



Individual Assignment

Module: Operating Systems (COMP 20004)

Level: 2

Duration: 7 weeks

Max. Marks: 100 (Scaled down to 30 %)

Submission Week: 13th Week

| ID NUMBER | | | | | |
|-----------|--|--|--|--|--|
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Outcomes:

1. Evaluate process management techniques.
2. Analyse different memory management strategies.
3. Become aware of the issues of operating systems in regards storage management.
4. Analyse the issues of protection and security

Tasks: Read the following four tasks, understand and present your response in a document not more than 10 pages.

Task 1:

Submit a work proposal for this assignment by the end of week 9. (10 marks)

Task 2:

- a. You can read the article “**Deadlock Resolution Techniques: An Overview by Pooja Chahar and Surjeet Dalal**” which highlights the key aspects needed to consider while resolving deadlock conditions in OS. Justify the role played by the OS in managing the processes to avoid deadlock in the given article. (20 marks)
- b. You can read the research article “**Robust Memory Management using Real Time Concepts by Karthikeyan, Ravi and M. Anand**” which highlights the key aspects of Operating system’s memory management mechanism. Provide a reflection in your own words not more than 250 words related to Memory Management in Operating System. (20 marks)

Task 3:

Choose any suitable telecommunication organization in Oman. Research the selected organisation by analyzing the issues of protection and security. You may obtain data from the organisation's website or people of the organisation or even from various sources in the library, etc. Besides, you will be given research articles, hand-outs and case studies to study and analyse. Based on the research and information gathered, execute following tasks making suitable additional assumptions:

a. Discuss the organisation storage management. (20 marks)

b. Debate on the organisation security and protection policy related to Operating System.

(20 marks)

Task 4:

Proper documentation and references using CU-Harvard style. (10 marks)

Evaluation Criteria:

You would be evaluated on the following:

- **Originality of answer**, i.e. writing in your own words with some amount of referenced material.
- **Viva:** Your Assignment marks are based on the viva, which will be conducted upon submission of assignment. The Viva will be conducted in week 14 and based on the tasks given in the assignment. ZERO marks will be awarded to the student if she / he is absent for VIVA.
- **Analytical Skills:** Student's analytical skills, reflective skills and deep understanding will be evaluated based on submitted assignment and in the Viva. Correct information in document form. Adequate referencing and citation provided.

Guidelines:

- i. The assignment should not be more than 10 pages in (size A4) paper.
- ii. The document should be well presented and neatly done.
- iii. Assignment should be computer typed using Times New Roman 12 font and the soft copy should be submitted through Moodle via available link by week 13.
- iv. The report must have a Title Page, table of contents, reference/ bibliography and page number. Every page must have header & footer.
- v. Heading should be with Font Size 14, Bold, and Underline.
- vi. Each student has to do the assignment individually.
- vii. You are welcome to discuss about the assignment with the lecturer in his office hours.

Plagiarism policy:

Clarification on Plagiarism Policy

As per MEC policy, any form of violation of academic integrity will invite severe penalty. Plagiarised documents, in part or in whole, submitted by the students will be subject to this policy.

A. First offence of plagiarism

a. A student will be allowed to re-submit the assignment once, within a maximum period of one week. However, a penalty of deduction of 25% of the marks obtained for the resubmitted work will be imposed.

b. Mark deduction: When the work is resubmitted, the marking will be undertaken according to the marking criteria. In compliance with this policy, the 25% deduction is then made on the marks obtained. For example, in an assessment that carries a maximum of 50 marks, suppose a student were to obtain 30 marks for the resubmitted work, the final marks for that assessment will be 22.5 (after deducting 25% of the marks actually obtained for the resubmitted work).

c. Period of resubmission: The student will have to resubmit the work one week from the date he or she is advised to resubmit. For example, if the formal advice to resubmit was communicated to the student on a Sunday (latest by 5 pm), the student will have to resubmit the work latest by next Sunday 5 pm.

d. If the re-submitted work is also detected to be plagiarized, then the work will be awarded a zero.

e. Resubmission of the work beyond the maximum period of one week will not be accepted and the work will be awarded a zero.

B. Any further offence of plagiarism

a. If any student is again caught in an act of plagiarism during his/her course of study (either in the same module, same semester or in any other semester), the student will directly be awarded zero for the work in which plagiarism is detected. In such cases, the student will not be allowed to re-submit the work.

