
OOC-2 LAB 01 HANDOUT AND TASKS

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1 IDE

An IDE or Integrated Development Environment is a software application that provides comprehensive facilities to develop and debug software. One developer has multiple options for choosing an IDE for a particular programming language—for instance, *IntelliJ Idea* or *Eclipse* for Java, *Visual Studio* for C++, or C#, etc.

1.1 IntelliJ Idea installation

Go to [intellij site](#). Give your credentials including your university email address and register.

Go to [login page](#). After login, you can download **IntelliJ Idea Ultimate** latest version. Download and complete your installation. you will use your username and password to activate the product. The license for the IDE is valid for 1 year. You can reapply to extend the time every year.

1.2 Visual Studio installation

Go to [visual studio microsoft](#) page and download the community edition based on your operating system. Visual Studio is the best for the Windows platform.

2 TASKS

2.1 Scenario: Indispensable SuperShop

As the name suggests, Indispensable SuperShop has all types of products a customer may search for. The shop has diverse departments, for example, Groceries, Electronics, Clothing, and more. Each department has numerous products. Each product has a name, barcode, price, and other relevant information of the product. A product must belong to any of these departments. A product may have a discount associated with it. Electronics products have 10% discount, Clothing products have 15% discount. The inventory of the shop needs to be managed. For example, any addition, deletion, or the number of pieces of a product, etc.

1. Design an object-oriented solution of the scenario.
2. Identify core concepts of oop in the developed solution.
3. Write C# or Java code.

2.2 Scenario: Music Streaming Application

Your task is to develop a music streaming application that allows users to enjoy their favorite audio content. This includes songs, podcasts, and audiobooks. A song has a title, artist, and duration. A Podcast has a title, host, and episode number. Similarly, an Audiobook has a title and narrator. Users should be able to play, pause, and stop the playback of different types of audio content. Additionally, users can create playlists to organize their content. Users should be able to create playlists, add audio content to them, and play all the content within a playlist.

1. Design an object-oriented solution of the scenario.
2. Identify core concepts of oop in the developed solution.
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