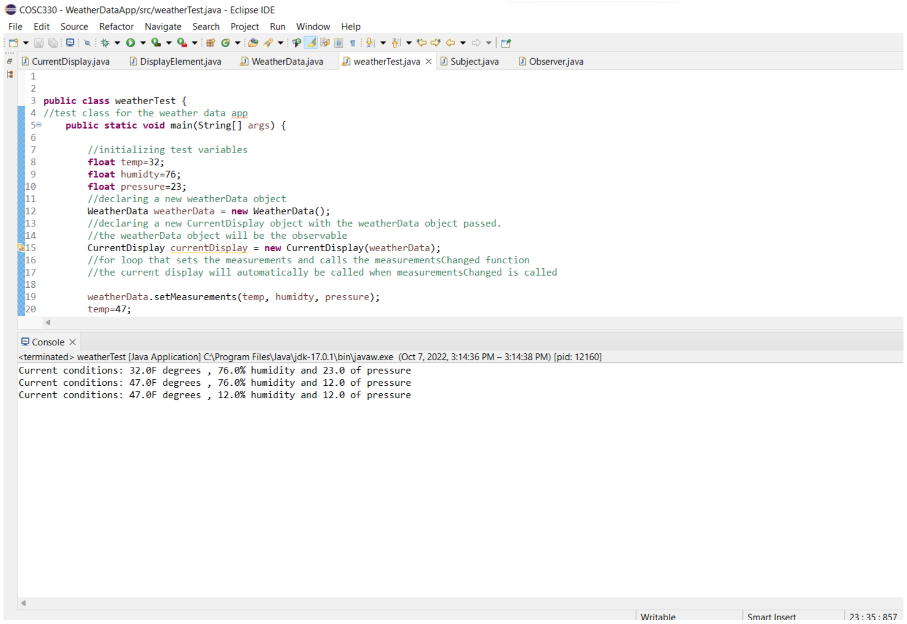
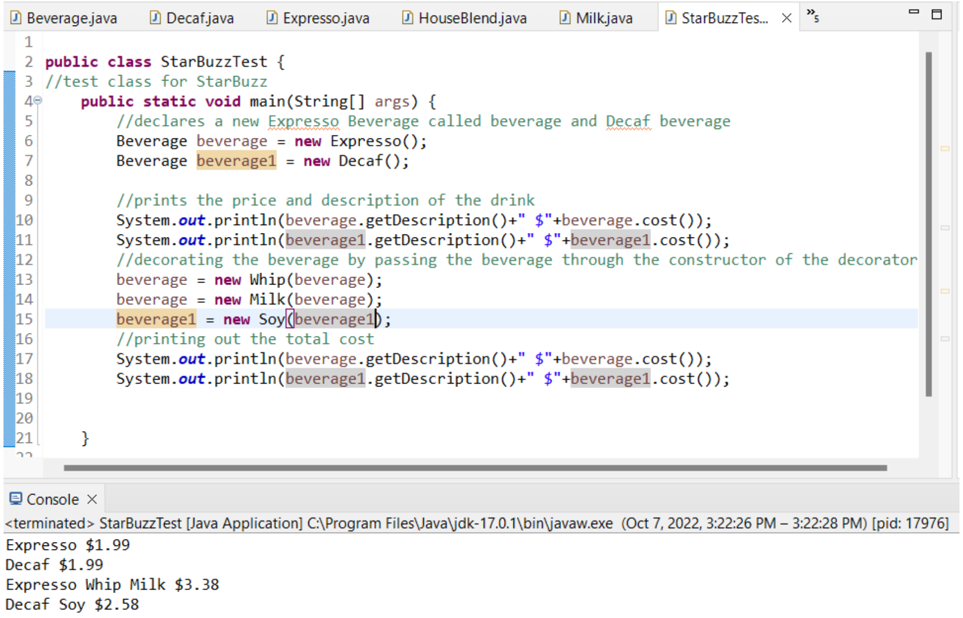
Weather Data Application Output Screenshot:



```java


public class weatherTest {
//test class for the weather data app
    public static void main(String[] args) {

        //initializing test variables
        float temp=32;
        float humidty=76;
        float pressure=23;
        //declaring a new weatherData object
        WeatherData weatherData = new WeatherData();
        //declaring a new CurrentDisplay object with the weatherData object passed.
        //the weatherData object will be the observable
        CurrentDisplay currentDisplay = new CurrentDisplay(weatherData);
        //for loop that sets the measurements and calls the measurementsChanged function
        //the current display will automatically be called when measurementsChanged is called

        weatherData.setMeasurements(temp, humidty, pressure);
        temp=47;
```

```
<terminated> weatherTest [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (Oct 7, 2022, 3:14:36 PM – 3:14:38 PM) [pid: 12160]
Current conditions: 32.0F degrees , 76.0% humidity and 23.0 of pressure
Current conditions: 47.0F degrees , 76.0% humidity and 12.0 of pressure
Current conditions: 47.0F degrees , 12.0% humidity and 12.0 of pressure
```

