Report

Team 17:

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Components I used :

1- infrared sensor for obstacle detecting
2- Lane detector sensor to keep moving on the lane
3- 5V Motor
4- Transistor 2AAA
5- Breadboard
6- FPGA (For sure :)

- In the project we were asked to implement a code and make and hardware for a car that follow a particular lane if it gets out from the lane It's going to display word "ALERT" on the 7 segment display on the FPGA ,Also if the there is an obstacle in front of the car the car will stop (In our case the motor will stop).... Simply That was the idea that we were asked to perform .

-Input : Infrared sensor , Lane detector sensor
-Outputs : Motor , 7 segment lamps
-Pins: GND ,SV , GIPO_[35] , GIPO_[33] , GIPO_[31] And all the pins of the 7 segment display

Code explanation :

Initially the car is moving (which was the motor in our case)

First of all i defined the inputs and outputs of the project in the entity ,

Then i started my architecture ; If sensor1 which was the infrared gives us a signal which means that there is an obstacle on front of the car, then the car will stop moving (which is the motor in our case) and if the sensor don’t send us a signal then the motor will continue moving ..That was for the first condition.

Secondly I f sensor2 (which is the lane detector sensor) gives a signal meaning that the car is moving outside the lane which was supposed to follow , then it gonna display word “Alert” on the 7 segment display