جامعة القاهرة الجديدة التكنولوجية NCT NEW CAIRO TECHNOLOGICAL UNIVERSITY

Sub.	Re-Sub

LOs	LO1		LO2	
Sub				
Resub	P	Not Achieved	P	Not Achieved

Student Name		Code		Section	
Unit No. & Title	ICT 224 - Data Structure				
Qualification	Higher Diploma in Information Technology (y2)				
Assignment No.	1		Assessor Name	Dr. Eman Monir	
Evidence	Document / observation/ Hardware/ Project/ …		IV Name	Dr. Rasha Elstohy	
Hand out date	27/3/2024		Hand in date	3/4/2024	

Targeted LO	Targeted criteria	Criteria achieved	Assessment comments
LO1	Pass		
	Merit		
	Distinction		
LO2	Pass		
	Merit		
	Distinction		
Assessor Signature: *Eman Monir*			

Criteria reference	Targeted criteria	To achieve the criteria the evidence must show that the student is able to:	Evidence	Page numbers
LO1	Pass	**P1** Explain the definition of Asymptotic notations (Big O, Big Omega Big Theta) **P2** Define What is meant by array. **P3** Define What is meant by stack.		
	Merit	**M1** compare between the different array searches techniques. **M2** Illustrate the application of stack.		
	Distinction	**D1** Apply the array and stack using C++ or java programming language		
LO2	Pass	**P4** Explain what is meant by queues. **P5** Define the operation of linked list. **P6** Define the operation of double linked list.		
	Merit	**M3** Explain the applications of queues and linked list		
	Distinction	**D2** Apply the queues and linked list using C++ or Java		
"I certify that this assignment is my own work, written in my own words. Any other person's work included in my assignment is referenced / acknowledged".				
IV Signature: *Rasha ElStohy*		Learner's signature:	Date:	

Scenario

You work as in-house software developer for Softnet Development Ltd, a software body shop providing network provisioning solutions. Your company is part of a collaborative service provisioning development project and your company has won the contract to design and develop a middleware solution that will interface at the front-end to multiple computer provisioning interfaces including SOAP, HTTP, JML and CLI, and the back-end telecom provisioning network via CLI .
Your account manager has made you technical project leader and your role is to inform them about designing and implementing abstract data types. You have been asked to create a presentation for all collaborating partners on how ADTs can be utilized to improve software design, development and testing. Further, you have been asked to write an introductory report for distribution to all partners on how to specify abstract data types and algorithms in a formal notation.

From above scenario:

Task No.01

1. Explain the definition of Asymptotic notations (Big O, Big Omega Big Theta)
2. Illustrate the main applications of stack?
3. Apply the array and stack using C++ or java programming language

Task No.02

1. Explain a concrete data structure for a First In First out (FIFO) and illustrate the main applications of it?
2. Define the operation of linked list and compare between the different types of linked lists?
3. Apply the queues using C++ or Java accurately?

Resubmission Feedback: ***Please note resubmission feedback is focussed only on the resubmitted work**	
Assessor Signature:	**Date: / /202**
Internal Verifier's Comments:	
IV Signature:	**Date: / /202**