HACETTEPE UNİVERSİTY

Computer Engineering

Java Programming lab

Programming Assignment 2
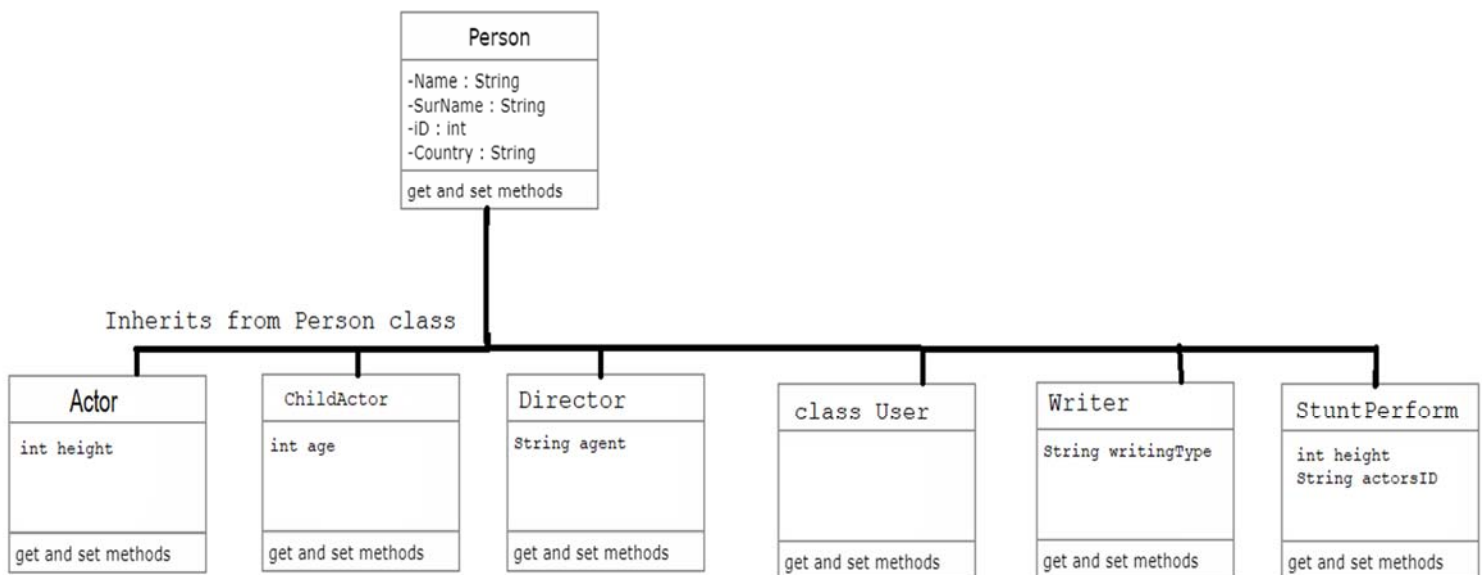
Subject : Inheritance, Access Modifiers

Introduction

Object-oriented programming has advantages like less complex modeling problems, Reuse code in another class without write again. In this experiment, you used these features to notice these advantages.

