

Problem 5: Write a minimal program implementing MVC.

Q.5:*) MVC Architecture Implemⁿ Code.

Model Layer.

Ans.

```
package MyPackage;
public class Course
{
    private String CourseName;
    private String CourseId;
    private String CourseCategory;

    public String getId()
    {
        return CourseId;
    }

    public void setId(String id)
    {
        this.CourseId = id;
    }

    public String getName()
    {
        return CourseName;
    }

    public void setName(String name)
    {
        this.CourseName = name;
    }

    public String getCategory()
    {
        return CourseCategory;
    }

    public void setCategory(String category)
    {
        this.CourseCategory = category;
    }
}
```


View Layer

```
package MyPackage;
public class CourseView
{
    public void printCourseDetails (String CourseName,
    String CourseId, String CourseCategory)
    {
        System.out.println ("Course Details:");
        System.out.println ("Name: " + CourseName);
        System.out.println ("Course ID: " + CourseId);
        System.out.println ("Course Category: " + CourseCategory);
    }
}
```

Controller Layer

Controller Layer

```
package MyPackage;
public class CourseController
{
    private Course model;
    private CourseView view;

    public CourseController (Course model, CourseView view)
    {
        this.model = model;
        this.view = view;
    }

    public void setCourseName (String name)
    {
        model.setName (name);
    }

    public void getCourseName ()
    {
        return model.getName ();
    }

    public void setCourseId (String id)
    {
        model.setId (id);
    }

    public String getCourseId ()
    {
        return model.getId ();
    }

    public void setCourseCategory (String category)
    {
        model.setCategory (category);
    }
}
```



```

public String getCourseCategory ()
{
    return model.getCategory();
}

public void updateView ()
{
    view.printCourseDetails(model.getName(), model.getId(),
        model.getCategory());
}
}

```

Main Java Class.

```

package MyPackage;

public class MVCPatternDemo
{
    public static void main (String [] args)
    {
        Course model = retrieveCourseFromDatabase();
        CourseView view = new CourseView();
        CourseController controller = new CourseController(model, view);
        controller.updateView();
        controller.setCourseName("Python");
        System.out.println("\nAfter updating, Course Details are as follows");
        controller.updateView();
    }

    private static Course retrieveCourseFromDatabase()
    {
        Course course = new Course();
        course.setName("Java");
        course.setId("01");
        course.setCategory("Programming"); return course;
    }
}

```