Course: Programming Fundamentals using C

Contents

Why We Program?

- We usually cause errors (hay sai), quickly forget something (mau quên) and are not tenacious (chóng chán)

- Computers are our assistances

- They need to be taught how to work

- To teach a computer working, we use a programming language.

Fpt University

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Why C is chosen?

- Top ten common programming languages:

May-15	May-14	Change	Programming Language	Ratings	Change
1	2	^	Java	16.87%	-0.04%
2	1	v	C	16.85%	-0.08%
3	4	^	C++	7.88%	1.89%
4	3	v	Objective-C	5.39%	-6.40%
5	6	^	C#	5.26%	1.52%
6	8	^	Python	3.73%	0.67%
7	9	^	JavaScript	3.13%	1.34%
8	11	^	Visual Basic .NET	2.97%	1.70%
9	7	v	PHP	2.72%	-0.67%
10	-	^^	Visual Basic	1.89%	1.89%

For latest data   http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html

- Completed EN051 or obtain 500+ TOEFL equivalent international certificates

- We plan to *understand* a subset of the C language, rather than the whole thing, is to make learning easier, and how and why the C language is learned and applied as the basic language syntax.
  - The keyword is *understand* !! We must not be satisfied by just learning a bunch of information about the C language syntax – our goal is to learn how to implement the console application/ algorithms/ … using the C language and what makes them good.
  - As we proceed to learn and use the C language, we shall pick up the underlying theory and basic syntax.
  - *This will be a practical course* !! We shall use the Dev-C++ 4.9.9.2 for Windows program to learn C language.
  - *Remember*: The C language is the language of the low level nature. Therefore, it is critical to understand the C language syntax.

Course Description- Course Plan

1. **Introduction to PFC**
2. **Basic Computation**
3. **Basic Logics**
4. **Modules and Functions**
5. **Pointers**
6. **Libraries**
7. **Contiguous Storage**
8. **Strings**
9. **Text Files**

Coues plan: Please get it from CMS

Materials/ Tools/ References

- **Textbook:**
  Evan Weaver – Foundations of Programming Using C, July 2006 Edition, Trường Đại học FPT – Hà Nội – tháng 9, 2007

- **Course Website (forum)**: http://cms-hcm.fpt.edu.vn/

- **Tool**: You can use an arbitrary C/C++ programming software, such as:
  (1) Dev-C++ 4.9.9.2 (recommended):
      Link: http://www.bloodshed.net/

  (2) NetBeans with C/C++ plug-in:

  http://www.oracle.com/technetwork/java/javase/downloads/jdk-netbeans-jsp-142931.html

Course Requirements

- Following lessons in classrooms

- Reading textbook and documents at home

- Completing chapter assessments in time (programs and/or reports)

- Discussing actively in your teams and in classrooms

- Maximum score: 10
- On-going assessments:
  - 02 Quiz (Q)   (10%)
  - 08 Workshops (W)   (10%)
  - 01 Assignments (AS)   (10%)
  - 01 Practical Exam (PE)   (40%)

  (Practical exam retake only when the score of PE < 4)
- Final exam (FE)   (30%)

- Total score = 0.1*Q + 0.1*W + 0.1*AS + 0.4*PE + 0.3*FE
- Pass:

  Every on-going assessment component >0 and
  Practical Exam >=4 and
  Final Examination score ≥ 4
  Total score ≥ 5
- FE Retake only when not passed

- **Read lesson before class**
- **Attend lectures**
  - Listen, understand, then make your own notes
  - Give your explanation about some topic in lectures
  - Ask questions
  - Give some examples that are not existed in your book
  - Practice all the exercises to make your sense
- **After classes**
  - Discuss your classmate in directly, on forum
  - Analyze, design and implement workshops and assignment. **Write reports** to your notebook.
  - Build your teams in yourselves to support together in studying

- Cheating, plagiarism and breach of copyright are serious offenses under this Policy.
  - Cheating
    - Cheating during a test or exam is construed as talking, peeking at another student's paper or any other clandestine method of transmitting information.
  - Plagiarism
    - Plagiarism is using the work of others without citing it; that is, holding the work of others out as your own work.
  - Breach of Copyright
    - If you photocopy a textbook without the copyright holder's permission, you violate copyright law.

- **Enjoy the Course!**
  - Be enthusiastic about the material because it is interesting, useful and an important part of your training as a software engineer. Our job is to help you learn and enjoy the experience. *We will do our best but we need your help*. So let's all have fun together with Foundations of Programming Using C!!!

Download and Install Dev-C++ 4.9.9.2

Link: http://www.bloodshed.net/

Q&A