**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* "Flannel"*:*

*return* (season.*equals*("Autumn") || season.*equals*("Winter"));

*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") *?* true *:* false;

}

}

**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") *?* false *:* true;

}

}

**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:**

A screenshot of a computer program

Description automatically generated