COMPUTER SCIENCE AND ENGINEERING
COMPUTER ORGANISATION AND ARCHITECTURE- CSE 2151
FISAC 1 (Take Home Assignment)
Submission Date: On or before 4.00PM, 29/10/2022

Instructions to Students:

1. *Answer all the questions.*
2. *If the answers are plagiarized, then all the scripts with same answer will be evaluated for 50% of the allotted marks.*
3. *Handwritten answers to be submitted.*
4. *Write the following on the answer script: Name, Reg. No., Section, Roll No., Semester, Subject.*

1	Design microprogrammed control unit for 4-bit unsigned integer division algorithm
2	Design a computer using hardwired approach to check whether the given number is in Fibonacci Series or not. a. Write the register transfer description algorithm for the given hardware to perform the above operations b. Complete the design of processing section establishing the control points c. Draw the block diagram of the controller for this processing hardware. d. Write an efficient state diagram for the controller.
3	In the processing section diagram Figure 3.1, all registers are of size 4-bit and ALU is also a 4-bit ALU. It is required to perform the following ALU operations: R0 ← R0 + R1 R1 ← R1 + R2 R3 ← R2 + R3 a. Write the register transfer description algorithm for the given hardware to perform the above operations b. Complete the design of processing section establishing the control points c. Draw the block diagram of the controller for this processing hardware. d. Write an efficient state diagram for the controller.

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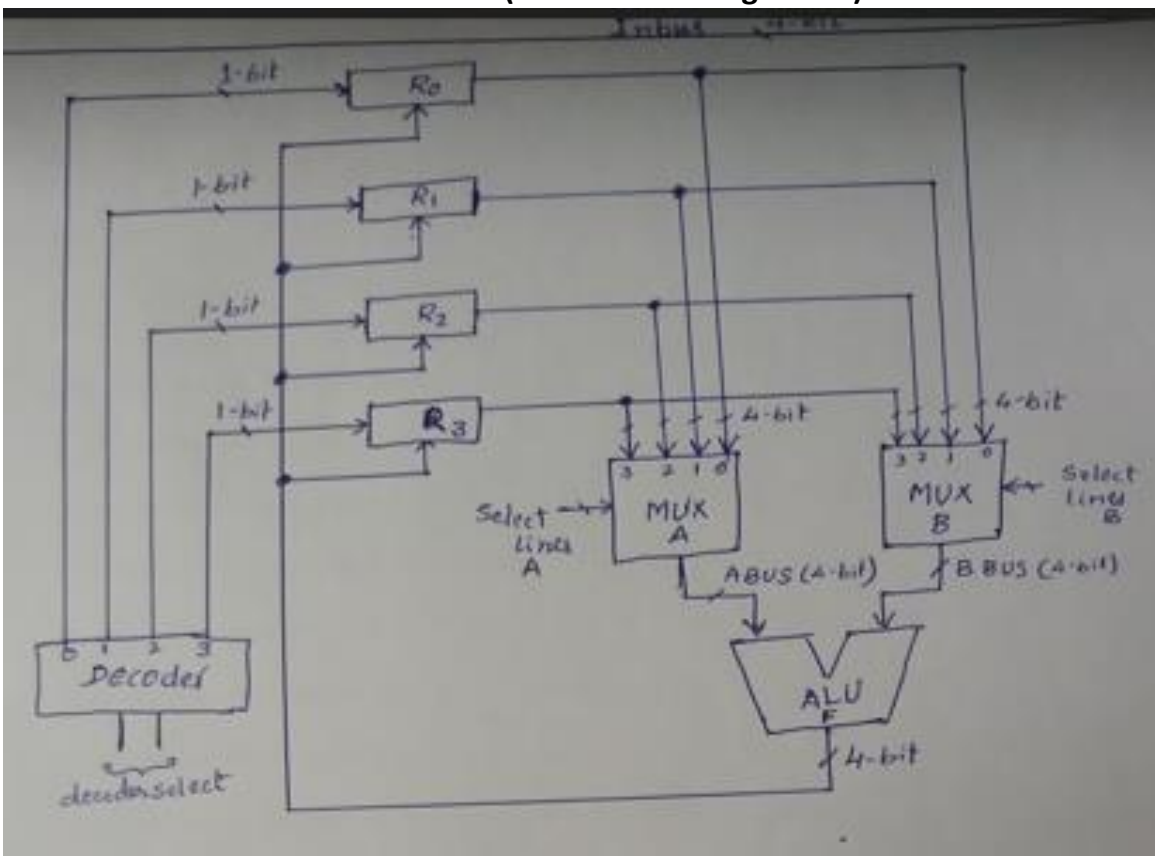

Figure 3.1