Course: Java Object-Oriented Programming

When: Every Saturday morning from 11am-12pm from Apr 01, 2023 – May 13, 2023

Where: Google Meet sent via email reminders

Lesson Plan:

Through this course, students will learn the elements and advantages of Object-Oriented Programming in Java. This course will be primarily a seminar, involving weekly presentations including code examples and writing of new code. Students will be encouraged to ask questions. Practice problems will be given and independent coding/research is always recommended, but this course is more conceptual than it is syntactic.

Course Outline:

- **Lesson 1 - Introduction to Classes**
  - Students will learn what a class is, how to write one, and when one may be used
- **Lesson 2 - Inheritance and Casting**
  - Students will learn what, when, and how inheritance works in a class structure, as well as understanding the class hierarchy and casting.
- **Lesson 3 - Abstraction and Interfaces**
  - Students will investigate data and class abstraction in java, as well as interfaces. Along with this they will understand the difference between vertical and horizontal class hierarchies.
- **Lesson 4 - Generics and Review of Classes**
  - Students will learn how generics can be used to further class abstraction. We will also review all aspects of classes and their properties.
- **Lesson 5 – Recursion**
  - Students will explore recursive functions and understand the implications of a recursive effect.
- **Lesson 6 - Final Evaluation**
  - Students will be offered a variety of final project prompts which involve one or more of the important topics discussed in class. Solutions will be provided as well as textual descriptions of how they may be solved.

Contact Us:

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