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| **View** |
|  |
| + showSelection( ) : void |

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|  | **DVD** |
| - title: **String //1**  - category: **String //2**  - runtime:: **String //3**   * price: **double //4** * yor: **String //5** |
|  |
|  |

**“uses”**

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| **DVD Catalog** |
| * **control: Controller** * **view**: **View**   +title: **String**  +category: **String**  +runtime:: **String**  +yor: **String**  +price: **double**  +option: **int** |
| + main ( ) |

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| **Controller** |
| - **catalog**: **Catalog** |
| + **UCAddDVD**(String DVD): void // UC1  + **UCdisplayCategory**(string category): void // UC2  + **UCRestoreCatalog**(DVD[] currentcatalog): void // UC3  + **UCSaveCatalog**(DVD[] currentcatalog): void // UC4 |

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| **Catalog** |
| -**MAX\_DVDs= 100 //1**  -**DVDS**: **DVD[MAX\_DVD] //2**   * #numberOfDVDs: **int //3** |
| + **AddDVD** (String DVD): void // 1  + **displayCategory** (string category): void // 2  + **restoreCatalog**(DVD[] currentcatalog): void // 3  + **saveCatalog**(DVD[] currentcatalog): void // 4 |

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| **DVD Catalog** |
| * **control: Controller** * **view**: **View**   +title: **String**  +category: **String**  +runtime:: **String**  +yor: **String**  +price: **double**  +option: **int** |
| + main ( ) |

public static void main ( ) {

This method will create the **Controller** and **View objects** that allows the Actor **User** to use the **DVD Catalog**

Create the **instance** of the **Controller** Class

## Controller control = new Controller();

Call the **UC 7 control.UCRestoreCatalog()** of the **Controller** Class to read the Catalog from the “**Catalog.txt**” file into the **DVD Catalog** memory

Create the **instance** of the **View** Class

## View view= new View();

Call the **view.showSelection()** of the **View** Class to display the menu of options for Actor **User**

Create **local variables** +title: **String**

+category: **String**

+runtime:: **String**

+yor: **String**

+price: **double**

+option: **int**

Read the choice from the keyboard Case choice of

1: Prompt for DVD information title, category, runtime, yor, price

Call the Controller method **UC1 control.UCAddDVD(**title, category, runtime, yor, price**);**

2: Prompt for Category Name category

Call the Controller method **UC2 control.UCdisplayCategory(category);**

3: Call the Controller method **UC3 control.UCRestoreCatalog(**DVD[] currentcatalog**);**

4: Call the Controller method **UC4 control.UCSaveCatalog(**DVD[] currentcatalog**);**

Call the **UC 4 control.UCSaveCatalog()** of the **Controller** class to write the Catalog in the “**Catalog.txt**” file

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| **View** |
|  |
| + showSelection( ) : void |

public void showSelection( ) {

Display the string “Welcome to DVD Catalog. Pick an option”

Display the string “1.restore Catalog:”

Display the string “2.add DVD:”

Display the string “3.display DVDs by category:” Display the string “4.save Catalog:”

}

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| **Controller** |
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Create the **instance** of the **Catalog** Class

## Catalog catalog = new Catalog();

public void **UCAddDVD**(String **DVD**){ **catalog.addDVDt(DVD);**

} // UC1

public void **UCDisplayCategory**(string category){

## catalog.listDVDs();

} // UC2

public void **UCRestoreCatalog**(DVD[] currentcatalog){

}

public void **UCSaveCatalog**(){

## catalog.saveCatalog();

Since the **catalog** is **private** we need to call a **public** method in the **catalog** to operate on the **private** instance variables of the **catalog**

} // UC4

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| **Controller** |
| - **catalog**: **Catalog** |
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**public** void **addDVD**(string intitle, string incategory, string inruntime, string inyor, string inprice){

If the DVDName is not already in the **catalog**

if (numberOfDVD **< MAX\_DVDS**) **DVDs[**numberOfDVD**] = new DVD** (**title, category, runtime, yor, price);**

numberOfDVD**++;**

} // 1

**public** void **displayCategory** (category){

for (int i=0;i<numberOfDVDs;i++)

if(**DVD**[i].**getCategory**()==category)

display **DVD**[i].**getName**());

} // 2

}

**public** void **restoreCatalog**(){

**Catalog catalog** = **new Catalog**(); **catalog**.DVDs = **DVDs**;

open file to write **File** file = **new** File("**Catalog.txt**");

## out.writeObject(catalog);

} // 3

**public** void **saveCatalog**(){

open file to read **File** file = **new** File("**Catalog.txt**");

## catalog = (Catalog)in.readObject();

**DVDs** = **catalog**.**DVDs**;

// set number of DVD

while (**DVD**[numberOfDVDs] != null) numberOfDVDs++;

}