Lesson 3
Integrated Development Environment (IDE)

Development Of Application Software Codes

- Perfected by a number of cycle of runs and tests
- Development phase cycle consists of editing-testing-debugging
- The cycles repeat during development phases
- Till system has thoroughly tested and debugged software
- A system develops in a larger time-frame than the hardware circuit design.

Integrated Development Environment

- A set of software components and modules
- Provides the software and hardware environment for developing and prototyping
- Enabling the codes development on a computer, and later on enables download of the codes on to hardware platform
- IDE enables software that communicates with the Internet web server or cloud service

IDE or Prototyping Tool

- Enables a prototype design

- Used for developing embedded hardware and software platform, simulating, and debugging

- A tool for the software development of embedded devices that makes application development easy

- May be open source; Arduino open source IDE from the Arduino website

IDE Software Serial Library Example

- The library consists of number of programs

- Serial-interface protocol functions

- Enables using the protocol-specific programs directly

- A program for reading an RFID tag

- A program for sending data to USB port for onward transmission on Internet

Simulator in an IDE

- Software that enables development on the computer without any hardware need

- Then prototyping the hardware which can be connected for embedding the software and further tests.

Summary

We learnt

- Edit-Test-Debug Development cycle

- IDE

- Device APIs, libraries, compilers, RTOS, simulator, editor, assembler, debugger, emulators, logic analyser, application codes' burner for flash, EPROM and EEPROM and other software components for integrated development of a system

End of Lesson 3 on
Integrated Development Environment