Experiment -1.2

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

Student Name: **UID:**
Branch: **Section/Group**
Semester: **Date of Performance:**
Subject Name **Subject Code:**

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:

Make a simple inventory control system for a small video rental store

3. Apparatus(For applied/experimental sciences/materials based labs)**:**

Jdk, vsCode

4. Algorithm/Flowchart (For programming based labs)**:**

1. start
2. make a class with name Video. In this class make variable related to video.
3. make a class with name VideoStore. In this class functions are made for add video, rent video, return video. Etc….
4. make a main class with name VideoStoreLauncher. In this class we call all the function with object of the class.
5. End.

5. Code:

a. code of Video class :

```
import java.util.Scanner;

public 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;

        }

    }

}
```

b. code of VideoStore class

```
import java.util.Scanner;

public 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 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());

            }

        }

    }

}
```

c. Code of VideoStoreLauncher class

```
import java.util.Scanner;

public class VideoStoreLauncher {

  public static void main(String[] args) {
    VideoStore vs = new VideoStore();

    int ch, uCh, aCh, vno;

    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"));
  }
}
```

10. Result/Output/Writing Summary:

```
=========Menu=========
1. Login as User
2. Login as Admin
Enter Your Choice
2
1. List Inventory
2. Add Video
2
Enter the name of Video
Pushpa
Video Added Successfully
Do you want to repeat yes/no
yes
1. List Inventory
2. Add Video
2
Enter the name of Video
Titanic
Video Added Successfully
Do you want to repeat yes/no
no
Want to Return to main Menu yes/no
yes
```

```
=========Menu==========
1. Login as User
2. Login as Admin
Enter Your Choice
1
1. List Inventory
2. Rent Video
3. Enter the rating of Video
4. Return Video
1
1. Pushpa Rating 0 Availabilitytrue
2. Titanic Rating 0 Availabilitytrue
Do you want to repeat yes/no
yes
1. List Inventory
2. Rent Video
3. Enter the rating of Video
4. Return Video
3
Enter the rating for moviePushpa
5
Enter the rating for movieTitanic
6
Do you want to repeat yes/no
yes
1. List Inventory
2. Rent Video
3. Enter the rating of Video
4. Return Video
2
1. Pushpa Rating 5 Availabilitytrue
2. Titanic Rating 6 Availabilitytrue
Enter the video Name you want
pushpa
Video is rented
Do you want to repeat yes/no
yes
1. List Inventory
2. Rent Video
3. Enter the rating of Video
4. Return Video
4
Do you want to repeat yes/no
no
Want to Return to main Menu yes/no
```

Learning outcomes (What I have learnt):

1. Identify situations where computational methods would be useful.
2. Approach the programming tasks using techniques learnt and write pseudo-code.
3. Choose the right data representation formats based on the requirements of the problem.
4. Use the comparisons and limitations of the various programming constructs and choose the right one for the task.

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.			