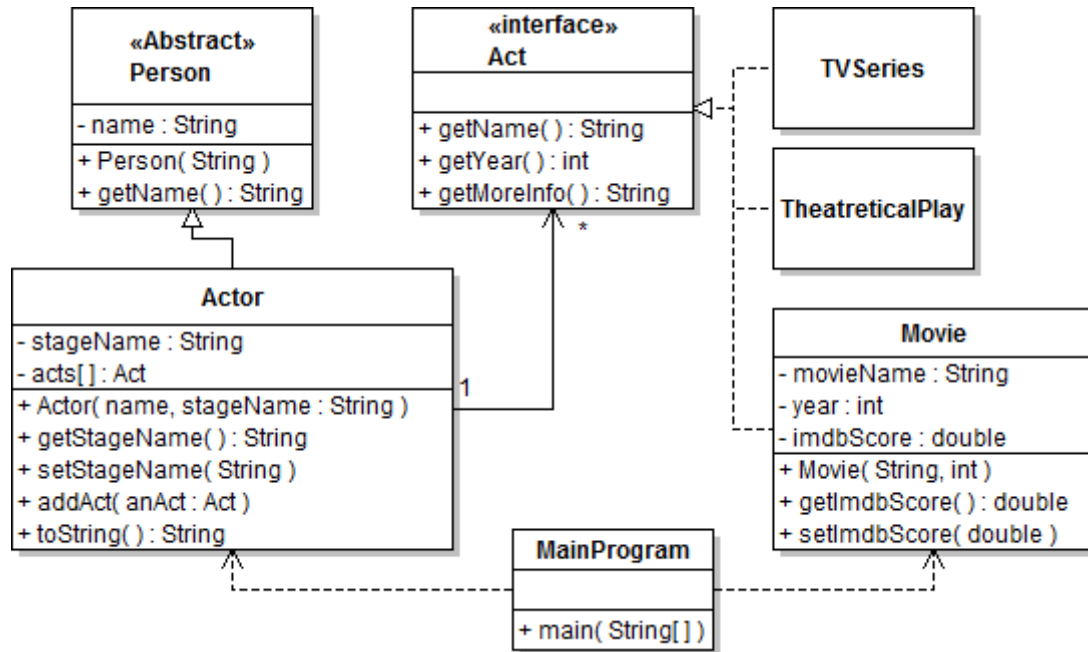


Student Number:				Name, Surname:				Signature:
Scoring:	1	2	3	4	5	6	Group Nr.	
	10	10	20	30	15	15		90mins.

QUESTIONS



Attention: All the questions should be answered according to UML diagram above. Please note that there may be hidden information in the diagram.

Question 1: Write the source code of class Person.

Question 2: Write the source code of interface Act.

Question 3: Write the source code of class Movie. The getMoreInfo method of class Movie returns the imdb score of that movie in String such as (imdb: 6.3)

Question 4: Write the source code of class Actor. The addAct method of this class must make sure that multiple acts with the same name must not exist in the array acts. The toString method of this class returns a String similar to the one below:

My name is Charles Reeves and my stage name is Keanu Reeves. My acts are: Speed (1994) (imdb: 7.2) The Matrix (1999) (imdb: 8.7)

Question 5: Draw the sequence diagram of the toString method of class Actor.

Question 6: Write the source code of the main method of class MainProgram. You are expected to create an actor who has acted in two movies and print the information about that artist such as you have coded in Question 4.

Question 1: Write the source code of class Person. (10p)

```
public abstract class Person {  
    private String name;  
    public Person(String name) { this.name = name; }  
    public String getName() { return name; }  
}
```

Question 2: Write the source code of interface Act. (10p)

```
public interface Act {  
    public String getName( );  
    public int getYear( );  
    public String getMoreInfo( );  
}
```

