Computer System Architecture Lab

A list of potential Laboratory Practical's

1. To design a combinational logic system for a specified Truth Table and design it using logic gate ICs.

2. Implement Half Adder and Full Adder using logic gate ICs.

3. Implement Half Subtractor and Full Subtractorusing logic gate ICs.

4. To build JK Master-slave flip-flop using Flip-Flop ICs

5. To build a Counter using D-type/JK Flip-Flop ICs and study timing diagram

6. Write a program in assembly language to add two 8-bit numbers

7. Write a program in assembly language to perform multiplication for unsigned positive numbers

8. Write a program in assembly language to print input string and print it.

9. Simulate the machine to determine the contents of AC, E, PC, AR and IR registers in hexadecimal after the execution of each of following register reference instructions:

a. CLA	e. CIR	i. SNA
b. CLE	f. CIL	j. SZA
c. CMA	g. INC	k. SZE
d. CME	h. SPA	l. HLT

10. Simulate the machine for the following memory-reference instructions with I= 0 and address part = 082. The instruction to be stored at address 022 in RAM. Initialize the memory word at address 082 with the operand B8F2 and AC with A937. Determine the contents of AC, DR, PC, AR and IR in hexadecimal after the execution.

a. ADD
b. AND
c. LDA
d. STA
e. BUN
f. BSA
g. ISZ