

Experiment - 2

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Subject Name: Machine Learning Lab

Subject Code: 20CSP-317

1. Aim/Overview of the practical:

Design and implement a simple inventory control system for a small video rental store.

2. Task to be done/ Which logistics used:

Write the program to design and implement a simple inventory control system for a small video rental store.

3. Algorithm/Flowchart (For programming-based labs):

4. Steps for experiment/practical/Code:

```
import java.util.Scanner;
```

```
class Video {  
    public String title;  
    public boolean checked = true;  
    int avgrating;  
  
    public boolean checked() {  
        return checked;  
    }  
  
    public void rent() {  
        checked = false;  
    }  
  
    public void returned() {  
        checked = true;  
        System.out.println("Video is returned ");  
    }  
}
```

```
public int getRating() {
    if (avgrating > 0) {
        return avgrating;
    } else {
        System.out.println("Rating is not available");
        return 0;
    }
}

class VideoStore extends Video {
    Video v[] = new Video[10];
    static int i = 0;

    void addVideo(String title) {
        v[i] = new Video();
        this.title = title;
        v[i].title = title;
        i++;
        System.out.println("Video Added Successfully");
    }

    void checkOut(String title) {
        for (int k = 0; k < i; k++) {
            if (v[k].title.equalsIgnoreCase(title)) {
                if (v[k].checked()) {
                    v[k].rent();
                    System.out.println("Video is rented");
                } else {
                    System.out.println("Sorry Video not available");
                }
            }
        }
    }
}
```

```
void returnVideo(String title) {
    if (i == 0) {
        System.out.println("You have no video to return");
    }
    for (int k = 0; k < i; k++) {
        if (v[k].title.equalsIgnoreCase(title)) {
            v[k].checked = true;
        }
    }
}

public void receiveRating() {
    if (i == 0) {
        System.out.println("No Video inInventory");
    } else {
        for (int k = 0; k < i; k++) {
            System.out.println("Enter the integer rating for movie " + v[k].title);
            Scanner ob = new Scanner(System.in);
            v[k].avgrating = ob.nextInt();
        }
    }
}

public void listInventory() {
    if (i == 0) {
        System.out.println("No Video in Inventory");
    } else {
        for (int k = 0; k < i; k++) {
            System.out.println(
                k +
                1 +
                ". " +
                v[k].title +
                " " +
                "Rating " +
```

