Arduino,Nodemcu and Raspberry

Arduino

Arduino and Nodemcu are basically development boards.It is actually made to learn how to program an MCU.We can tell the board what to do by sending a set of instructions to the microcontroller on the board.

Unlike a general purpose system such as PC a development board consist of little or no hardware for dedicates user interface.It has got only a memory to accept and run a user supplied program.

Program:C++,Embedded C.

IDE:ESPlorer,Arduino

Features:Inexpensive,simple,cheaper and opensource.

Applications:Toys,control Led brightness using PWM,Light sensor,Temperature sensor to monitor temperature of the room.

Example:remote controlled car.

Nodemcu

NodeMCU is an open source firmware for which open source prototyping board designs are available. The name "NodeMCU" combines "node" and "MCU" (micro-controller unit). The term "NodeMCU" strictly speaking refers to the firmware rather than the associated development kits.

Extra feature:Wifi connectivity

All other functions same as Arduino.

Raspberry Pi

It is a low cost ,small size computer in which a monitor,keyboard and mouse can be connected.Its capable of doing everything a normal PC can do.From browsing the internet and playing high definition video,to making spreadsheets,word processing and playing games.

Applications:Home automation,Machine learning,games,website.

Example:remote controlled car with live streaming using webcam

Coding etiquette

1. Documentation
2. Use descriptive variable names
3. Use repeatitive codes-functions
4. Avoid multiple lines-Short handing
5. Convention(camel phrase)
6. Indenting

Version control

1. GitHub
2. Bit bucket

Software used for version control operations is sourcetree

PCB design software used:**EAGLE**

**Arduino UNO**