Ain Shams University
Faculty of Engineering

University of East London

Computer Engineering and Software Systems

Course Assessment Map and Specification

Module Data:		
Module Code		**EG7421**
Module Name		**Software Development**
UEL Credit Rating		**30 Credits**
UEL Level		**Level 4**
ASU Course Weight in UEL Module:		**25%**
UEL Module LOs Served by this course Work Assessment Tasks:		
Task	**Weight**	**Served LOs**
Major Assessment Task	**40%**	6. Distinguish the different types of algorithm paradigms and evaluate when an algorithmic design situation calls for it 8. Program in the major computer programming paradigms 10. Solve complex problems using a variety of methodologies
In Class Test	**60%**	6. Distinguish the different types of algorithm paradigms and evaluate when an algorithmic design situation calls for it 8. Program in the major computer programming paradigms 10. Solve complex problems using a variety of methodologies

ASU Couse Data:

ASU Couse Code	ASU Couse Name	ASU Credit Rating	ASU Level
CSE331	**Data Structures and Algorithms**	**3 credits**	**Junior**

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Course Assessment Specification (CAS)

Coursework Title : **Major task**
Task Weight in the ASU Course final Grade : **40% distributed as follow:**

Maximum mark available: 20

Lecturer : Associate Professor Dr. Hesham Farag

Contact : If you have any issues with this coursework, you may contact your lecturer.

Contact details are: Email: hesham_farag@eng.asu.edu.eg
Mobile: 01007938329

Hand-out Date : 01/11/21
Hand-in Date : 18/01/22
Hand-in Method : Submission through LMS as one compressed file and fill in the following form https://forms.gle/QznUvJRfpDwRUaXEA (one submission per team).
Feedback Date : Your work will be marked and returned within two weeks.

Introduction

This coursework is to be carried out in groups of 1-5 students. It is designed to meet the module Learning Outcomes as presented in the module proforma.

The objective is to build an application to compare the efficiency of different sorting algorithms. The application should be able to compare the efficiency of sorting algorithms with their respective asymptotic behaviour.

Commented [t1]: Please, ad a general description for this curse work

Learning Outcome to be assessed

6. Distinguish the different types of algorithm paradigms and evaluate when an algorithmic design situation calls for it

8. Program in the major computer programming paradigms

10. Solve complex problems using a variety of methodologies

Detail of the task

Build a software application capable of:

1- Ability to create test data files. Optionally test data files may be created using Microsoft Excel.
2- The user can choose either to compare the efficiency of an algorithm with another algorithm, or to compare an algorithm with its asymptotic efficiency.

3- Ability to select an algorithm out of predefined set of algorithms. A list of sort algorithm must include, but not limited to, the insertion sort, the merge sort, the bubble sort, the quick sort, and the heap sort.
4- The efficiency should be measured as the number of steps taken by the algorithm
5- to sort the test data.
6- The results should by displayed graphically.

What you should hand in

1- Task report in pdf format
2- Role of each participant in the task (max 5)
3- Source code
4- Executable version
5- Video demonstrating the working task

Guide to Marking Criteria

Marking criteria Would be as listed in the following table:

Assessment Criteria	Max. Percentage
The software covers the requirements	40%
The User interface is clear and easy to use	10%
The results are examined to be correct	40%
The presentation of the results is clear to draw conclusions	10%

Academic Misconduct

The University defines Academic Misconduct as 'any case of deliberate, premeditated cheating, collusion, plagiarism or falsification of information, in an attempt to deceive and gain an unfair advantage in assessment'. This includes attempting to gain marks as part of a team without making a contribution. The department takes Academic Misconduct very seriously and any suspected cases will be investigated through the University's standard policy. If you are found guilty, you may be expelled from the University with no award.

It is your responsibility to ensure that you understand what constitutes Academic Misconduct and to ensure that you do not break the rules. If you are unclear about what is required, please ask.