Automatic kit for Automobile

Abstract

Many accidents takes place around us. It is very difficult to find out cause of accidents or the culprits in the accidents, whether it is human mistake or faults in the machine. This project is one effort to find out the cause of accidents, whether it is human mistake of machine faults.

In this project we interface two cameras, one is located in the car to capture the front view videos and images. And other is located in the car to capture rear view. The videos from both cameras will be stored in the memory. The video will be captured in slots of predefine duration. After taking 1st slot, it will store in the memory. 2nd slot will start capturing, if accident has taken place while 2nd slot is running, the sensor will sense the accident and interrupt the processor. After interrupting the processor will save the video.

If video capturing in the second slot has completed, 3rd slot video capturing will start and automatically 1st slot of video in the memory will be deleted. This will save the excess memory space requirement.

Accident may takes place due to air pressure in the tire or sudden puncture in the tire may cause accidents. In this project we use sensor to identify the puncture or less air pressure in the tire. Following block diagram gives idea of the system.
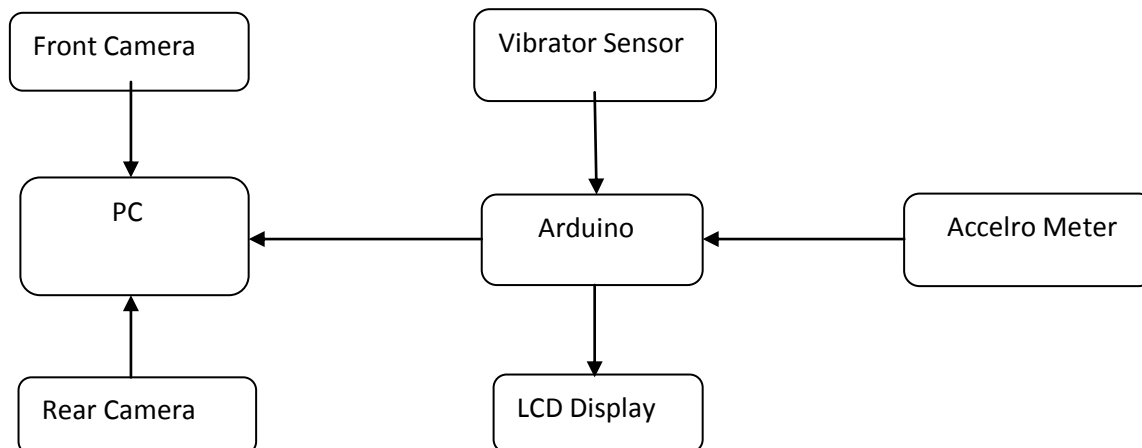
Fig. Block Diagram of System

Block diagram gives the idea of proposed work. Here we have to use car processor for taking video and processing data. For prototype and experimental purpose we are using PC, in place of car processor. The two cameras will take the videos from front and rear side of the car. Here we are using Arduino kit for interfacing of tilt sensor(i.e. Accelerometer). Here vibrator sensor is interfaced to Arduino to detect accidents. LCD display is use to display parameters regarding system.