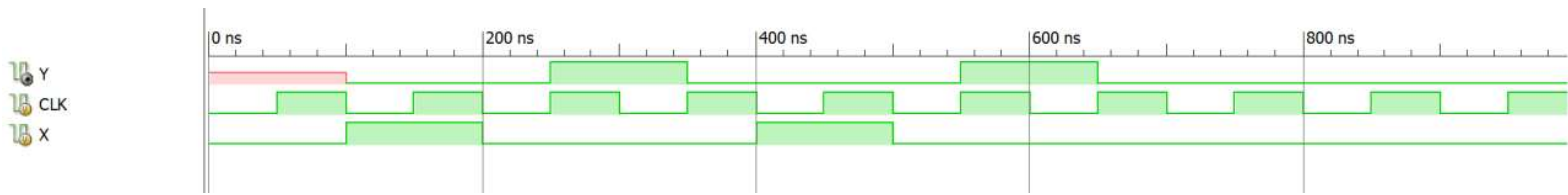


It is not working on posedge



Testbench:

```
module DFFTest;
```

```
    // Inputs
```

```
    reg CLK;
```

```
    reg X;
```

```
    // Outputs
```

```
    wire Y;
```

```
    // Instantiate the Unit Under Test (UUT)
```

```
    sequence_detector uut (
```

```
        .Y(Y),
```

```
        .CLK(CLK),
```

```
        .X(X)
```

```
    );
```

```
    initial begin
```

```
        // Initialize Inputs
```

```
        X = 0;
```

```
        CLK = 0;
```

```
        #100;
```

```
        X = 1;
```

```
        #100;
```

```

        X = 0;

        #100;

        X = 0;

        #100;

        X = 1;

        #100;

        X = 0;

        #100;

        X = 0;

        #100;

    end

    always #50 CLK = !CLK;
endmodule

```

Code

```

module D_FlipFlop( Q, D, CLK);
    output reg Q;
    input D, CLK;
    always @(posedge CLK)
        Q = D;
endmodule

module sequence_detector(Y,CLK,X);
    input CLK;
    input X;
    output Y;
    wire W1,W2,W3;
    D_FlipFlop first (.Q(W1),.D(X),.CLK(CLK));
    assign W2 = W1 && ~X;
    D_FlipFlop second(.Q(W3),.D(W2),.CLK(CLK));
    assign Y= ~W1 && ~X && W3;
endmodule

```