“Experiment 1.2”

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Branch: **CSE**	Section/Group: **808-A**
Semester: **5**	Date of Performance: **11-08-22**
Subject Name: **PBLJ Lab**	Subject Code: **20CSP-321**

AIM:

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

Minimum Hardware Requirements:

- 2 GHz CPU or 1 virtual CPU in virtualized environments.
- 1 GB of RAM.
- 4 GB of storage.

Minimum Software Requirements:

Software	**Version**
• OS	• Mac OS 10.15, HP-UX 11i V3, AIX 7.2, Windows Server 2019, Windows 10, Solaris 11.3, Red Hat Enterprise Linux 8.1, Ubuntu Server 20.04
• JDK	• JDK 1.8.0, JDK 11, Ellipse IDE, Net, NetBeans 8.2

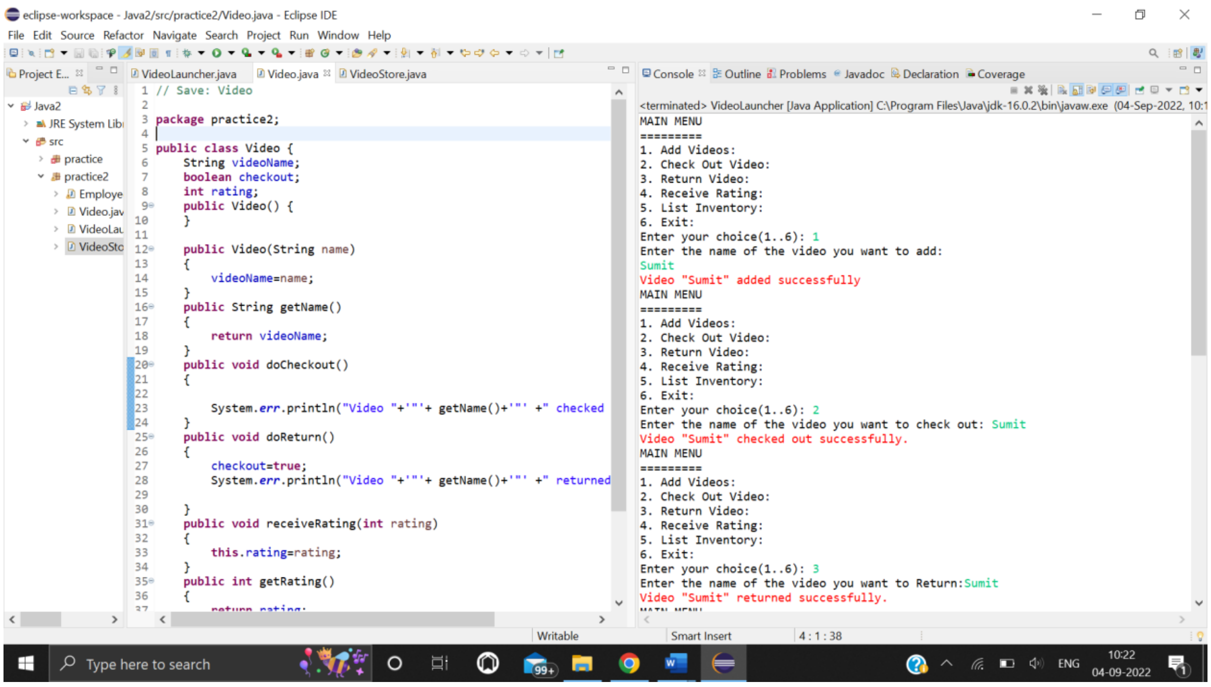
Source Code:

```
// SUMIT KUMAR
// UID: 20BCS8226

// Save: VideoLauncher

package practice2;

import java.util.Scanner;
public class VideoLauncher {
	public static void main(String[] args) {
		Scanner input=new Scanner(System.in);
		int choice;
		VideoStore videoStore=new VideoStore();
		do {
				System.out.println("MAIN MENU \n=========");
				System.out.println("1. Add Videos:");
				System.out.println("2. Check Out Video:");
				System.out.println("3. Return Video:");
				System.out.println("4. Receive Rating:");
				System.out.println("5. List Inventory:");
				System.out.println("6. Exit:");
				System.out.print("Enter your choice(1..6): ");

				choice=input.nextInt();
				switch (choice) {
				case 1:
			System.out.println("Enter the name of the video you want to
add: ");
					videoStore.addVideo(input.next());
					break;
				case 2:
			System.out.print("Enter the name of the video you want to
check out: ");
						videoStore.doCheckout(input.next());
						break;
				case 3:
					System.out.print("Enter the name of the video you
want to Return:");
					videoStore.doReturn(input.next());;
					break;
				case 4:
			System.out.println("Enter the name of the video you want to
Rate: ");
					videoStore.receiveRating(input.next(), input.nex-
tInt());

					break;
				case 5:
					videoStore.listInventory();
					break;
				case 6:
				System.err.println("Enter ...!! Thanks for using the
application");
					System.exit(1);
					break;
				}
		}while(!(choice==6));
				input.close();
	}
}
```

```
// Save: VideoStore

package practice2;

public class VideoStore {
	Video[] store;
	public VideoStore() {
		// TODO Auto-generated constructor stub
		store=new Video[5];
	}
	public void addVideo(String name)
	{
		store[0]=new Video(name);
	System.err.println("Video "+'"'+store[0].getName()+'"'+" added success-
fully");
	}
	public void doCheckout(String name)
	{
		if(store[0].videoName.equals(name))
		{
			store[0].doCheckout();
		}
	}
	public void doReturn(String name)
	{
		if(store[0].videoName.equals(name))
		{
			store[0].doReturn();
		}
	}
	public void receiveRating(String name, int rating) {

		if(store[0].videoName.equals(name))
		{
			store[0].receiveRating(rating);
		}
System.err.println("Rating "+'"'+store[0].getRating()+'"'+" has been mapped to the
Video '"+store[0].getName()+'"');

	}
	public void listInventory() {
		System.out.println("-----------------------------------------");
		System.out.println("Video Name | Checkout Status | Rating");
		System.out.println(store[0].getName()+"|" +store[0].getCheckout()+
"|"+ store[0].getRating());
		System.out.println("-----------------------------------------");
	}
}
```

```
// Save: Video

package practice2;

public class Video {
	String videoName;
	boolean checkout;
	int rating;
	public Video() {
	}

	public Video(String name)
	{
		videoName=name;
	}
	public String getName()
	{
		return videoName;
	}
	public void doCheckout()
	{

		System.err.println("Video "+'"'+ getName()+'"' +" checked out suc-
cessfully.");
	}
	public void doReturn()
	{
		checkout=true;
		System.err.println("Video "+'"'+ getName()+'"' +" returned success-
fully.");

	}
	public void receiveRating(int rating)
	{
		this.rating=rating;
	}
	public int getRating()
	{
		return rating;
	}
	public boolean getCheckout()
	{
		return checkout;
	}
}
```

