

First, we should create a Vivado-HLS project and then create a source file and insert the design top-function.

Before synthesising the code, we should add port interfaces as follows:

```
unsigned char led_ctrl(char sw_input) {
#pragma HLS INTERFACE ap_none port=sw_input
#pragma HLS INTERFACE ap_ctrl_none port=return
    return sw_input;
}
```

This figure shows parts of the synthesis report