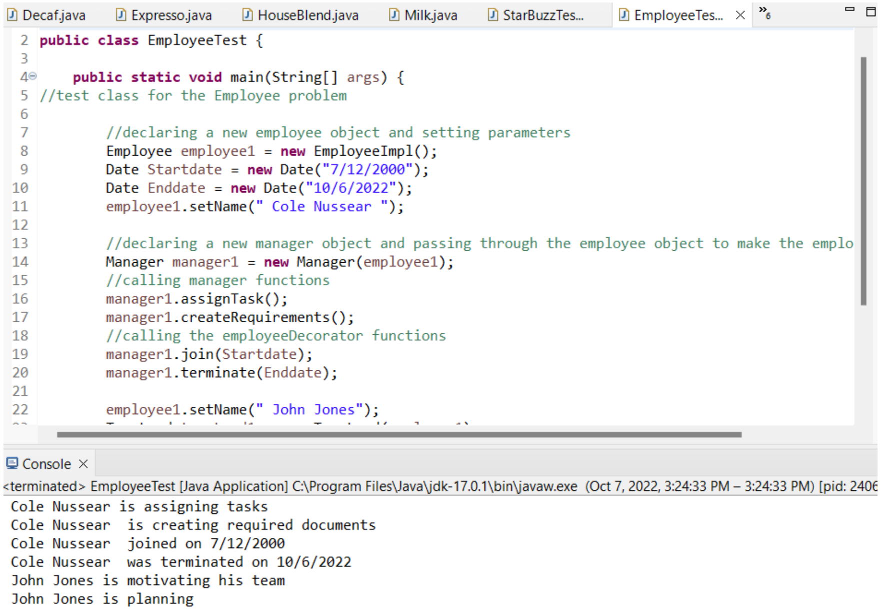
StarBuzzCafe Output ScreenShot:



```java

public class StarBuzzTest {
//test class for StarBuzz
    public static void main(String[] args) {
        //declares a new Expresso Beverage called beverage and Decaf beverage
        Beverage beverage = new Expresso();
        Beverage beverage1 = new Decaf();

        //prints the price and description of the drink
        System.out.println(beverage.getDescription()+" $"+beverage.cost());
        System.out.println(beverage1.getDescription()+" $"+beverage1.cost());
        //decorating the beverage by passing the beverage through the constructor of the decorator
        beverage = new Whip(beverage);
        beverage = new Milk(beverage);
        beverage1 = new Soy(beverage1);
        //printing out the total cost
        System.out.println(beverage.getDescription()+" $"+beverage.cost());
        System.out.println(beverage1.getDescription()+" $"+beverage1.cost());


    }
```

```
<terminated> StarBuzzTest [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (Oct 7, 2022, 3:22:26 PM – 3:22:28 PM) [pid: 17976]
Expresso $1.99
Decaf $1.99
Expresso Whip Milk $3.38
Decaf Soy $2.58
```