2 C. Guidelines

a. Type 1: In case plagiarism is detected in any component or part submission (submitted at different times) of one assessment (assignment), the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted.

b. Type 2: In case plagiarism is detected in a group assessment, all students of the group will be considered as having committed an act of plagiarism irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students.

c. Type 3: Combination of Type 1 and Type 2: In case plagiarism is detected in any component or part submission (submitted at different times) of a **group assessment (assignment)**, the deduction in marks will be applicable for the whole assessment (assignment), even if only the component or part submission alone needs to be resubmitted. All students of the group would be considered as having committed an act of plagiarism irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all the students of the group.

d. Type 4: Variation of Type 1 and Type 2: In cases where the assessment consists of components or part submissions that could be a group assessment component (e.g. group assignment) and an individual assessment component (e.g. individual reflection), the following will be applicable:

1. If plagiarism is detected in the group assessment component, all students of the group will be considered as having committed an act of plagiarism, irrespective of whether plagiarism is on account of the act of all or a few or only one member. The policy will then be applied to all students of the group. In such cases the group assessment component will be resubmitted as per the policy.

2. If plagiarism is detected in the individual assessment component, the individual assessment component will be resubmitted as per the policy. The policy will then be applied to that student alone.

3. In both cases (a) and/or (b), the deduction in marks will be applicable for the whole assessment (assignment).

3 D. Amount of similar material

a. The total amount of similar material in any form of student work from all sources put together should not exceed 30% (including direct quotations).

b. The total amount of quoted material (direct quotations) in any form of student work from all sources put together should not exceed 10%.

c. The total amount of similar material in any form of student work from a **single source** should not exceed 7 percent. However, cases having a similarity of less than 7 percent in such cases may still be investigated by the faculty depending on the seriousness of the case.

d. If faculty member find enough merit in the case of a student work with a similarity (with a single source) of more than 7 percent as not a case of plagiarism, the faculty member should provide detailed comments/remarks to justify the case.

Late Submission policy:

Penalty for late submission - 5% of the maximum mark specified for the assessment will be deducted for each working day.

Assessment documents submitted beyond a period of one week after the last date of submission will not be accepted and will be marked as zero for that assessment.

Rules & Regulations

- ☐ If two assignments are similar in all aspects then marks will be deducted from both the assignments.
- ☐ Your source of information should be mentioned in the reference page clearly. (For example: If it is from book, you have to mention the full details of the book with title, author name, and edition and publishers name. or if it is from internet you have to mention the correct complete URL).

MODULE NAME: Operating Systems (COMP 20004)

Assessment Sheet –Basic Assignment Analysis:

| Deliverables | Aspects | 0 – 10 | | | Mark |
|--------------|---|--|--|--|------|
| Task 1 | Submission of work proposal | What you will do with the given tasks and the Timeline by when they will be completed General overview of initial understanding of solutions to all the tasks Identification of Literature Resources | | | |
| Deliverables | Aspects | 0 | 1-10 | 11-20 | Mark |
| Task 2-a | Writing clearly process management | Uncompleted / Plagiarized report | Partially explanation of Process Management of an Operating System. | Complete explanation of Process Management of an Operating System. | |
| Deliverables | Aspects | 0 | 1-10 | 11-20 | Mark |
| Task 2-b | Explanation of Memory Management; and Technique used. | No attempt/ Plagiarized report | Incomplete/Partial explanation of technique used for Memory Management. | Complete explanation of technique used for Memory Management. | |
| Deliverables | Aspects | 0 | 1-12 | 13 – 20 | Mark |
| Task 3-a | Storage Techniques used | No attempt/ Plagiarized report | Identification and partial explanation of storage techniques. | Complete explanation of Storage techniques used. | |
| Deliverables | Aspects | 0 | 1-12 | 13 – 20 | Mark |
| Task 3-b | Security and Protection Mechanism Used | No attempt/ Plagiarized report | Identification and partial explanation of Security and Protection Mechanism. | Complete explanation of Security and Protection used. | |
| Deliverables | Aspects | 0 | 1-5 | 6-10 | Mark |
| Task 4 | Documentation and References | Incomplete / Weak | Referencing made but not CU Harvard Style, Fair Documentation | Perfect Referencing. Good to excellent documentation | |

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|--------------------|--|
| Total Marks | |
| Penalty | |
| Final Marks | |

Name of the student : _____
 ID : _____ Section : _____

Feedback: _____

