

# **Computer Organization and Architecture**

## **In-Lab**

### **Lab 09**

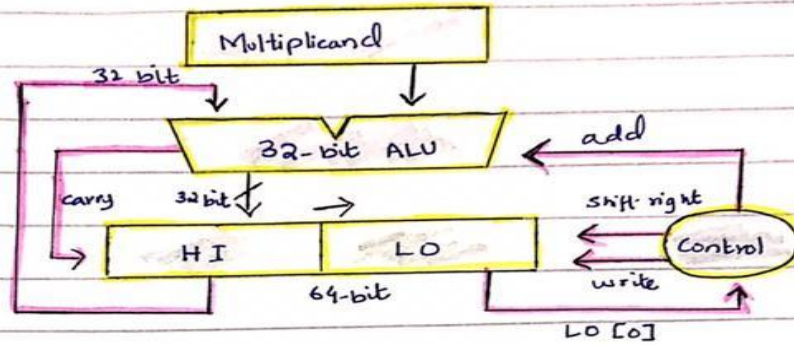


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Class	Computer Organization and Architecture CPE343( <b>BCE-5B</b> )
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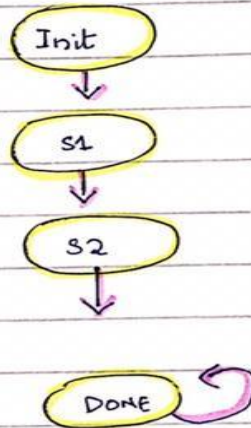
## Inlab: Task 1

Lab - 09 - InLab

### Hardware :



### Bubble Diagram:



Code:

```
module four_bit_multiplier(
    input clk, reset,
    input [3:0] multiplicand, multiplier,
    output [3:0] HI_FF, LO_FF
);
    wire init, SR;

    multiplier_controller MC(clk, reset, init, SR);
    multiplier_datapath MDP(clk, reset, init, SR, multiplicand,
        multiplier, HI_FF, LO_FF);
endmodule
```

Task1 Output Waveform:

