link provided in the COS3023/N Microsoft Teams channel.
   * Each group member will provide individual marks for the peer evaluation, which will be averaged to calculate the final marks of peer evaluation assessment.

**Deadline**

The deadline for report submission of this assignment is on **date 30.06.2023.**

----- Please refer to the attached excel file for the marking rubric -----