

# Chapter 13

## PIC Family Microcontroller

# Lesson 16

## **Development Tools**

# MPLAB®

- A development environment for PIC MCUs
- Free source code
- Free software libraries, commonly available in source code form
- Commonly used software for graphics, TCP/IP, USB, encryption, file systems, and digital signal processing

# MPLAB® development environment

- Supports all over 600 MCUs
- Lowest cost 8-bit MCU
- Highest performing and largest memory PIC32 MCU
- Most of software stacks compatible across many microcontroller and digital signal processor families from Microchip

# Development tools

- MPLAB® IDE (Micorchip PIC Laboratory integrated development environment)
- MPLAB® C Compiler
- MPLAB® REAL ICE™ In-circuit Emulator
- MPLAB® ICD 3 In-circuit Debugger
- PICkit 3 Programmer
- MPLAB PM3 Universal Device Programmer

# Software resources (Free Source Code)

- USB Host and Device stacks
- Graphics and audio library
- TCP/IP Stack with SSL,
- 16 and 32-bit File System
- CAN software

# MPLAB IDE

- Windows environment on a personal computer
- MPLAB® MPLAB editor
- Assembler (MPASM™), library (MPLIB™) linker (MPLINK™)
- Simulator
- MPLAB SIM

# MPLAB IDE

- In-circuit emulators (MPLAB ICE 2000 and ICEPIC™)
- in-circuit debugger for specific devices (for example, MPLAB ICD for PIC16F87X)
- MPLAB® IDE full featured editor



# Summary

# We learnt

- MPLAB an IDE
- Free down load
- Software libraries for number of applications also freely available
- Commonly used software for graphics, TCP/IP, USB, encryption, file systems, and digital signal processing

End of Lesson 15 on

**Development Tools**