Egyptian Chinese University

Faculty of Engineering

Course Title: SET 222 – Design and Analysis of Algorithms

Final Project: Sorting Algorithms – Design, Implementation, and Complexity Analysis

Total Marks: 20

Marking Scheme

Section	Criteria	Marks
Code Implementation	Correct Implementation of Quick Sort, Merge Sort, and Insertion Sort	3
Code Implementation	Applies optimization techniques that enhance algorithm efficiency in practical scenarios	1
Code Implementation	Displays awareness of input size impact by showing results on small and larger arrays	1
Code Implementation	Modular Code Design (functions/classes used properly)	1
Code Implementation	Code Readability (indentation, naming, structure)	1
Code Implementation	Inline Comments Explaining Logic	1
Code Implementation	Handles All Input Types: Sorted, Reversed, Random	1
Code Implementation	No Redundancy or Inefficient Code	1
Report & Analysis	Complexity Analysis (Best, Worst, Average)	2
Report & Analysis	Test Cases with Output Snapshots	2
Report & Analysis	Comparative Table of Time Complexities	2
Report & Analysis	Graphical Representation of Performance (Optional)	1
Report & Analysis	Explanation of Code in Own Words	2
Report & Analysis	Overall Report Clarity & Organization	1