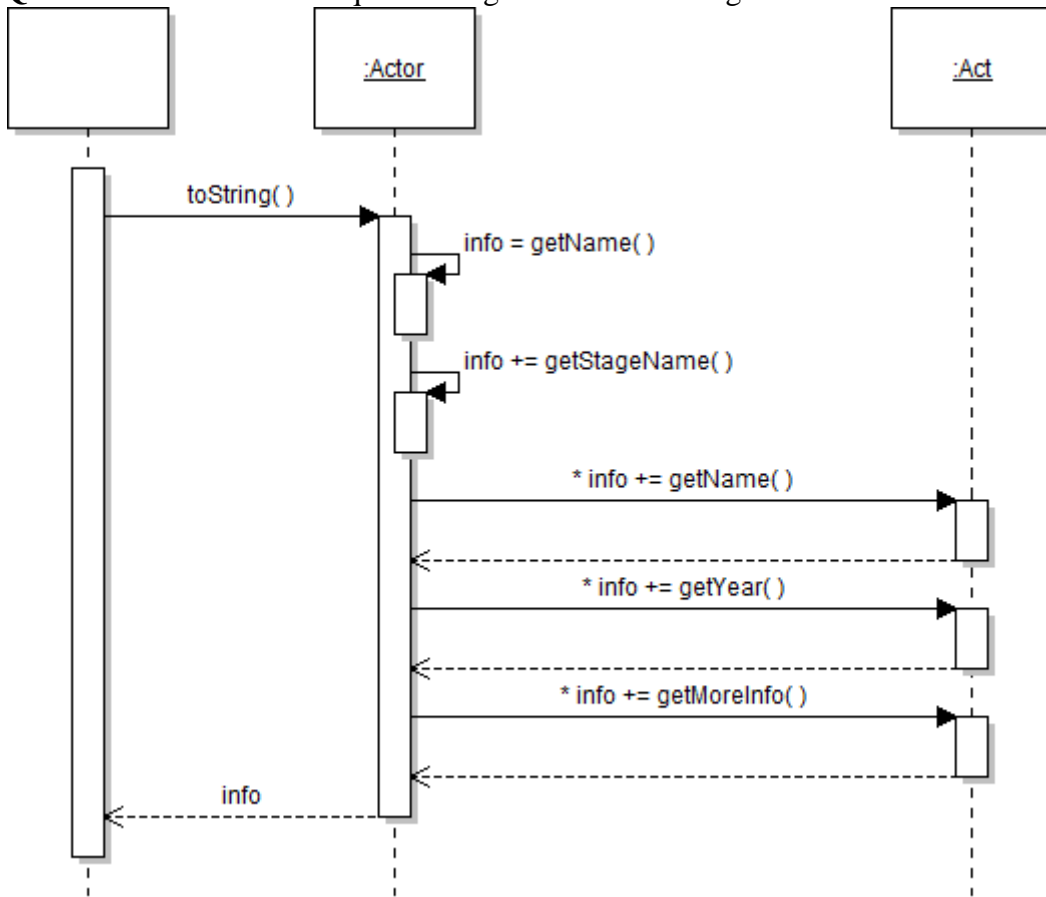
Question 3: Write the source code of class Movie. (20p)

```
public class Movie implements Act {  
    private String movieName;  
    private int year;  
    private double imdbScore;  
  
    public Movie(String name, int year) {  
        this.movieName = name;  
        this.year = year;  
    }  
    public double getImdbScore() { return imdbScore; }  
    public void setImdbScore(double score) { this.imdbScore = score; }  
  
    public String getName() { return movieName; }  
    public int getYear() { return year; }  
    public String getMoreInfo() { return "(imdb: "+imdbScore+")"; }  
}
```

Question 4: Write the source code of class Actor. (30p)

```
public class Actor extends Person {  
    private String stageName;  
    private Act acts[ ];  
    private final static int maxAct = 50;  
    private int actCount = 0;  
  
    public Actor(String name, String stageName) {  
        super(name);  
        this.stageName = stageName;  
        acts = new Act[maxAct];  
    }  
    public String getStageName() { return stageName; }  
    public void setStageName(String stageName) { this.stageName = stageName; }  
    public void addAct( Act anAct ) {  
        for( int i = 0; i < actCount; i++ )  
            if( anAct == acts[i] )  
                return;  
        if( actCount < maxAct ) {  
            acts[actCount] = anAct;  
            actCount++;  
        }  
    }  
    public String toString( ) {  
        String info;  
        info = "My name is " + getName();  
        info += " and my stage name is " + stageName + ". ";  
        info += "My acts are: ";  
        for( int i = 0; i < actCount; i++ )  
            info += " " + acts[i].getName() + "(" +  
                acts[i].getYear() + ")" + acts[i].getMoreInfo();  
        return info;  
    }  
}
```

Question 5: Draw the sequence diagram of the toString method of class Actor. (15p)



Question 6: Write the source code of the main method of class MainProgram. (15p)

```

public class MainProgram {
    public static void main(String[] args) {
        Actor keanu = new Actor("Charles Reeves", "Keanu Reeves");
        Movie film1 = new Movie("Speed", 1994);
        film1.setImdbScore(7.2);
        keanu.addAct(film1);
        Movie film2 = new Movie("The Matrix", 1999);
        film2.setImdbScore(8.7);
        keanu.addAct(film2);
        System.out.println(keanu.toString());
    }
}
  
```