# Rep1: Arduino and Android App in Proteus

# We are living in 21st century where automation of any form i.e. home or industrial plays an important role in human life. When it comes to industrial automation, the concept is applied to large machines or robots which helps in increasing the efficiency in terms of production, energy and time.In this project, we will design a simple home automation project using simple components using which different electrical appliances can be switched on or off. The project is based on Arduino and we have used Arduino UNO for the project

# 1N4007=A 1N4007 is a widely-used general-purpose diode. It is normally built to use as a rectifier in the power supplies section of electronic appliances to convert AC voltage to DC with other filter capacitors.

# The 2N2222 is a common NPN bipolar junction transistor (BJT) used for general-purpose low-power amplifying or switching applications. It is designed for low to medium current, low power, medium voltage, and can operate at moderately high speeds. It was originally made in the TO-18 metal can as shown in the picture.

# ALTERNATOR=he alternator provides your car with the bulk of its electricity and helps recharge the battery. But to do all of that, the alternator must first turn mechanical energy into electricity.

# HC-05 Bluetooth Module is an easy-to-use Bluetooth SPP (Serial Port Protocol) module, designed for transparent wireless serial connection setup.HC-05 Bluetooth module provides a switching mode between master and slave mode which means it able to use neither receiving nor transmitting data.

# L298N Motor Driver= Module is a high power motor driver module for driving DC and Stepper Motors. This module consists of an L298 motor driver IC and a 78M05 5V regulator. L298N Module can control up to 4 DC motors, or 2 DC motors with directional and speed control

# Arduino Uno R3 =is a microcontroller board based on a removable, dual-inline-package (DIP) ATmega328 AVR microcontroller. It has 20 digital input/output pins (of which 6 can be used as PWM outputs and 6 can be used as analog inputs). ... The R3 is the third, and latest, revision of the Arduino Uno.

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# 

# 

# 

# Code:

# String TEXT;

# void setup() {

# Serial.begin(9600);

# pinMode(6, OUTPUT); //NIGHT LAMP PIN

# pinMode(4, OUTPUT); // LED PIN

# pinMode(9, OUTPUT); // MOTOR PIN 1

# pinMode(10, OUTPUT); //MOTOR PIN 2

# }

# void loop() {

# while(Serial.available())

# {

# delay(3);

# char c = Serial.read();

# TEXT+=c;

# }

# if(TEXT.length() >0){

# 

# Serial.println(TEXT);

# 

# if(TEXT == "light on")

# {digitalWrite(6, HIGH);}

# 

# else if(TEXT == "light off")

# {digitalWrite(6, LOW);}

# 

# else if(TEXT == "fan on")

# {

# digitalWrite(9, 1);

# digitalWrite(10,0);

# }

# else if(TEXT == "fan off")

# {

# digitalWrite(9, 0);

# digitalWrite(10,0);

# }

# 

# else if(TEXT == "night lamp on")

# {digitalWrite(4, HIGH);}

# 

# 

# else if(TEXT == "night lamp off")

# {digitalWrite(4, LOW);}

# 

# 

# else if(TEXT == "all on")

# {digitalWrite(4, HIGH);

# digitalWrite(9, 1);

# digitalWrite(10,0);

# digitalWrite(6, HIGH);}

# 

# else if(TEXT == "all off")

# {digitalWrite(4, LOW);

# digitalWrite(9, 0);

# digitalWrite(10,0);

# 

# digitalWrite(6, LOW);}

# TEXT = "";}

# }

# 