BLUETOOTH BASED DC MOTOR SPEED AND DIRECTION CONTROL

AIM:

Design and development of Bluetooth based dc motor speed and direction control.

PURPOSE:

DC motors are widely used in different systems. DC motors can be controlled through batteries where there is no AC power available. There are so many applications like actuators, cordless drill machines, Automatic curtain controls…etc. In every application it requires speed control and direction control. Controlling from Bluetooth is added advantage. Here we propose system like Bluetooth based DC motor speed and direction control.

DESCRIPTION:

This project includes Bluetooth (HC-05) module, which is connected to Arduino through UART interface. L293d connected to Arduino digital pins.

WORKING:

Here DC motor controlled by l293d (H-bridge) IC. DC motor direction change by interchanging signals of digital pins. Speed will be controlled by PWM. This PWM performed through Arduino code. We have Bluetooth customized APP and using this we can control DC motor speed and direction. Motor speed and direction information displaying on 16X2 LCD.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Bluetooth	:	HC-05
H-Bridge	:	L293D IC
Motor	:	Dc gear motor 100 r.p.m
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

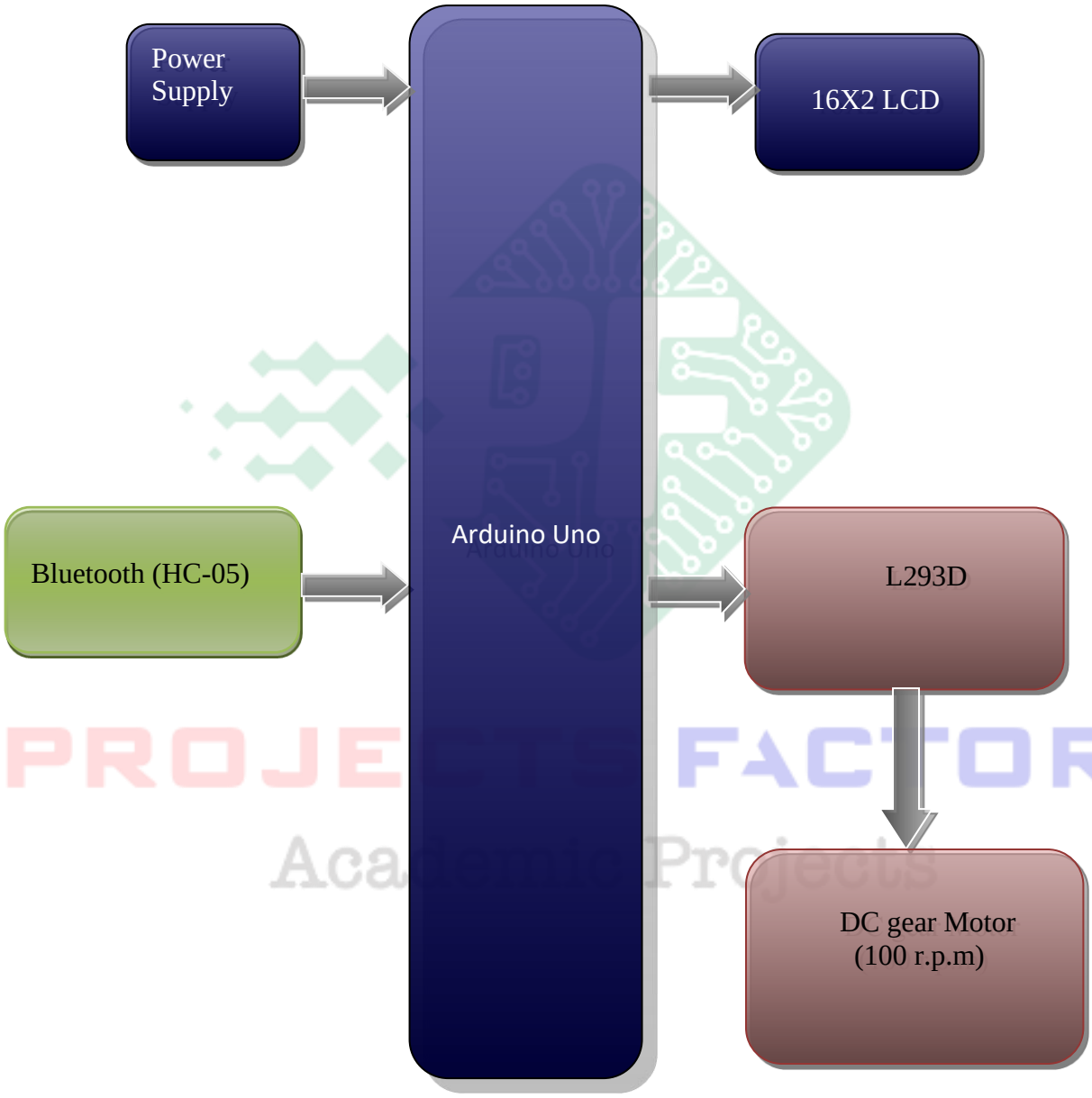
Arduino IDE

Proteus based circuit diagram

APPLICATIONS:

- Actuators
- Door Control
- Window Control
- Viper Control

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:

INTERFACES COVERD:

- We have covered Bluetooth (HC-05) module interfacing
- L293d interface