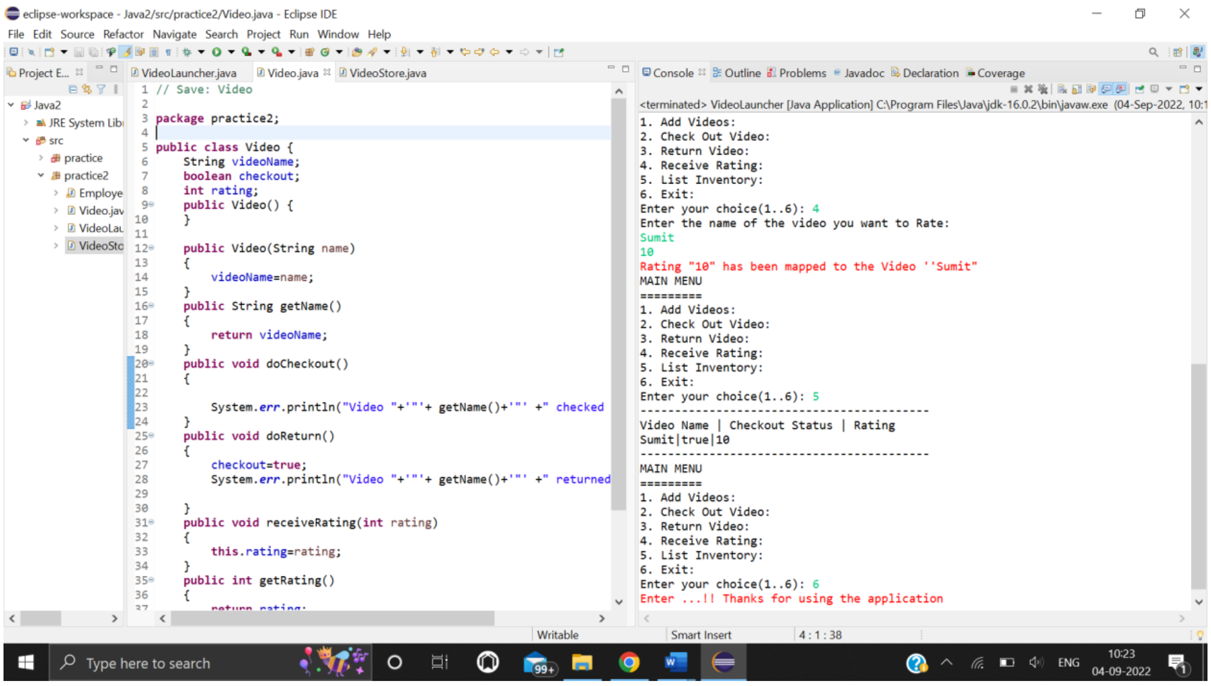
Output:



```java
// Save: Video

package practice2;

public class Video {
    String videoName;
    boolean checkout;
    int rating;
    public Video() {
    }

    public Video(String name)
    {
        videoName=name;
    }
    public String getName()
    {
        return videoName;
    }
    public void doCheckout()
    {

        System.err.println("Video "+'"'+ getName()+'"' +" checked
    }
    public void doReturn()
    {
        checkout=true;
        System.err.println("Video "+'"'+ getName()+'"' +" returned

    }
    public void receiveRating(int rating)
    {
        this.rating=rating;
    }
    public int getRating()
    {
```

```
<terminated> VideoLauncher [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe  (04-Sep-2022, 10:1
MAIN MENU
=========
1. Add Videos:
2. Check Out Video:
3. Return Video:
4. Receive Rating:
5. List Inventory:
6. Exit:
Enter your choice(1..6): 1
Enter the name of the video you want to add:
Sumit
Video "Sumit" added successfully
MAIN MENU
=========
1. Add Videos:
2. Check Out Video:
3. Return Video:
4. Receive Rating:
5. List Inventory:
6. Exit:
Enter your choice(1..6): 2
Enter the name of the video you want to check out: Sumit
Video "Sumit" checked out successfully.
MAIN MENU
=========
1. Add Videos:
2. Check Out Video:
3. Return Video:
4. Receive Rating:
5. List Inventory:
6. Exit:
Enter your choice(1..6): 3
Enter the name of the video you want to Return:Sumit
Video "Sumit" returned successfully.
```

