Object-Oriented Programming - OOP

Course Introduction

Trinh Thi Van Anh – PTIT

Why should you study Java?

- **Top ten common programming languages:**

Jul 2018	Jul 2017	Change	Programming Language	Ratings	Change
1	1		Java	16.139%	+2.37%
2	2		C	14.662%	+7.34%
3	3		C++	7.615%	+2.04%
4	4		Python	6.361%	+2.82%
5	7	^	Visual Basic .NET	4.247%	+1.20%
6	5	v	C#	3.795%	+0.28%
7	6	v	PHP	2.832%	-0.26%
8	8		JavaScript	2.831%	+0.22%
9	-	^^	SQL	2.334%	+2.33%
10	18	^^	Objective-C	1.453%	-0.44%

From   http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html

Why Java?

- Java is Architecture Neutral (i.e. platform independent).

- Java Provides "One-Stop Shopping" (customers can get all they need in just "one stop").

- Java is Object-Oriented from the Ground Up.

- Java is an Open Standard.

- Java is Free!

Instructor introduction

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Group online:

https://www.facebook.com/groups/901807533750555 **(LTHĐT-D19-Cô Vân Anh)**

Course Overview

- **Prerequisite**:
  - Programming Fundamentals Using C

Course objectives

- Introduce fundamental object-oriented (OO) terminology and concepts.

- Getting to know the "World of Java".

- Understand the implementation of a Java Application.

- Understand the roles of java built-in packages.

Contents

- The basic Java Language

- The advance Java Language

- OOP (object-oriented programming) with java

- Collections

- Exceptions

- Basic I/O (Input/output)

- Thread

- GUI

Resources

- **Tool**
  - Java Development Kit (**JDK**8)
    - http://www.oracle.com/technetwork/java/java**se**/downloads
  - IDE (Integrated Developement Environment)
    - Notepad / Notepad++ (https://notepad-plus-plus.org)
    - NetBeans (http://netbeans.org)
    - Eclipse (http://www.eclipse.org)
- **Text book**
  - http://docs.oracle.com/javase/tutorial/
  - http://www.oracle.com/technetwork/java/javase/documentation/jdk8-doc-downloads-2133158.html

Download & Install NetBeans 8 & JDK

JDK

[http://www.oracle.com/technetwork/java/java**se**/downloads](http://www.oracle.com/technetwork/java/javase/downloads)

NetBean:

https://netbeans.apache.org/download/index.html

Links for reading

- Java tutorial
  - https://**docs.oracle.com**/javase/tutorial/
- Java platform
  - http://www.tutorialspoint.com/java/index.htm
- java.util.Collections
  - http://www.tutorialspoint.com/java/util/java_util_collections.htm
- java.util.ArrayList
  - http://www.tutorialspoint.com/java/util/java_util_arraylist.htm

Course Requirements

- Following lessons in classroom
- Reading textbook and documents at home (online)
- Doing all exercises at home
- should bring your laptop to class for short exercises

Grading policy

- Must attend at class
- Evaluating
  - Attendance marks (AD, 10%)
  - **4 to 6** Labs for L1 (20%) and L2 (20%)
  - Final Exam (FE, 50%) (Lab)
  - Total score = 10%(AD)+20%(L1)+**20%**(L2)+**50%**(FE)