KIBABII UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE

**CSC 212 COMPUTER ORGANIZATION AND ARCHITECTURE 1
ASSIGNMENT**
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Answer all questions and submit latest 22/11/2023

1. The instruction: Add X, R0 is received by the CPU for processing:
    (a) How will the control unit decode the instruction
    (b) Describe the steps in which this instruction will be executed using one bus data path
    (c) Data movement within the CPU can be performed in several different ways. Contrast the following methods in terms of their advantages and disadvantages:
        i.   Dedicated connections
        ii. One-bus data path
        iii. Two-bus data path
        iv. Three-bus data path
2. A computer A with a 2 GHz clock speed executes a program in 8 seconds. What would be the clock rate of computer B if it must execute the same instruction in 4 seconds?
3. As a computer architect, discuss the cpu performance improvement measures
4. What does the future of computer organization and architecture looks like?