**Lab Assignment- 1**

**Practice Lab**

**Week 1: 4 Aug-11 Aug**

**Lab 1 (hardwired simulation tool)**

Read the manual of computer organization and architecture hardwired simulation tool. This tool is based on 5 bit logic (1,0,X,Z,I) with defined input  output  block for digital circuits .  
  
  
1. Realize the truth table of various gates like as AND, OR, NOT, XOR, NAND and NOR.  
  
  
2.Conversion of universal  gates  
  
  
3. Design the half adder and full adder circuits.  
  
  
4. Realization of ripple adder logic circuit.   
  
  
5. Design the 4 x1 multiplexor circuit and realize the various input output logic based on  
control.   
  
  
6. Design the 4X1 multiplexor with NAND gates logic circuits.