CS1083

Assignment #2

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Source Code for Wearable:

```
public interface Wearable {
    public String getColour();
    public String getSize();
    public boolean inFashion(String season);
}
```

Source Code for Shirt:

```
public class Shirt implements Wearable {
    private String type;
    private final String size;
    private final String colour;

    public Shirt (String type, String size, String colour) {
        this.type = type;
        this.size = size;
        this.colour = colour;
    }

    public String toString() {
        return type + ":" + "\t" + size + "\t" + colour;
    }

    public boolean inFashion(String season) {
        switch (type) {
            case "T-shirt":
                return (season.equals("Spring") ||
season.equals("Summer"));
            case "Sweater":
                return (season.equals("Autumn") ||
season.equals("Winter"));
            case "Hawaiian":
                return !(season.equals("Spring") ||
season.equals("Summer") || season.equals("Autumn"));
            default:
                return true;
        }
    }
```

```
    public String getColour() {
        return colour;
    }

    public String getSize() {
        return size;
    }
}
```

Source Code for Pants:

```
public class Pants implements Wearable{
    private final String colour;
    private String size;

    public Pants(String colour, String length) {
        this.colour = colour;
        this.size = length;
    }

    public String toString() {
        return "Pants:\t" + size + "\t" + colour;
    }

    public boolean inFashion(String season) {
        double lengthNum = 0;

        if (size.endsWith("in")) {
            lengthNum = Double.valueOf(size.substring(0,
size.length()-2));
        } else if (size.endsWith("cm")) {
            lengthNum = Double.valueOf(size.substring(0,
size.length()-2)) / 2.54; // cm to in
        }
        return (lengthNum > 25 && season.equals("Winter"));
    }

    public String getColour() {
        return colour;
    }
```

```
    public String getSize() {
        return size;
    }
}
```

Source Code for Shoes:

```
public abstract class Shoes implements Wearable{
    private String colour;
    private String size;

    public Shoes(String colour, String size) {
        this.colour = colour;
        this.size = size;
    }

    public String getColour() {
        return colour;
    }

    public String getSize() {
        return size;
    }
}
```

Source Code for Boots:

```
public class Boots extends Shoes {
    private boolean lining;

    public Boots(String colour, String size, boolean lining) {
        super(colour, size);
        this.lining = lining;
    }

    public String toString() {
        return "Boots:\t" + super.getSize() + "\t" +
super.getColour();
```

```
    }

    public boolean inFashion(String season) {
        return season.equals("Winter");
    }
}
```

Source Code for Sneakers:

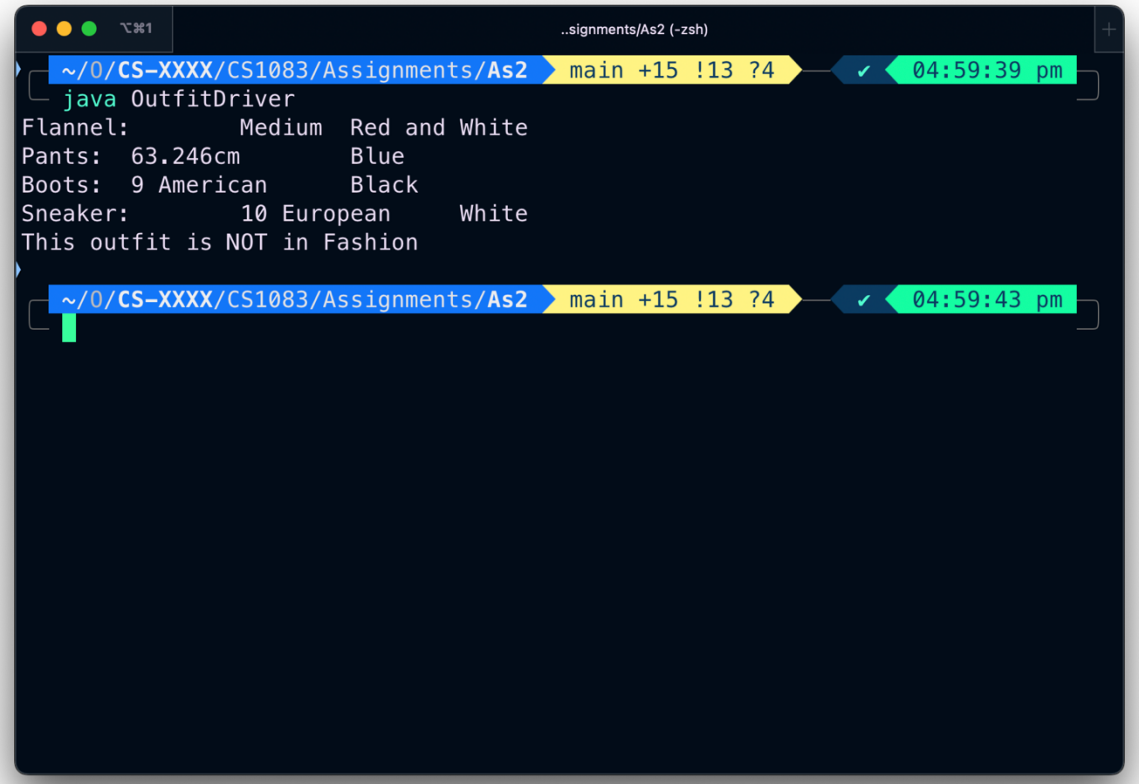
```
public class Sneaker extends Shoes {
    private boolean laces;

    public Sneaker(String colour, String size, boolean laces) {
        super(colour, size);
        this.laces = laces;
    }

    public String toString() {
        return "Sneaker:\t" + super.getSize() + "\t" +
super.getColour();
    }

    public boolean inFashion(String season) {
        return !season.equals("Winter");
    }
}
```

Source Code for Driver:

```
import java.util.ArrayList;

public class OutfitDriver {

    public static void main(String[] args) {
        Shirt shirt = new Shirt("Flannel", "Medium", "Red and
White");
        Pants pants = new Pants("Blue", "63.246cm");
        Shoes boots = new Boots("Black", "9 American", true);
```

```
        Shoes sneakers = new Sneaker("White", "10 European",
true);

        ArrayList<Wearable> array = new ArrayList<>();
        array.add(shirt);
        array.add(pants);
        array.add(boots);
        array.add(sneakers);

        boolean inFashion = true;

        for (Wearable outfit : array) {
            System.out.println(outfit);
            if(!outfit.inFashion("Winter")) {
                inFashion = false;
            }
        }

        System.out.println("This outfit is" + (inFashion? " YES
":" NOT ") + "in Fashion");
    }
}
```

Output:


⌥⌘1
..signments/As2 (-zsh)
~/O/CS-XXXX/CS1083/Assignments/As2 main +15 !13 ?4 ✔ 04:59:39 pm
java OutfitDriver
Flannel: Medium Red and White
Pants: 63.246cm Blue
Boots: 9 American Black
Sneaker: 10 European White
This outfit is NOT in Fashion
~/O/CS-XXXX/CS1083/Assignments/As2 main +15 !13 ?4 ✔ 04:59:43 pm