Asia Pacific University of Technology and Innovation

Operating System and Computer Architecture (CT049-3-1-OSCA)

Total Marks: 40%

**Group Assignment**

|  |  |  |
| --- | --- | --- |
| Intake | : |  |
| Hand-Out Date | : |  |
| Hand-in Date Work | : |  |
| Lecturer | : |  |

**Instructions:**

This is a group assignment. You will be setup into groups (about 6 members per group).

The group is to research and investigate **TWO** areas; **Hardware** and **Software** (Computer Architecture and Operating System) of an information technology as it is used within a context.

The goal of this assignment is to demonstrate knowledge and understanding in the specified areas. The total word count of the report should be within the range of 9,000 words. You may exceed this word count if your topic necessitates it however, the absolute limit for word count should be +/- 1000 words.

No marks will be awarded for the entire assignment if any part is copied directly from published materials or from another student. All submissions should be made on or before the due date. Any late submissions after the deadline will not be entertained. **Zero (0)** mark will be awarded for late submission unless extenuating circumstances are upheld.

As a group, you will need to select a specific computing device and its’ operating system to produce a **Report** which covers the following details.

**A descriptive Report containing:**

* 1. An introduction to the device and a description of the **Hardware** functions and capabilities from your understanding of Computer Architecture.
* Introduction to the device: showcase everything that comes out the box.
* A collection of tables capturing the details of the most significant hardware components; for example:

|  |  |  |
| --- | --- | --- |
| **Component** | **Specification** | **Rating** |
| CPU | 2.7GHz dual-core Intel Core i5 processor (Turbo Boost up to 3.1GHz) with 3MB shared L3 cache | 4/5 |
| **Description** | | |
| This device is capable of running 2.7 billion calculations per second……. | | |
| **Opinion and Advantages/Disadvantages** | | |
| This is a very good processor as its clock speed is more than enough to run most applications……. | | |

* A conclusion about the most important components the device has to offer.
  1. A description of the OS functions and capabilities (Services and facilities provided by the OS), for example:
     + User Interface (use screen shots)
     + File Management
     + Security and Protection Services
     + Etc.

**Guidelines for the Report:**

Document the results of your work in a **professional and systematic** manner, in the form of a **computerized report,** appropriately formatted.

Your completed documentation should include the following sections:

1. Cover
2. Abstract
3. Table of contents
4. Introduction
5. Chapters / sections
6. Limitations (optional)
7. Conclusion
8. References
9. Appendices (Data charts, extra screen captures etc.)
   * Work Breakdown Structure
   * Minutes of Meetings (At least 3 meetings required)

Frequently Asked Questions (At least 5 questions for Device and 5 questions for OS)

(See sample here: [Click Me](https://www.searchenginejournal.com/best-faq-page-examples/267709/#close))

* + Gantt Chart (Plan of activities)

**Assessment Criteria (Marking Grid):**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Criteria | % | Scales | | | | |
|  |  | Distinction | Credit | Pass | M-Fail | Fail |
| An introduction to the device and a description of the Hardware functions and capabilities from your understanding of Computer Architecture. | 10 | Excellent introduction to the device selected, highlighting most significant innovations.  Excellent description of key hardware components detailing form and function, while also specifying key advantages and disadvantages.  Analysis was discussed comprehensively and logically connected in light of the purpose of the report. | Good introduction to the device selected, highlighting some significant innovations.  Good description of key hardware components detailing function.  Analysis was discussed comprehensively and logically connected. | Acceptable introduction to the device selected, highlighting primary innovations.  Sufficient description of key hardware components detailing function.  Analysis was discussed comprehensively. | Introduction to the device selected lacks detail and does not highlighting primary innovations.  Less than sufficient description of key hardware components. No specific mention of importance of components.  Analysis could be discussed more comprehensively. | Poor introduction to hardware and minimal description of key hardware components.  The report fails to identify or discuss all the relevant aspects for analysis. |
| A description of the OS functions and capabilities (Services and Facilities provided). | 10 | Excellent description of key operating system functions.  The report includes a comprehensive list of purposefully selected and well justified discussion on the functionality of the operating system. | Good description of key operating system functions.  The report includes a comprehensive list of software functionalities, purposefully discussed to highlight importance. | Sufficient description of key operating system functions.  The report includes a partial analysis of the operating system functions. | Less than sufficient description of key operating system functions.  The report includes a partial analysis of the functions of the operating system. | Poor description of key operating system functions.  The report does not include any analysis. |
| A well-articulated discussion. | 20 | Shows outstanding style going beyond usual college level; rhetorical devices and tone used effectively; creative use of sentence structure and coordination .  The report is organised logically and formatted as a report, specifically for its purpose. The writing is articulate. The tone is appropriate and consistent. | Attains college level style; tone is appropriate and rhetorical devices used to enhance content; sentence  variety used effectively.  The report is organised logically and formatted as a report, though not  specifically for its purpose. The writing is mostly articulate, The tone is appropriate and mostly consistent. | Approaches college level usage of some variety in sentence patterns, diction, and rhetorical devices.  The report is organised logically and formatted as a report, though not specifically for its purpose. The writing is mostly articulate. The tone could be more appropriate and/or  consistent. | Mostly in elementary form with little or no variety in sentence structure, diction, rhetorical devices or emphasis.  The report is organised logically but not formatted as a report. The writing is understandable. The tone is not appropriate or consistent. | The report is neither organised logically nor formatted as a report. The tone and accuracy of language used in the writing is not understandable at times. |
| Discussion references the selected technology. | 20 | Meets all formal and assignment requirements and evidences attention to detail; all margins, spacing and indentations are correct; essay is neat and correctly assembled with professional look.  The report follows a referencing style that complies with the Harvard style, and the in-text citations are made purposefully. | Meets format and assignment requirements; margins, spacing, and indentations are correct; essay is neat and correctly assembled.  The report follows a referencing style that complies with the Harvard style, and the in-text citations are mostly purposeful. | Meets format and assignment requirements; generally correct margins, spacing, and indentations; essay is neat but may have some assembly errors.  The report follows a referencing style that mostly complies with the  Harvard style, though the in-text citations are not made purposefully. | Fails to follow format and assignment requirements; incorrect margins, spacing and indentation; neatness of essay needs attention.  The report follows a referencing style that does not comply with the Harvard style, or only includes either the in-text citations or the reference list. | The report does not include any citations and/or a reference list. |
| Critical review of the specific technology. | 30 | Writing shows high degree of attention to logic and reasoning of points. Unity clearly leads the reader to the conclusion and stirs thought regarding the topic.  Content indicates synthesis of ideas, in-depth analysis and evidences original thought and support for the topic. | Writing is coherent and logically organised with transitions used between ideas and paragraphs to create coherence. Overall unity of  ideas is present.  Content indicates original thinking and develops ideas with sufficient and firm evidence. | Writing is coherent and logically organised. Some points remain misplaced and stray from the topic. Transitions evident but not used throughout essay.  Content indicates thinking and reasoning applied with original thought on a few ideas. | Writing lacks logical organisation. It shows some coherence but ideas lack unity. Serious errors.  Shows some thinking and reasoning but most ideas are underdeveloped and unoriginal. | Poor review of original content from group work. |
| A well formatted report. | 10 | Excellent formatting. Line spacing, numbering, margins & headers/footers done properly  Spelling and grammar checks done. | Good formatting.  Most elements of formatting are done very well. | Sufficient formatting done. | Works looks a bit unpolished due to missing formatting elements and typos. | Poor formatting.  Very little consideration for readability. |

**Work Breakdown Structure:**

|  |  |  |
| --- | --- | --- |
| **Student** | **Allocation of Work** | **Signatures** |
| S1 (Name) |  |  |
| S2 (Name) |  |  |
| S3 (Name) |  |  |
| S4 (Name) |  |  |
| S5 (Name) |  |  |
| S6 (Name) |  |  |

**Minutes of Meeting**

**(*See Link*:** [*Click Me*](https://www.wildapricot.com/articles/how-to-write-effective-meeting-minutes)**)**

# Call to order

A meeting of **[Organization or team name]** was held at **[Location]** on **[Date]**.

# Attendees

Attendees included **[list attendee names]**.

# Members not in attendance

Members not in attendance included **[list names]**.

# Discussions

[Add your text here.]

# Unfinished business

[Add your text here.]

# New business

[Add your text here.]

# Announcements

[Add your text here.]

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Secretary |  | Date of approval |

**Marking Criteria:**

**Distinction**

Demonstrated comprehensive research with detailed evidence. High level of analysis performed, exceptional and thorough knowledge and understanding displayed with regard to facilities and services of the Operating System. Documentation presented in a professional manner, without any spelling or grammar mistakes. Displayed evidence of critical appraisal.

**Credit**

Adequate research conducted with fair detail of evidence presented. Moderate level of understanding, analysis and knowledge displayed. Good level of documentation presented. Some level of reflection in the documentation. Moderate level of critical appraisal.

**Pass**

Low level research conducted. Some evidence of research displayed. Basic level of analysis, knowledge and understanding displayed. Satisfactory level of documentation. Satisfactory or low level of reflection displayed. Poor level of critical appraisal demonstrated.