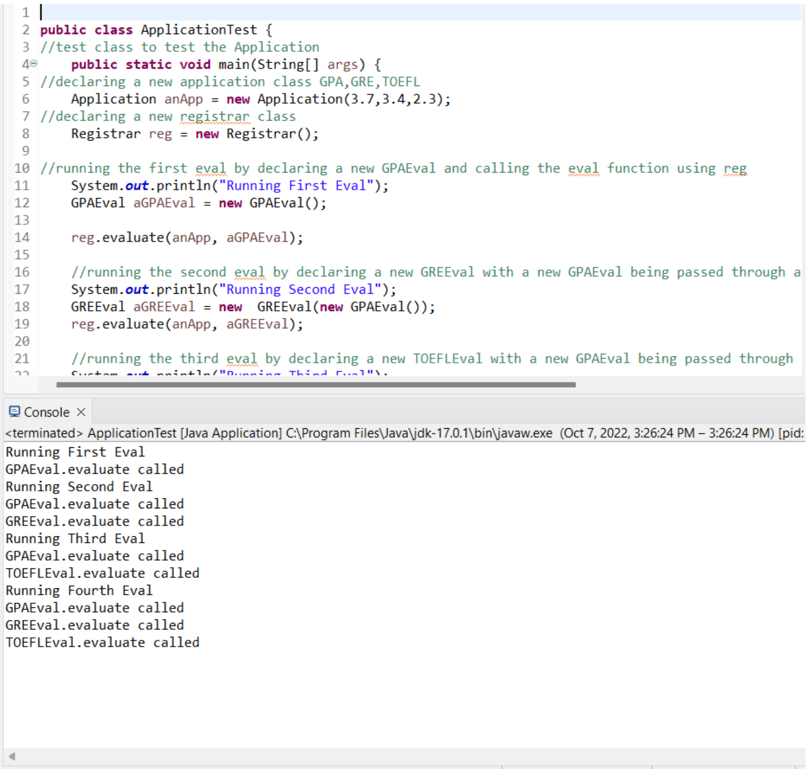
Employee Output Screenshot:



```
public class EmployeeTest {

    public static void main(String[] args) {
//test class for the Employee problem

        //declaring a new employee object and setting parameters
        Employee employee1 = new EmployeeImpl();
        Date Startdate = new Date("7/12/2000");
        Date Enddate = new Date("10/6/2022");
        employee1.setName(" Cole Nussear ");

        //declaring a new manager object and passing through the employee object to make the emplo
        Manager manager1 = new Manager(employee1);
        //calling manager functions
        manager1.assignTask();
        manager1.createRequirements();
        //calling the employeeDecorator functions
        manager1.join(Startdate);
        manager1.terminate(Enddate);

        employee1.setName(" John Jones");
```

```
<terminated> EmployeeTest [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (Oct 7, 2022, 3:24:33 PM – 3:24:33 PM) [pid: 2406
 Cole Nussear is assigning tasks
 Cole Nussear  is creating required documents
 Cole Nussear  joined on 7/12/2000
 Cole Nussear  was terminated on 10/6/2022
 John Jones is motivating his team
 John Jones is planning
```

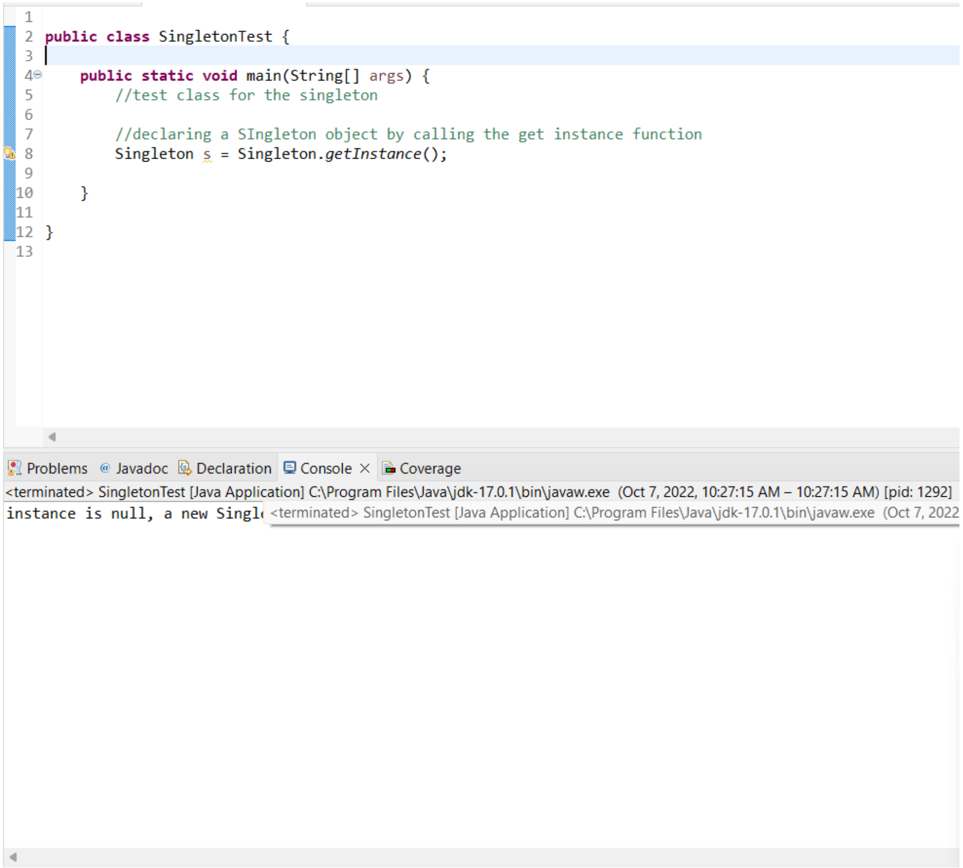
Application Output Screenshot:



```

public class ApplicationTest {
//test class to test the Application
    public static void main(String[] args) {
//declaring a new application class GPA,GRE,TOEFL
    Application anApp = new Application(3.7,3.4,2.3);
//declaring a new registrar class
    Registrar reg = new Registrar();

//running the first eval by declaring a new GPAEval and calling the eval function using reg
    System.out.println("Running First Eval");
    GPAEval aGPAEval = new GPAEval();

    reg.evaluate(anApp, aGPAEval);

    //running the second eval by declaring a new GREEval with a new GPAEval being passed through a
    System.out.println("Running Second Eval");
    GREEval aGREEval = new  GREEval(new GPAEval());
    reg.evaluate(anApp, aGREEval);

    //running the third eval by declaring a new TOEFLEval with a new GPAEval being passed through
    System.out.println("Running Third Eval");
```

```
<terminated> ApplicationTest [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (Oct 7, 2022, 3:26:24 PM – 3:26:24 PM) [pid:
Running First Eval
GPAEval.evaluate called
Running Second Eval
GPAEval.evaluate called
GREEval.evaluate called
Running Third Eval
GPAEval.evaluate called
TOEFLEval.evaluate called
Running Fourth Eval
GPAEval.evaluate called
GREEval.evaluate called
TOEFLEval.evaluate called
```

