Sub.	Re-Sub
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Assignment Brief Submission&Resub

LOs	LO3	LO4	
Grade " Sub"			
Grade "Resub"	P		Not Achieved " repeat unit"

Student Name:		**ID Number**	
Unit Number and Title:	ICT216	Operating System	
Qualification	Higher National Diploma in Information Technology (y2).		
Academic Year:	2023/2024	**Assessor Name**	**Dr. Eman Monir**
Assignment Title	OS Essential	**Internal Verifier Name**	**Dr. Amany Abdel Samea**
Assignment No.	2	**Issue Date**	Wednesday 12/12/2023
Submission Format Type of Evidence	Report	**Submission Date**	Wednesday 20/12/2023

STUDENT DECLARATION

Plagiarism

Plagiarism is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalised. It is your responsibility to ensure that you understand correct referencing practices. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet. Please consult the relevant unit lecturer or your course tutor if you need any further advice.

Student Declaration

Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

Student signature: Date:

FORMATIVE FEEDBACK	**DATE:**
Assessor's Formative Feedback:	
Assessors Name: Dr eman monir **Signature:** *eman monir*	**Date:**
I acknowledge that I have received the feedback about my work from the assessor. **Student Signature:**	**Date:**

IV assessment brief approval			
IV's Name: Dr Amany Abdel Samea	**IV's signature**	Amany Abdel Samea	**Date**

Learning Outcomes and Assessment Criteria:			
Learning Outcome	Pass	Merit	Distinction
LO2 Understand how the operating system synchronize process work with hardware and critical section problem.	**P5** Explain what is process synchronization. **P6** Define Mutual Locks, Semaphores. **P7** Define critical section	**M2** Explain the classic problems of process synchronization	**D2** Compare between the alternative approaches in critical section solutions
LO3 Know how the operating systems deal with deadlock, Deadlock Detection, Deadlock prevention, Deadlock Avoidance.	**P8** Explain Deadlock characteristics. **P9** Explain the Deadlock Detection and Avoidance process.	**M3** Explain the different methods for handling deadlocks.	**D3** Reasonably explain the recovery from deadlocks methods.
LO4 Understand how operating systems managing resources such as processors, memory and I/O.	**P10** Explain the low level implementation of memory management. **P11** Explain segmentation and paging process. **P12** Explain the memory allocation methods.	**M4** Explain the concepts of page table and swapping.	**D4** Compare between different techniques of memory allocation.

Assignment Brief and Guidance:

Scenario

Many IT jobs require in-depth knowledge of operating systems, including systems administrators, server engineers, and software developers. For this reason, since you are working as an IT manager at El Sewedy International, you must be prepared to answer questions about operating systems. If you are an IT professional looking to grow in this industry, you must be able to speak efficiently about operating systems. For this reason, you may encounter many problems that may be caused by deadlocks in operating systems.

Tasks

Task1: From the above scenario

1) Explain what process synchronization is.
2) Explain the classic problems of process synchronization and Compare between the alternative approaches in critical section solutions.
3) Define critical section, Mutual Locks, Semaphores.

Task2: According to the mentioned scenario:

4) Explain Deadlock characteristics. And Explain the Deadlock Detection and Avoidance process.
5) Explain the recovery from deadlocks methods.

6) Explain the low level implementation of memory management. Explain the concepts of page table and swapping.
7) Explain segmentation and paging process. Explain the memory allocation methods.

With my Best wishes

Higher Nationals - Summative Assignment Feedback Form

Student Name		**Section Number**	
Unit Title			
Assignment Number	**1 or 2**	**Assignment Title**	

Assessor Summative Feedback: Feedback should be against the learning outcomes and assessment criteria to help students understand how these inform the process of judging the overall grade. *Should be constructive and useful including:

- Feedback should give full guidance to the students on how they have met the learning outcomes and assessment criteria

a) Strengths of performance

b) Limitations of performance

c) Any improvements needed in future assessments

Assessor Signature:	**Date: / /**

Re-submission Date	**/ /**	**Actual Date Received Re-submission**	**/ /**

Resubmission Feedback:

*Please note resubmission feedback is focussed only on the resubmitted work

Assessor Signature:	**Date: / /**
Internal Verifier's Comments:	
Signature:	**Date: / /**

* Please note that grade decisions are provisional. They are only confirmed once internal and external moderation has taken place and grades decisions have been agreed at the assessment board.