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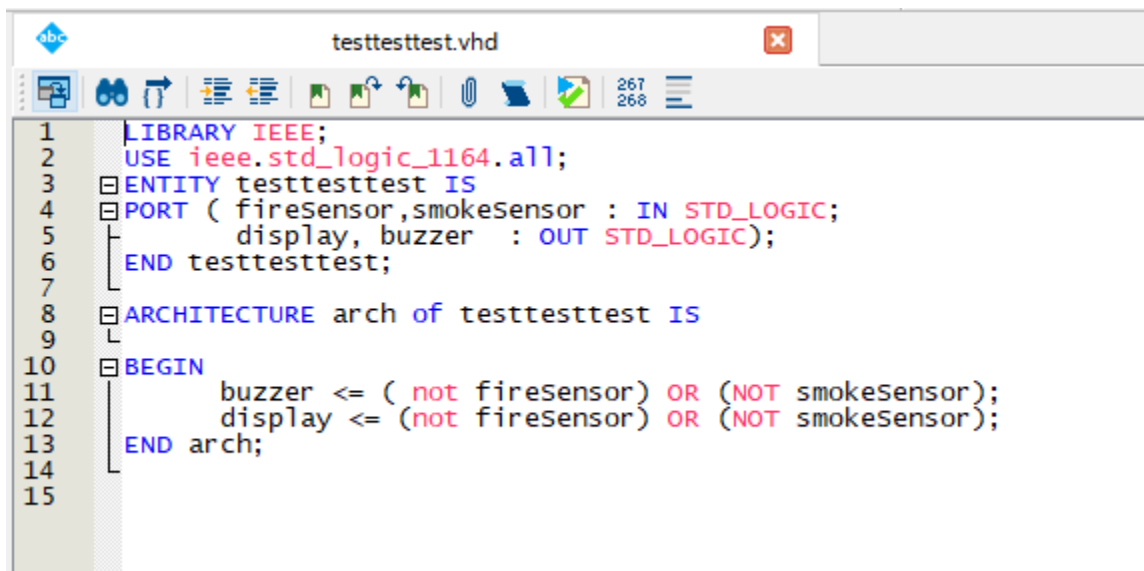
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DSD PROJECT

(1) The Idea

Our system is Fire or gas detection system which works by Triggering the fire or smoke senor so that the buzzer give high sound and lamp lights up when smoke or natural gas or fire is detected.

(2) The set of sensors and parts used in our system:-

2 inputs: - 1 flame sensor, 1 smoke sensor.

2 outputs: - 1 led and 1 Buzzer.

(3)(a) The implementation VHDL CODE:

```
testtesttest.vhd
1    LIBRARY IEEE;
2    USE ieee.std_logic_1164.all;
3    ENTITY testtesttest IS
4    PORT ( fireSensor,smokeSensor : IN STD_LOGIC;
5           display, buzzer  : OUT STD_LOGIC);
6    END testtesttest;
7
8    ARCHITECTURE arch of testtesttest IS
9
10   BEGIN
11          buzzer  <= ( not fireSensor) OR (NOT smokeSensor);
12          display <= (not fireSensor) OR (NOT smokeSensor);
13   END arch;
14
15
```