The inheritance mechanism, which is an important feature in object-oriented programming. Object-oriented programming (OOP) covers software in terms similar to those that people use to describe real-world objects. It takes advantage of class relationships, where objects of a certain class. Inheritance is one of important property of OOP. OOP takes advantage of inheritance relationships, where new classes of objects are derived by absorbing characteristics of existing classes and adding unique characteristics of their own. In Java, a class (called the derived class or subclass) extends from another class (called the base class or super class).
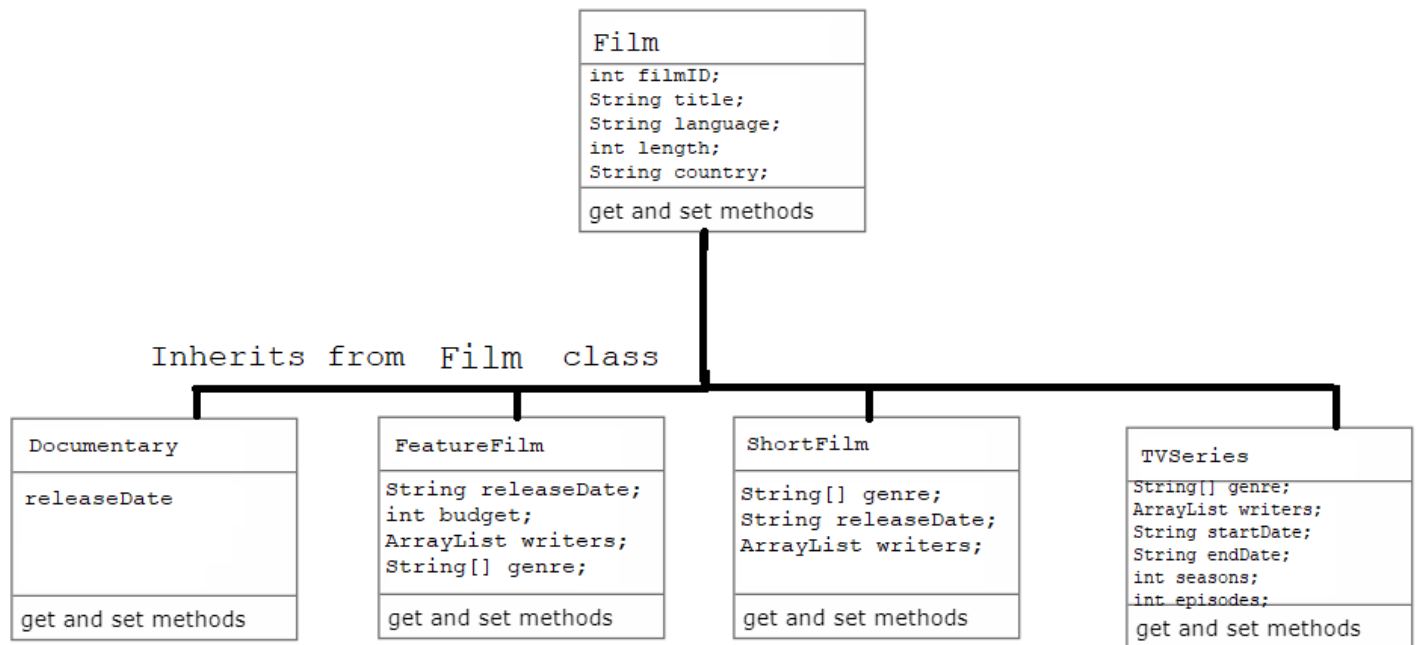
In Java, there are three access modifiers which provide access levels for classes and members of classes: private (visible to the class only), protected (visible to the package and all subclasses) and public (visible to the everywhere). The default is visible to the package.

In our Programming Assignment we used inheritance mechanism to solve it and here the UML diagram of classes relationship.

(Person diagram)

In our Assignment we have person class and it super class and we have sub classes like actor, child actor, director, user, writer, stunt perform, as we see at diagram.

```
Film
int filmID;
String title;
String language;
int length;
String country;

get and set methods
```

Inherits from Film class

```
Documentary

releaseDate




get and set methods
```

```
FeatureFilm

String releaseDate;
int budget;
ArrayList writers;
String[] genre;

get and set methods
```

```
ShortFilm

String[] genre;
String releaseDate;
ArrayList writers;


get and set methods
```

```
TVSeries

String[] genre;
ArrayList writers;
String startDate;
String endDate;
int seasons;
int episodes;
get and set methods
```

(Film Class)