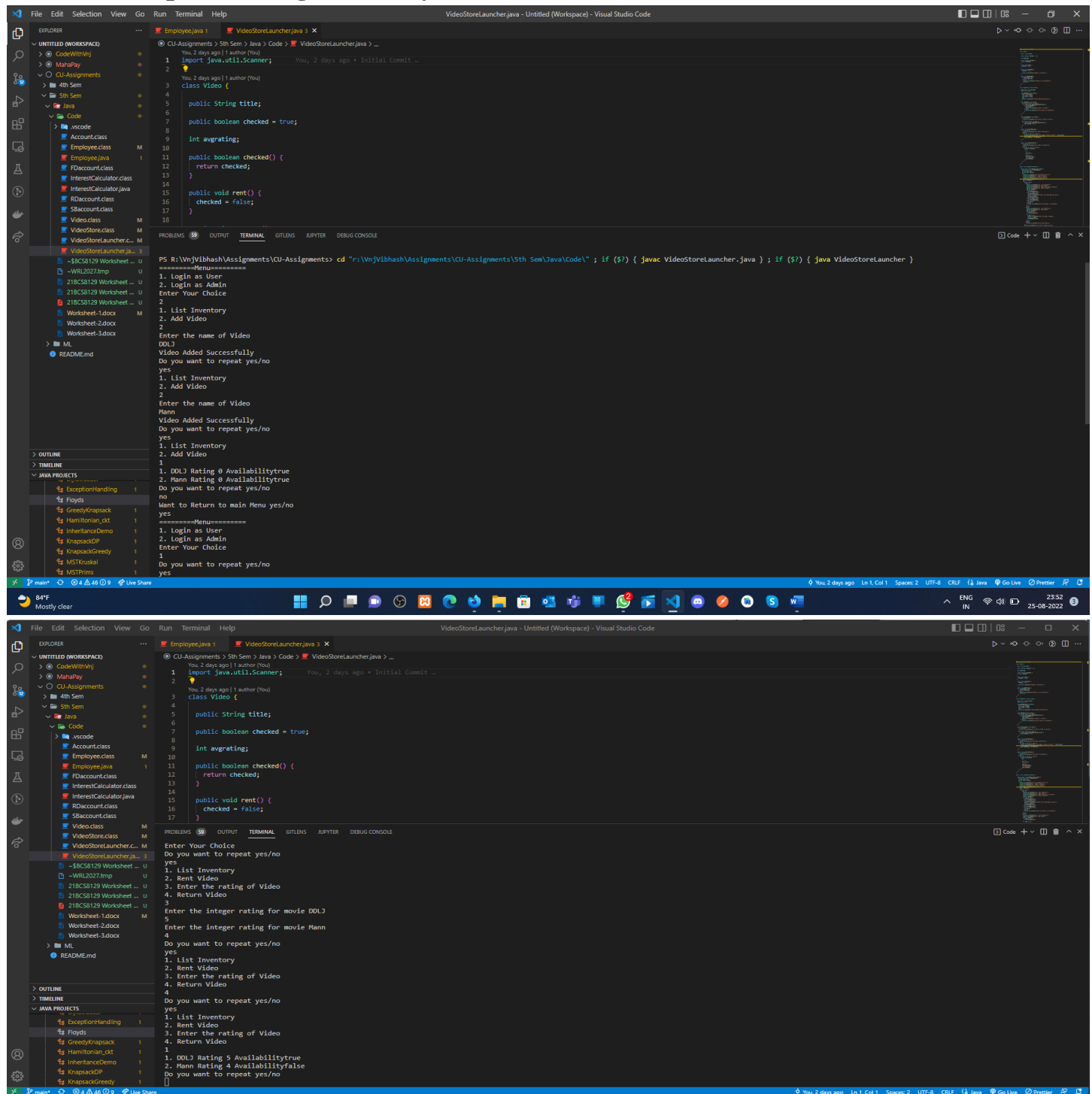
```
v[k].avgrating +  
" Availability" +  
v[k].checked()  
);  
}  
}  
}  
}  
  
public class VideoStoreLauncher {  
    public static void main(String[] args) {  
        VideoStore vs = new VideoStore();  
        int ch, uCh, aCh;  
        String title, choice;  
        do {  
            System.out.println("=====Menu=====");  
            System.out.println("1. Login as User");  
            System.out.println("2. Login as Admin");  
            System.out.println("Enter Your Choice");  
            Scanner s = new Scanner(System.in);  
            ch = s.nextInt();  
            do {  
                switch (ch) {  
                    case 1:  
                        System.out.println("1. List Inventory");  
                        System.out.println("2. Rent Video");  
                        System.out.println("3. Enter the rating of Video");  
                        System.out.println("4. Return Video");  
                        uCh = s.nextInt();  
                        if (uCh == 1) {  
                            vs.listInventory();  
                        } else if (uCh == 2) {  
                            vs.listInventory();  
                        }  
                        System.out.println("Enter the video Name you want");
```

```
        title = s.next();
        vs.checkOut(title);
    } else if (uCh == 3) {
        vs.receiveRating();
    } else if (uCh == 4) {
        vs.rent();
    } else {
        System.out.println("No such Option is available");
    }
    break;
case 2:
    System.out.println("1. List Inventory");
    System.out.println("2. Add Video");
    aCh = s.nextInt();
    if (aCh == 1) {
        vs.listInventory();
    }
    if (aCh == 2) {
        System.out.println("Enter the name of Video");
        title = s.next();
        vs.addVideo(title);
    }
    break;
default:
    System.out.println("Sorry Wrong Choice");
}
System.out.println("Do you want to repeat yes/no");
choice = s.next();
} while (choice.equalsIgnoreCase("yes"));
System.out.println("Want to Return to main Menu yes/no");
choice = s.next();
} while (choice.equalsIgnoreCase("yes"));
}
}
```

5. Observations/Discussions/ Complexity Analysis:

Here we have created the VideoStoreLauncher, VideoStore and Video and I have Passed all the Parameters according to the Requirement given in the question.

6. Result/Output/Writing Summary:



The screenshot displays the Visual Studio Code interface with the following components:

- Explorer:** Shows the project structure with files like `Account.class`, `Employee.class`, `FDAccount.class`, `InterestCalculator.class`, `RDAccount.class`, `SBAccount.class`, `Video.class`, `VideoStore.class`, `VideoStoreLauncher.java`, and `VideoStoreLauncher.class`.
- Code Editor:** Displays the source code for `VideoStoreLauncher.java`. The code includes imports for `java.util.Scanner` and `java.util.ArrayList`, and defines a `Video` class with attributes `title`, `checked`, and `avgRating`. It also includes methods `checked()` and `rent()`.
- Terminal:** Shows the execution output of the program. The output includes a menu with options like "Login as User", "Login as Admin", "Enter Your Choice", "List Inventory", "Add Video", and "Return Video". It also shows the results of the `rent()` method, including the rating and availability of the video.

Learning outcomes (What I have learnt):

1. Learn How use the inheritance concept.
2. java classes and all the features.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			