

Pre-Informe 3

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Pregunta 1

- a) Un lenguaje de descripción de hardware, es un lenguaje computacional que se ocupa para describir la estructura y el comportamiento de circuitos electrónicos y de lógica digital. Este se diferencia de un lenguaje de programación,
- b)
- c)
- d)
- e)

Pregunta 2

Pregunta 3

El modulo es el sgte :

```
module counter5Bit(  
output logic [4:0] out,  
output logic fib,  
input logic enable,  
input logic clk,  
input logic reset);
```

```
reg [4:0] count = 5'b0;  
reg [4:0] A = 5'b0;  
reg [4:0] B = 5'b00001;  
assign out = count;  
assign s = (A+B);
```

```
    always@(posedge clk)  
begin  
if(reset)begin  
count j= 5'b0;  
A j= 5'b0;  
B j= 5'b00001;  
end  
else if (enable)begin  
count = count + 1;  
if (count==s)begin  
fib j= 1;  
A j= B;  
B j= count;  
end  
else begin  
fib j= 0;  
end  
end  
end  
endmodule
```

| clk | r | x | x-binario | y | y-binario | z | m | s | n | n-binario |
|----------------------|---|----|-----------|-----|-----------|---|---|---|-----|-----------|
| | 0 | | | | | | | | | |
| | | 0 | 00000000 | | | | | | | |
| | | | | 119 | 01110111 | | | | | |
| | | | | | | 1 | | | | |
| | | | | | | | | | 119 | 01110111 |
| | | | | | | | 1 | | | |
| | | | | | | | | 0 | | |
| 1er Canto de Subida | | | | | | 0 | | | | |
| | | 0 | 00000000 | 118 | 01110110 | | | 1 | | |
| | | | | | | 1 | | | | |
| | | | | | | | 2 | | 118 | 01110110 |
| 2do Canto de Subida | | 0 | 00000000 | 116 | 01110100 | | | | | |
| | | | | | | 2 | | | | |
| | | | | | | | 3 | | 116 | 01110100 |
| 3er Canto de Subida | | 0 | 00000000 | 116 | 01110100 | | | | | |
| | | | | | | 3 | | | | |
| | | | | | | | 4 | | 116 | 01110100 |
| 4to Canto de Subida | | 16 | 00010000 | 116 | 01110100 | | | | | |
| | | | | | | 4 | | | | |
| | | | | | | | 5 | | 132 | 10000100 |
| 5to Canto de Subida | | 16 | 00010000 | 100 | 01100100 | | | | | |
| | | | | | | 5 | | | | |
| | | | | | | | 6 | | 116 | 01110100 |
| 6to Canto de Subida | | 16 | 00010000 | 68 | 01000100 | | | | | |
| | | | | | | 6 | | | | |
| | | | | | | | 7 | | 84 | 01010100 |
| 7mo Canto de Subida | | 16 | 00010000 | 68 | 01000100 | | | | | |
| | | | | | | 7 | | | | |
| | | | | | | | 8 | | 84 | 01010100 |
| 8vo Canto de Subida | | 17 | 00010001 | 196 | 11000100 | | | | | |
| | | | | | | 0 | | | | |
| | | | | | | | 1 | | 213 | 11010101 |
| 9no Canto de Subida | | 19 | 00010011 | 197 | 11000101 | | | | | |
| | | | | | | 1 | | | | |
| | | | | | | | 2 | | 216 | 11011000 |
| 10mo Canto de Subida | | 23 | 00010111 | 197 | 11000101 | | | | | |
| | | | | | | 2 | | | | |
| | | | | | | | 3 | | 220 | 11011100 |