All data input files (people and films) will be processed according to the commands which will be given in a commands file. The command file contains 12 types of commands.
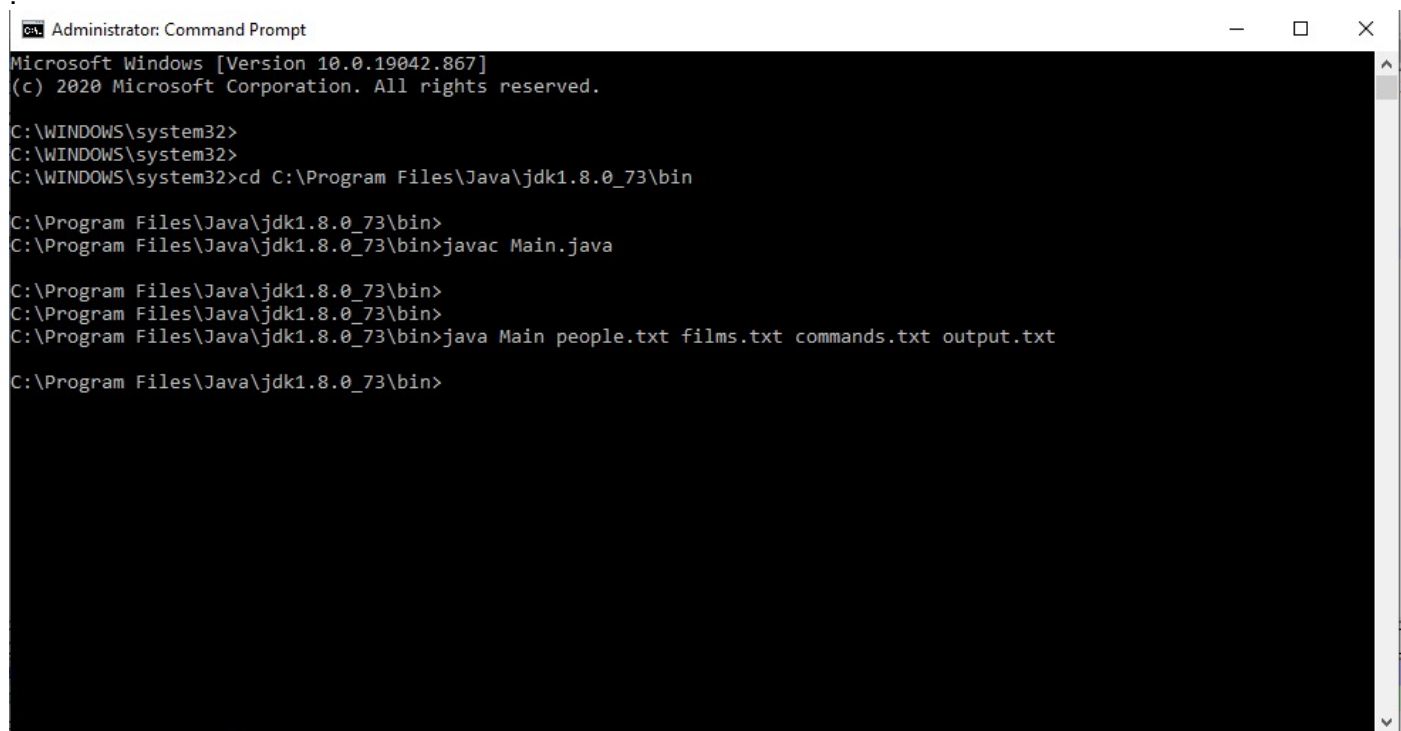
How to run
The program will be executed with four command line arguments:
<people_file><films_file><commands_file><output_file>

>javac Main.java
>java Main people.txt _lms.txt commands.txt output.txt

.

```
Administrator: Command Prompt                                               —    □    ×

Microsoft Windows [Version 10.0.19042.867]
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C:\WINDOWS\system32>
C:\WINDOWS\system32>
C:\WINDOWS\system32>cd C:\Program Files\Java\jdk1.8.0_73\bin

C:\Program Files\Java\jdk1.8.0_73\bin>
C:\Program Files\Java\jdk1.8.0_73\bin>javac Main.java

C:\Program Files\Java\jdk1.8.0_73\bin>
C:\Program Files\Java\jdk1.8.0_73\bin>
C:\Program Files\Java\jdk1.8.0_73\bin>java Main people.txt films.txt commands.txt output.txt

C:\Program Files\Java\jdk1.8.0_73\bin>
```