



**Faculty of Computers and Information    Analysis and Design of Algorithms (3<sup>rd</sup> Year)**

**Dept. of Computers Science**

**Fall 2024/2025**

**Due: Dec. 21, 2025 (11:00 am)**

**Programming Assignment**

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- (i) The following programming assignment measures the ability to analyze and implement Heap-Sort algorithm. You are required to work *individually* in this work.
- a. Write all required algorithms needed to sort a sequence of numbers using Heapsort Algorithms.
  - b. Analyze in detail your written algorithms in Part (a).
  - c. Implement your written algorithms in Part (a).
- (ii) The following programming assignment measures the ability to analyze and implement Kruskal's algorithm to find MST of a network. You are required to work with your colleagues in a teamwork (Maximum *Two–Three members*).
- a. Write all required algorithms needed to find MST using Kruskal's Algorithm.
  - b. Analyze in detail your written algorithms in Part (a).
  - c. Implement your written algorithms in Part (a).

**Any further information will be announcement later**