**Topic:** MVC Design

**Topic Introduction:**

The Model-View-Controller (MVC) is a software design pattern commonly used in building user interfaces. It aims to separate an application into three interconnected parts, namely, the Model, the View, and the Controller. The Model represents the data and business logic of the application, the View is responsible for displaying the data to the user and receiving user input, and the Controller connects the Model and View, implementing the application logic and processing user input.

**Assignment Goals:**

* Understand the concept of the MVC design pattern.
* Learn how to implement the MVC design pattern in software development.
* Build a simple console-based task manager using the MVC design pattern in Java.

**Assignment Description:**

In this assignment, you will learn how to implement the Model-View-Controller (MVC) design pattern in software development using Java. You will build a simple console-based task manager, where users can view, add, and complete tasks.

To achieve the assignment goals, you will need to follow these steps:

* Model: Implement the Task class that represents the data and business logic of the task manager. It should have attributes such as name, description, and completed.
* View: Implement the TaskView class that displays the list of tasks to the user and receives user input. It should have methods such as showTasks, getTaskName, getTaskDescription, and getTaskIndex.
* Controller: Implement the TaskController class that connects the Model and View, implementing the application logic and processing user input. It should have methods such as showTasks, addTask, completeTask, and run.
* Main: Implement the TaskModel class that stores and manages a list of tasks. Instantiate the Model, View, and Controller classes, and run the application.

By the end of this assignment, you will have a basic understanding of the MVC design pattern and how to implement it in software development using Java. Additionally, you will have gained experience in building a simple console-based application using Java.

**Key:**

The solution for this assignment is provided in a separate folder with the submission.