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{Extra}

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1) A four-bit binary number is represented as A3A2A1A0, where A3, A2, A1, and A0 represent the individual bits and A0 is equal to the LSB. Design a logic circuit using Verilog that will produce a HIGH output whenever the binary number is greater than 0010 and less than 1000.
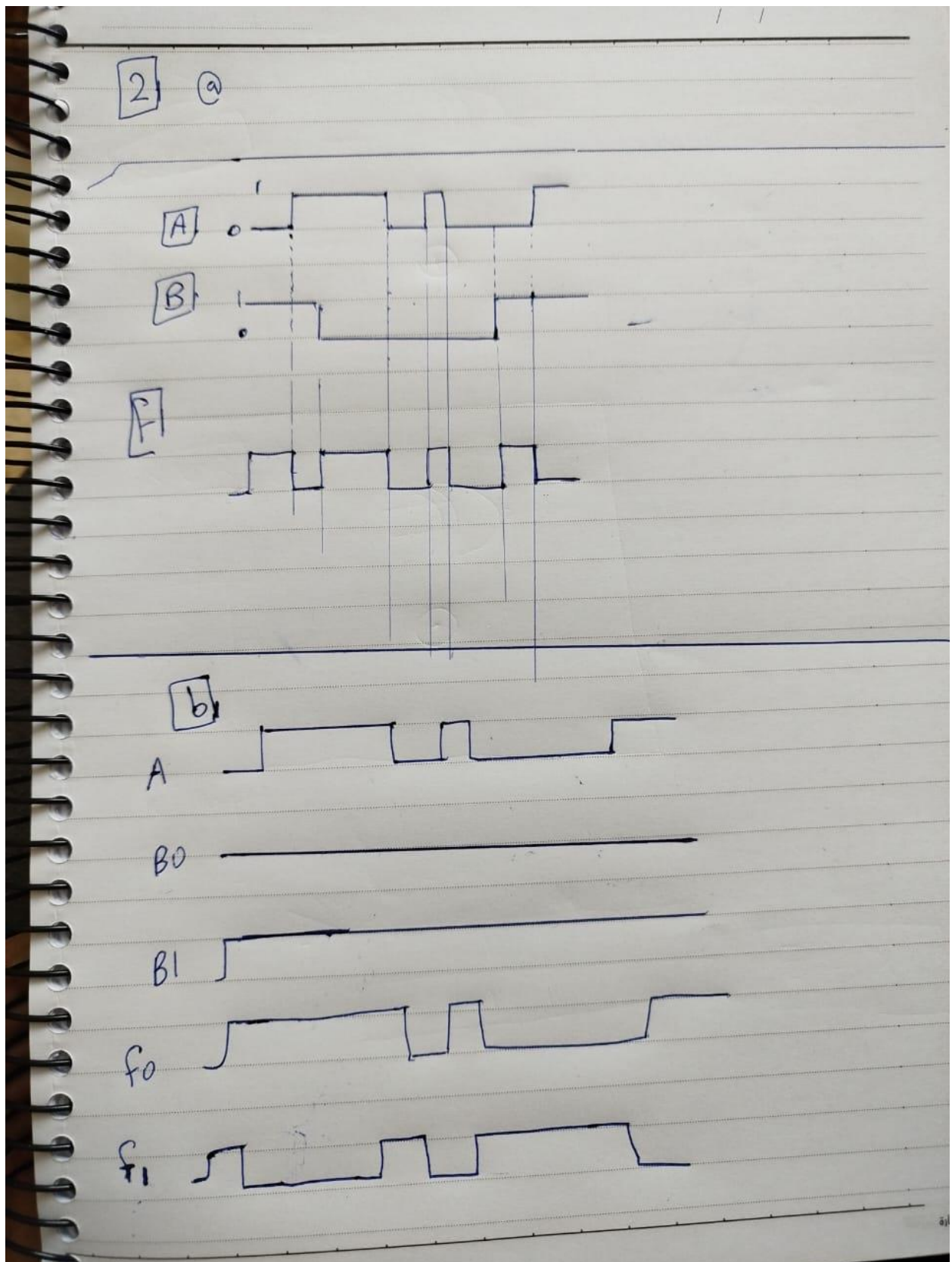
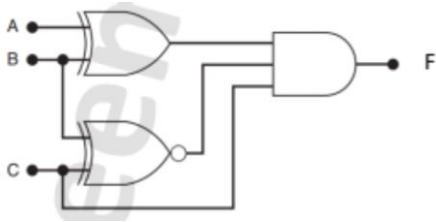• The design takes 1 input A (4-bits) and output out (1-bit)

Verilog:

```verilog
module circut_1 (input [3:0] A, output out);

    assign out = (A > 4'b0010) & (A < 4'b1000);

endmodule
```

2)

2 ⓐ

A

B

F

ⓑ

A

B0

B1

f0

f1
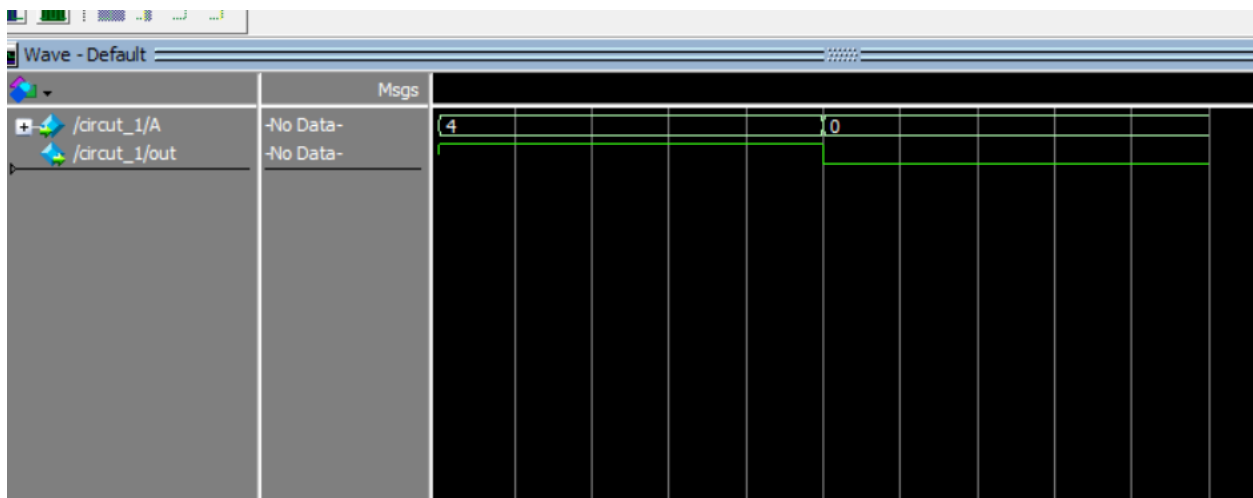
3) Design the following circuit using Verilog and determine the input conditions needed to produce F = 1


```
Assignment_2 > V lab_Ex_3.v > circuit_3
1  module circuit_3(input A, B, C, output F);
2
3  wire W1, W2;
4
5  assign W1 = A ^ B;
6  assign W2 = B ~^ C;
7  assign F = W1 & W2 & C;
8  |
9  endmodule
```


	Msgs
/circuit_3/A	-No Data-
/circuit_3/B	-No Data-
/circuit_3/C	-No Data-
/circuit_3/F	-No Data-

F will be 1 if
A = 0
B = 1
C = 1