Lecture 1 (08/09/2014)

Introduction

Readings: Chapters 1 and 2 (less 2.6, 2.9, 2.10)

Module Overview

- ## Lecturer: Dr. Mark Flanagan
  - Room 245
  - Email: Mark.Flanagan@ucd.ie

- ## Contact: 12 weeks
  - Lectures: Mon 10:00 AM (Eng 326)
    - Wed 10:00 AM (Eng 326)
    - Fri   09:00 AM (Eng 326)
  - Labs: Eng 321, Wed 15:00 PM; Thu 15:00 PM
  - NB: **No lab this week**!

- ## Assessment:
  - Lab Assignments   :   40 %
  - Final Examination   :   60 %

Module Overview

- Topics:
  - C programming basics; I/O, flow of control
  - Functions, preprocessor directives
  - Arrays and pointers, strings
  - File I/O
  - Dynamic memory allocation
  - User defined types, structures
  - Linked lists, stacks
  - Analysis of algorithms.

- References:
  - EEEN20010 Course Reader (available on BlackBoard)
  - Kernighan and Ritchie. The C Programming Language. 2nd Ed. Prentice Hall. (Available in UCD Library)

Programming Overview

- Programming: preparing a list of instructions telling the computer how to perform its calculations
- Computer understands *machine language* (ML)
- Assembly language: first level of abstraction
  - Still tedious to program
  - Still machine-specific
- High Level Language (HLL): next level of abstraction
  - e.g. C, C++, Java, Python, Ruby
  - Good level of abstraction
  - Transportable
- ANSI C