**Lab Report -8**

COMPUTER ORGANIZATION AND ARCHITECTURE

**Bachelor of Technology**

in

**Computer Science and Engineering**

**Under supervision of**

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**Design of an 8-bit Input/ Output system with four 8-bit Internal Registers.**

A Flip-flop is a 1 bit memory cell which can be used for storing the digital data. To increase the storage capacity in terms of number of bits, you can use a group of flip-flops. Such a group of flip-flops is known as a Register. The n-bit register will consist of n number of flip-flop(s) and it is capable of storing an n-bit word.

The binary-data, in a register, can be transfered within itself from one flip-flop to another. A shift register is a type of register that allows such data transfers. Shift register has 4 modes of operations.

**1.Serial-in serial-out**

**2.Serial-in parallel-out**

**3.Parallel-in serial-out**

**4.Parallel-in parallel-out**