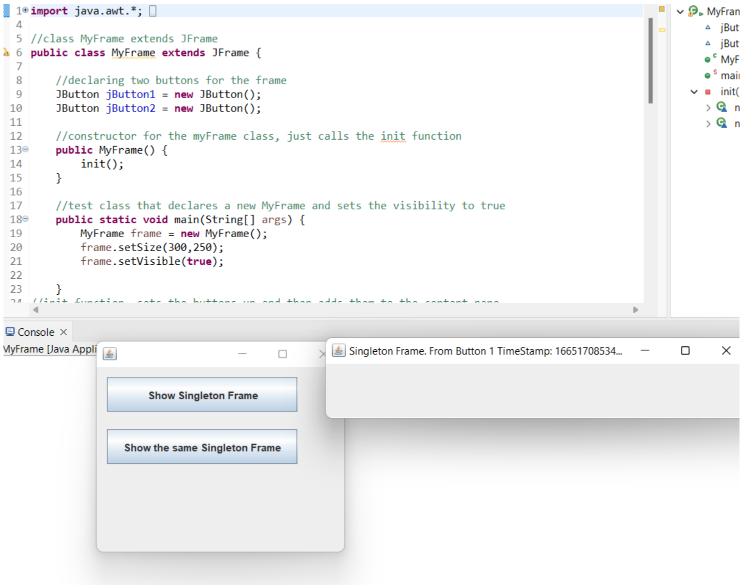
Singleton Pattern Output:



```java

public class SingletonTest {

    public static void main(String[] args) {
        //test class for the singleton

        //declaring a SIngleton object by calling the get instance function
        Singleton s = Singleton.getInstance();

    }

}

```

```
<terminated> SingletonTest [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (Oct 7, 2022, 10:27:15 AM – 10:27:15 AM) [pid: 1292]
instance is null, a new Singl <terminated> SingletonTest [Java Application] C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe  (Oct 7, 2022
```

SingletonGUI output:



```java
import java.awt.*;

//class MyFrame extends JFrame
public class MyFrame extends JFrame {

    //declaring two buttons for the frame
    JButton jButton1 = new JButton();
    JButton jButton2 = new JButton();

    //constructor for the myFrame class, just calls the init function
    public MyFrame() {
        init();
    }

    //test class that declares a new MyFrame and sets the visibility to true
    public static void main(String[] args) {
        MyFrame frame = new MyFrame();
        frame.setSize(300,250);
        frame.setVisible(true);

    }
//init function, sets the buttons up and then adds them to the content pane
```

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Show Singleton Frame
Show the same Singleton Frame
Singleton Frame. From Button 1 TimeStamp: 16651708534...