

Experiment - 2

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Branch: BE-CSE(LEET)

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Subject Name: Project Based Learning in Java Lab

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Subject Code: 20CSP-321

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. Software Requirements (For programming-based labs):

- JDK-8 or any
- Eclipse-IDE for Java

4. Steps for experiment/practical/Code:

```
package Unit1;
```

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

```
class Video {
```

```
    String videoName;
```

```
    boolean checkOut;
```

```
    int rating;
```

```
    String getName()
```

```
    {
```

```
        return videoName;
```

```
    }
```

```
    void doCheckOut()
```

```
    {
```

```
        checkOut = true;
```

```
    }
```

```
    void doReturn()
```

```
    {
```

```
        checkOut = false;
```

```
    }
```

```
    void receiveRating(int rating)
```

```
{
    this.rating = rating;
}

int getRating()
{
    return rating;
}

boolean getCheckOut()
{
    return checkOut;
}

public Video(String videoName)
{
    this.videoName = videoName;
}

}

class VideoStore {
    Video store[]= new Video[20];
    static int a=0;
    void addVideo(String name)
    {
        store[a] = new Video(name);
        store[a].checkOut = false;
        store[a].receiveRating(0);
        System.out.println("video " +name +" added sucessfully");
        a++;
    }

    void doCheckOut(String name)
    {
        for(int i=0; i<a;i++)
        {
            if(store[i].getName().equals(name))
            {
```

```
store[i].doCheckOut();
System.out.println("Video " +name +" removed successfully from "+i +" location");
} else {
    System.out.println("No such video exists at:" +i+" location");
}
}
}
void doReturn(String name)
{

for(int i= 0; i<a;i++)
{
    if(store[i].getName().equals(name))
    {
        store[i].doReturn();
        System.out.println("Video returned: " +name +" from location "+i);
    } else{
        System.out.println("No such video exists at locations:" +i);
    } } }
void receiveRating(String name, int rating)
{
    for(int i= 0; i<a;i++)
    {
        if(store[i].getName().equals(name))
        {
            store[i].receiveRating(rating);
        }
    }
    System.out.println("Ratings " +rating +" has been mapped to the video " +name);
}
void listInventory()
{
    for(int i= 0; i<a;i++)
    {
        if(!store[i].getCheckOut())
        {
            System.out.print("Videos (location "+i+ "): "+store[i].videoName+" Ratings (location "+i+ "):
"+store[i].getRating()+"\n");
        }
    }
}
```

```
}  
public void exit() {  
    System.exit(0);  
}  
}  
class VideoStoreLauncher {  
    public static void main(String[] args) {  
  
        VideoStore obj = new VideoStore();  
        int choice;  
        String videoName;  
        int rating;  
        boolean status = true;  
        while(status)  
        {  
            System.out.println("MAIN MENU");  
            System.out.println("*****");  
            System.out.println("1.Add Videos:");  
            System.out.println("2.Check Out Videos:");  
            System.out.println("3.Return Videos:");  
            System.out.println("4.Receive Rating:");  
            System.out.println("5.List Inventory:");  
            System.out.println("6.Exit");  
            System.out.println("Enter your choice:");  
            Scanner sc = new Scanner(System.in);  
            choice = sc.nextInt();  
            switch(choice)  
            {  
            case 1:  
                {  
                    System.out.println("Enter the name of the video you want to add");  
                    videoName = sc.next();  
                    obj.addVideo(videoName);  
                    break;  
                }  
  
            case 2:  
                {
```

```
        System.out.println("Enter the name of video to checkout");
        videoName = sc.next();
        obj.doCheckOut(videoName);
        break;
    }
    case 3:
    {
        System.out.println("Enter the video name to return");
        videoName = sc.next();
        obj.doReturn(videoName);
        break;
    }
    case 4:
    {
        System.out.println("Enter the name of video you want to rate");
        videoName = sc.next();
        System.out.println("Enter the Ratings for this video");
        rating = sc.nextInt();
        obj.receiveRating(videoName, rating);
        break;
    }
    case 5:
    {
        obj.listInventory();
        break;
    }
    case 6:
    { System.out.println("Exiting...!! Thanks for using the application");
      obj.exit();
      break;
    }
    default:
    {
        System.out.println("Wrong input!!");
    }
}
}
```

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:

```
Java - JavaLab/src/Unit1/VideoStoreLauncher.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Problems Javadoc Declaration Console X
C:\Program Files\Java\jdk-18.0.2\bin\java.exe (27-Aug-2022, 7:33:17 pm - 7:40:19 pm) [pid: 11096]
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
1
Enter the name of the video you want to add
DDLJ
video DDLJ added successfully
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
1
Enter the name of the video you want to add
Mann
video Mann added successfully
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
1
Enter the name of the video you want to add
Harry
video Harry added successfully
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
5
Videos (location 0): DDLJ Ratings (location 0): 0
Videos (location 1): Mann Ratings (location 1): 0
Videos (location 2): Harry Ratings (location 2): 0
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
4
Enter the name of video you want to rate
DDLJ
Enter the Ratings for this video
5
Ratings 5 has been mapped to the video DDLJ
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
4
Enter the name of video you want to rate
Mann
Enter the Ratings for this video
6
Ratings 6 has been mapped to the video Mann
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
4
Enter the name of video you want to rate
Harry
Enter the Ratings for this video
4
Ratings 4 has been mapped to the video Harry
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
```

```

4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
5
Videos (location 0): DDLJ Ratings (location 0): 5
Videos (location 1): Mann Ratings (location 1): 6
Videos (location 2): Harry Ratings (location 2): 4
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
3
Enter the video name to return
DDLJ
Video returned: DDLJ from location 0
No such video exists at locations:1
No such video exists at locations:2
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
2
Enter the name of Video to checkout
Mann
No such video exists at:0 location
Video Mann removed successfully from 1 location
No such video exists at:2 location
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
5
Videos (location 0): DDLJ Ratings (location 0): 5
Videos (location 2): Harry Ratings (location 2): 4
MAIN MENU
*****
1.Add Videos:
2.Check Out Videos:
3.Return Videos:
4.Receive Rating:
5.List Inventory:
6.Exit
Enter your choice:
6
Exiting.....!! Thanks for using the application
4

```

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.			