

1 Digital System Design with High-Level Synthesis in FPGA

Basic Output HLS C/C++ Design: Quiz Solution

www.highlevel-synthesis.com

This file is a resource of the UdeMy course: Digital System Design with High-Level Synthesis for FPGA: Combinational Circuits
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First of all, we should choose a proper data type to represent the value in our design. As we have a 16-bit value, the **unsigned short int** C/C++ data type can be used.

There are three ways to write the desired function

Case 1:

```
unsigned short int basic_output_16LED() {  
    return 0b0000000011111111;  
}
```

Case 2:

```
void basic_output_16LED(unsigned short int *led) {  
    *led = 0b0000000011111111;  
}
```

Case 3:

```
void basic_output_16LED(unsigned short int &led) {  
    led = 0b0000000011111111;  
}
```