Methodology

The embedded technology is the prime technology used here under the wireless as main domain; to achieve the concept here we are using ARDUINO UNO as the prime controller which uses ATMEGA-328 controller which is driven by 5V DC supply, the coding is done through the ARDUINO IDE and it is also dumped to the controller through the same IDE, the Embedded C language is used as the coding language, Arduino comprises of 12 digital pins, 6 analog pins, 1 5v, 3 ground pins and one serial pin. The digital pins can be used as the serial pins using the software serial communication, here we are using totally 5 sensor in which the alcohol and vibration sensors are used as the analog sensors while the eye blink, proximity, and the seatbelt/helmet sensors are used as digital sensor. Each and every sensor consists of a 5V and ground pin which is given to the Arduino's 5V and ground pin, the input pin is given to the corresponding Arduino's input pin which is declared in the coding, since the alcohol sensor and the vibration sensor must met certain threshold so we are using that sensors as analog sensors which is connected to the corresponding analog as such like declared in the code. Here the eye blink sensor is used to detect the drowsiness of the driver; the proximity sensor is used to detect a very close obstacle present in from of the vehicle, the alcohol sensor senses whether the driver consumes the alcohol[9], the seat belt/helmet sensor detect whether the driver is wearing the seat belt/helmet, the vibration sensor detects the accident of the vehicle. Here the 5V DC motor is used to indicate the vehicle's wheel is running or not, the buzzer is used for alarm indication, the GPS is used to get the location, the GSM is used to send the message the IOT is used to publish the data in cloud.