(3)(b) The implementation of Pin Planner:-

(3)(c) The implementation of circuit:-
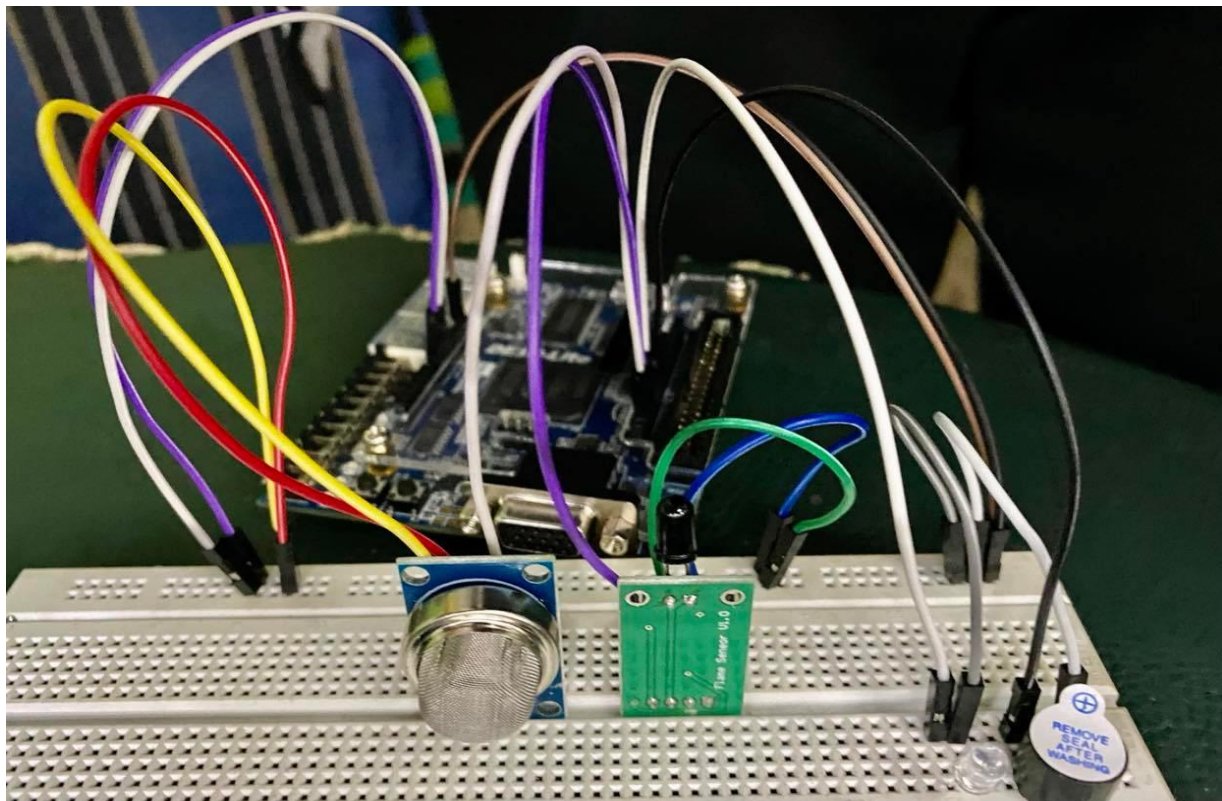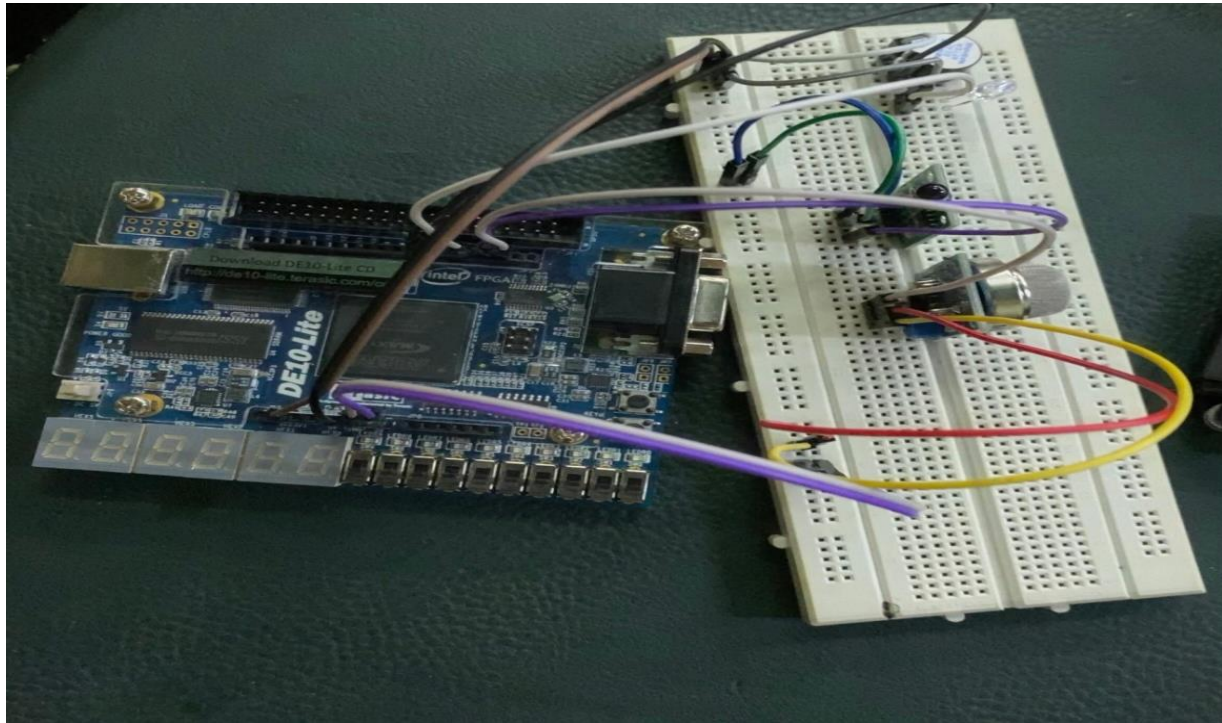
4) The results:-

- Flame sensor work in a sense to any input flame beside it to give output high sound of buzzer, also lighting up of led to show that there is fire in place.

- Smoke sensor work in a sense to any input smoke beside it to give output high sound of buzzer, also lighting up of led to show that there is smoke in place.