

North South University
School of Engineering & Physical Sciences
CSE331: Microprocessor Interfacing & Embedded System
Assignment-1 [Full Marks: 100]

[The marks on the right hand side in square brackets indicate marks allocated for that question only]

Marks

1. Design and simulate an 8-bit SAP-1 Microcomputer in any circuit maker tool (You can use Logisim) which can execute the following instructions [70+30]

Mnemonic	Operation
LDA	Load RAM data into accumulator
ADD	Add RAM data to accumulator
SUB	Subtract RAM data from accumulator
OUT	Load accumulator data into output register
HLT	Stop processing

Guidelines:

- You can form a Group of 3 members to complete the Assignment. (If you are comfortable to do it alone, you are welcome to do that).
- Each group has to run the simulation on the Assessment day (16/Nov/2024).
- Each group has to write a single report and submit it to the course teacher.

Submission Deadline: 16/November/2024 (during theory class)

***This Assignment is part of your Theory section. Your Lab instructor will not help in this assignment since it is part of your theory assessment. You can take any help from online and build the circuit accordingly.