

## Behavioral Pattern Implementation

### Iterator Pattern

A java implementation of iterator design pattern has been done to access sequentially the sub categories from an entered category without exposing its underlying representation.

#### Classes Implemented:

1. App (main() class)
2. ElectronicsSubCat
3. FurnitureSubCat
4. PetSupplySubCat
5. SportsSubCat

#### Interfaces:

1. Iterator
2. Container

When the App.java file is run, the user is asked to enter from the values 1, 2, 3 or 4 for the corresponding categories. As the value of the category is entered, a list of available sub categories under that category is displayed.

#### Steps to compile and run the code:

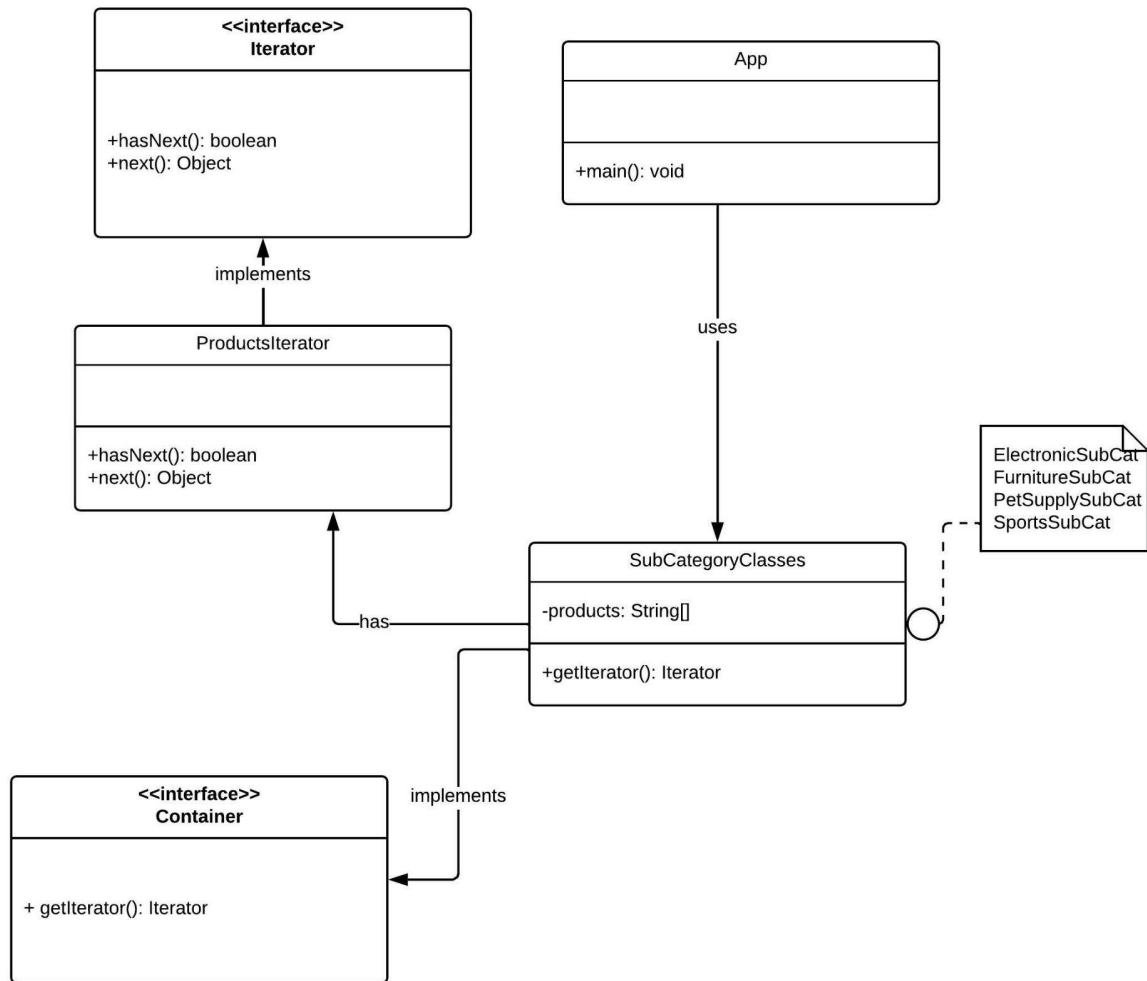
1. javac App.java
2. java App

#### Output Screenshot:

```
src > Assignment > App.java
7 import java.util.Scanner;
8
9 public class App {
10
11     Run | Debug
12     public static void main(String[] args) {
13         Scanner sc = new Scanner(System.in);
14         char choice = 'y';
15         while(choice == 'y' || choice == 'Y') {
16             System.out.println(x: "Enter 1: For products in Furniture Category");
17             System.out.println(x: "Enter 2: For products in Electronics Category");
18         }
19     }
20 }

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL
(base) pragyasa@Pragyas-MBP iteratorPattern % /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-16
.0.1.jdk/Contents/Home/bin/java -XX:+ShowCodeDetailsInExceptionMessages --module-path /Users/pragya
s/Desktop/iteratorPattern/bin -m 00AD_Assignment4/Assignment.App
Enter 1: For products in Furniture Category
Enter 2: For products in Electronics Category
Enter 3: For products in Pet Supplies Category
Enter 4: For products in Sports Category
2
Sub-category list for Electronics Category:
TV & Video
Cell Phones & Accessories
Car Electronics
Video Games
Do you want to enter more? (y/n)
y
Enter 1: For products in Furniture Category
Enter 2: For products in Electronics Category
Enter 3: For products in Pet Supplies Category
Enter 4: For products in Sports Category
3
Sub-category list for Electronics Category:
Dog Supplies
Cat Supplies
Fish & Aquatic Pets
Birds
Do you want to enter more? (y/n)
n
```

# Class Diagram - Iterator Pattern:



## Sequence Diagram - Iterator Pattern:

