

Ethan Kreloff

Homework 1 Part 2

OO Analysis and Design, Boese

1.

A.

```
/* UserUtility.java
 * Created by Ethan Kreloff on January 30th, 2015
 */

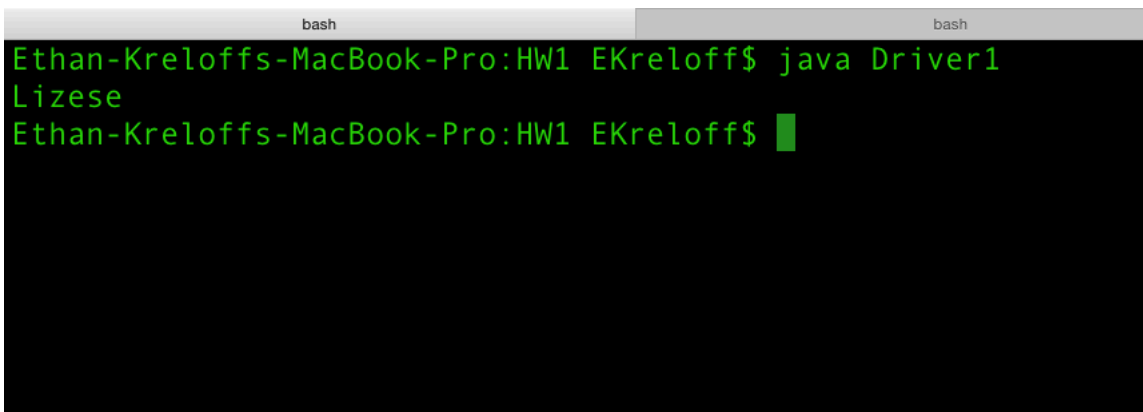
public class UserUtility
{
    static String createUsername(String firstName, String lastName){
        return firstName.substring(0,3) + lastName.substring(lastName.length() - 3,
lastName.length());
    }
}
```

B.

```
/* Driver1.java
 * Created by Ethan Kreloff on January 30th, 2015
 */

import java.util.*;
public class Driver1
{
    public static void main(String[] args)
    {
        System.out.println(UserUtility.createUsername("Liz", "Boese"));
    }
}
```

C.

A screenshot of a terminal window with a black background and green text. The window has two tabs, both labeled 'bash'. The first tab is active. The text in the terminal shows the command 'java Driver1' being executed, which outputs 'Lizese'. The prompt 'Ethan-Kreloffs-MacBook-Pro:HW1 EKreloff\$' is visible at the end of the line.

```
Ethan-Kreloffs-MacBook-Pro:HW1 EKreloff$ java Driver1
Lizese
Ethan-Kreloffs-MacBook-Pro:HW1 EKreloff$
```

2.

A.

```
/* Media.java
 * Modified by Ethan Kreloff on January 30th, 2015
 */
```

```
abstract class Media implements Comparable<Media>
{
    protected String title;
        public String getTitle() { return title; }
}
```

B.

```
/* Book.java
 * Modified by Ethan Kreloff on January 30th, 2015
 */
```

```
class Book extends Media implements Comparable<Media>
{
    private String author;
    public Book(String title, String author)
    {
        this.title = title;
        this.author = author;
    }
        public String getAuthor() { return author; }

    public String toString()
    {
        return getTitle() + " by " + getAuthor();
    }

    public int compareTo(Media book) {
        if(book instanceof Book){
            Book otherBook = (Book) book;
            if (this.title.equals(otherBook.title))
                if(this.author.equals(otherBook.author))
                    return 0;
            else if(this.author.compareTo(otherBook.author) > 0)
                return 1;
            else
                return -1;
            else if (this.title.compareTo(otherBook.title) > 0)
                return 1;
            else
                return -1;
        }
    }
```

```

        if(book instanceof DVD){
            return 1;
        }

        return 0;
    }
}

```

C.

```

/* DVD.java
 * Modified by Ethan Kreloff on January 30th, 2015
 */

class DVD extends Media implements Comparable<Media>
{
    private int year;

    public DVD(String title, int year)
    {
        this.title = title;
        this.year = year;
    }

    public int getYear() { return year; }

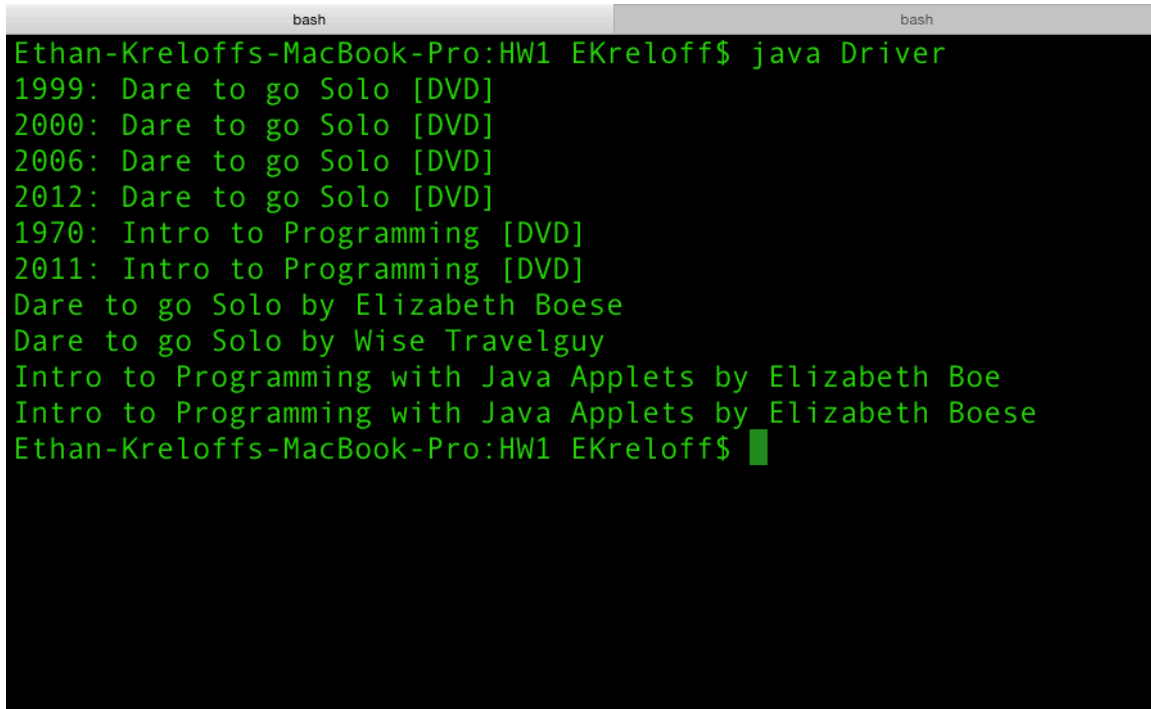
    public String toString()
    {
        return year + ": " + title + " [DVD]";
    }

    public int compareTo(Media dvd) {
        if(dvd instanceof DVD){
            DVD otherDVD = (DVD) dvd;
            if (this.title.equals(otherDVD.title))
                if(this.year == otherDVD.year)
                    return 0;
                else if(this.year > otherDVD.year)
                    return 1;
                else
                    return -1;
            else if (this.title.compareTo(otherDVD.title) > 0 )
                return 1;
            else
                return -1;
        }
    }
}

```

```
    if(dvd instanceof Book){  
        return -1;  
    }  
  
    return 0;  
}  
}
```

D.



```
Ethan-Kreloffs-MacBook-Pro:HW1 EKreloff$ java Driver  
1999: Dare to go Solo [DVD]  
2000: Dare to go Solo [DVD]  
2006: Dare to go Solo [DVD]  
2012: Dare to go Solo [DVD]  
1970: Intro to Programming [DVD]  
2011: Intro to Programming [DVD]  
Dare to go Solo by Elizabeth Boese  
Dare to go Solo by Wise Travelguy  
Intro to Programming with Java Applets by Elizabeth Boe  
Intro to Programming with Java Applets by Elizabeth Boese  
Ethan-Kreloffs-MacBook-Pro:HW1 EKreloff$
```