

## ECE 223 LAB EXPERIMENT 7

**Preparation Part:** In this lab, you will build a half-adder and then use it to build larger adders. Then you will use the larger adders to build an Adder Unit.

- 1) Draw the truth table and the circuit diagram for the half-adder.
- 2) Draw the truth table and the circuit diagram for the full-adder (built with half-adders)
- 3) Design a circuit that adds two two bits number such that  $ab+cd=efg$ .

### Lab experiment:

- 1) Using XOR, OR and AND gates set up half adder and full adder circuits.
- 2) Set up the circuit you have designed part 3 above.