

University of Asia Pacific
Department of Computer Science and Engineering
CSE 204: OOP 1
Classwork

1. Create a class called **Book** with the following attributes: **title**, **author**, **year**, and **bookid**. Write a parameterized constructor to initialize these attributes. Then, create a method within the class that displays the book's information.

2. Create a **MediaPlayer** class with overloaded methods for playing audio files. Implement methods named:

- i) **playAudio(String fileName)** - Plays an audio file by specifying the file name.
- ii) **playAudio (String fileName, int volume) (WithVolume)**- Plays an audio file with specified volume control.
- iii) **playAudio (String fileName, String format, int volume) (WithDetails)**- Plays an audio file with additional format and volume control options.

Use constructor overloading to provide various initialization options for the MediaPlayer class.

3. Design a **Car** class with attributes **brand**, **model**, **year**, and **fuelEfficiency**. Create a constructor to set the brand, model, and year. Implement a method named **calculateMaxDistance** that calculates the maximum distance the car can travel with a given amount of fuel.

Hint: The method should take a single parameter **fuelAmount**, which represents the amount of fuel available for the journey. Inside the method, use the fuelAmount and the car's fuelEfficiency to calculate the **maximum distance** the car can travel. The method should return the calculated maximum distance.