Object-oriented Programming

By Lim Pei Geok

Lecturer of Department of Computer Science,
Southern University College

About this subject…

Course Name	Object-oriented Programming
Code	PROG2013
Status	Core
Credit hours	3
Prerequisite	–

Assessment Scheme

Activities	Percentage	Overall Percentage
Tutorial	2 x 5%	10%
Assignment	1x10%,	10%
Project	1 x 20%	20%
Mid Term	1 x 20%	20%
Final	1 x 40%	40%
	Total	**100%**

Objectives

- Introduce students to Object-Oriented Paradigm and students will be able to practice OOP using Java upon completion of this course.

Learning Outcome

1. Demonstrate the use of UML graphical notations in design a solution using object-oriented approach.
2. Discuss the concept of object-oriented analysis, object-oriented design and object-oriented programming in a group work.
3. Solve the programming problem by develop the program with the concept of object-oriented approach.

Contents

1. Problem solving through computer
2. Process of program development
3. Concept of Objects
4. Objects and classes
5. Deriving Objects from a Given Problem
6. Common Attributes and Behaviours Among Objects of Different Classes
7. Defining classes in java programs
8. Manipulating Data and Objects
9. Class Members
10. Superclasses and subclasses
11. Overriding versus overloading
12. Polymorphism, dynamic binding and generic programmmg
13. Abstract classes and Interfaces

Recommended Text

Main reference:

- Y. Daniel Liang. Introduction to Java Programming and Data Structures. 12th Edition. Upper Saddle River: Pearson Prentice Hall, 2020. [ISBN: 0136520235]

Additional reference:

- H.M. Deital, PJ. Deital. Java: How to Program. 11th Edition. Prentice Hall, 2018. [ISBN: 013743350]