# DIGITAL LOGIC DESIGN

## LAB -13

## REGISTERS & COUNTERS

**Objective:** Students should be able to implement the Flip-Flops to study the design of shift registers and counters.A register is used to store n-bits of information, where n is the number of flip flops. A register consists of a set of flip flops, together with gates that perform data processing tasks. The shift register is capable of shifting its stored bits laterally in one or both direction.

**Task #1:** Implement a synchronous up- down counter on logic works + trainer

**Task #2:** Implement an asynchronous ripple counter on logic works