Screenshot of executing choices 1 to 3



```java
// Save: Video

package practice2;

public class Video {
    String videoName;
    boolean checkout;
    int rating;
    public Video() {
    }

    public Video(String name)
    {
        videoName=name;
    }
    public String getName()
    {
        return videoName;
    }
    public void doCheckout()
    {

        System.err.println("Video "+'"'+ getName()+'"' +" checked
    }
    public void doReturn()
    {
        checkout=true;
        System.err.println("Video "+'"'+ getName()+'"' +" returned

    }
    public void receiveRating(int rating)
    {
        this.rating=rating;
    }
    public int getRating()
    {
```

```
<terminated> VideoLauncher [Java Application] C:\Program Files\Java\jdk-16.0.2\bin\javaw.exe  (04-Sep-2022, 10:1
1. Add Videos:
2. Check Out Video:
3. Return Video:
4. Receive Rating:
5. List Inventory:
6. Exit:
Enter your choice(1..6): 4
Enter the name of the video you want to Rate:
Sumit
10
Rating "10" has been mapped to the Video ''Sumit"
MAIN MENU
=========
1. Add Videos:
2. Check Out Video:
3. Return Video:
4. Receive Rating:
5. List Inventory:
6. Exit:
Enter your choice(1..6): 5
-----------------------------------------
Video Name | Checkout Status | Rating
Sumit|true|10
-----------------------------------------
MAIN MENU
=========
1. Add Videos:
2. Check Out Video:
3. Return Video:
4. Receive Rating:
5. List Inventory:
6. Exit:
Enter your choice(1..6): 6
Enter ...!! Thanks for using the application
```

Screenshot of executing choices 4 to 6

Learning outcomes:

- Learn about getter and setter method.
- Learn about factory method.
- Learn to make code more efficient and maintainable by using Code refactoring.
- Learn how to implement object-oriented designs with Java.
- Learn how to use exception handling in Java applications.