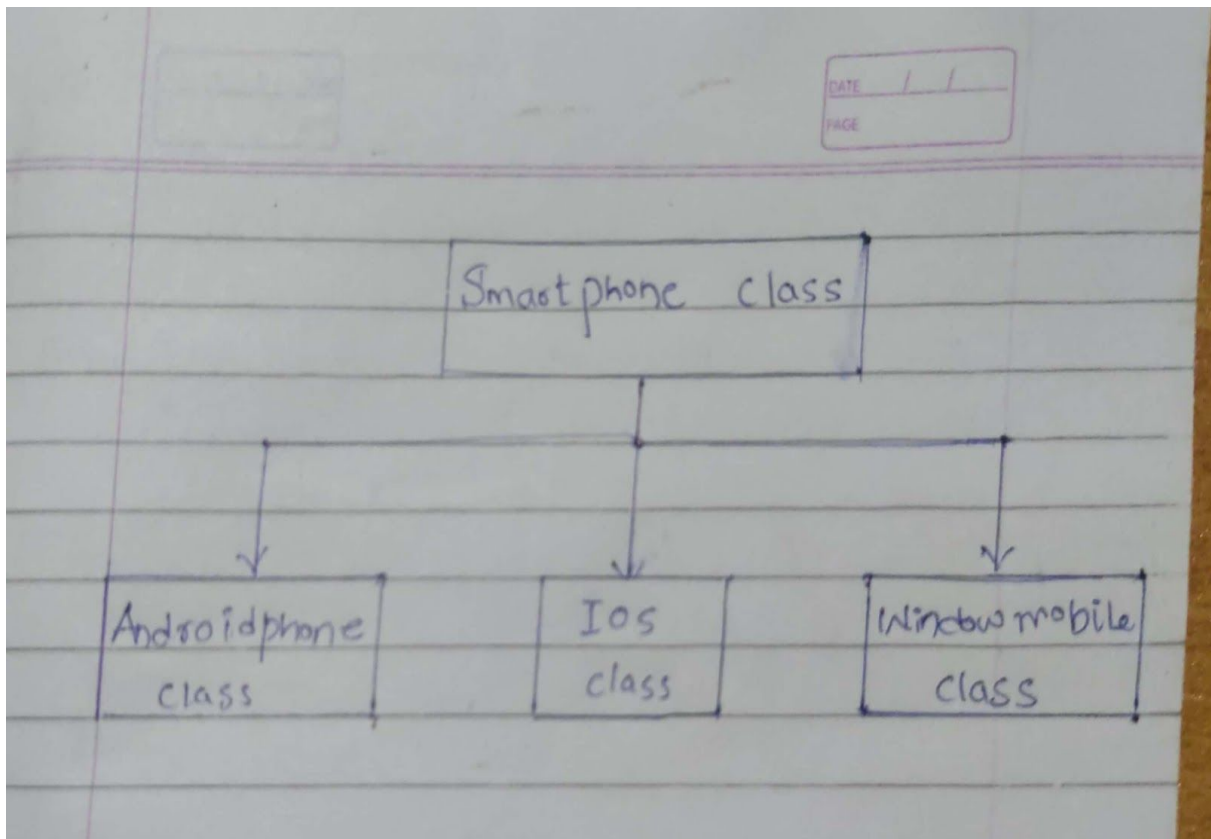


1.

## PATTERN : **Strategy Pattern**

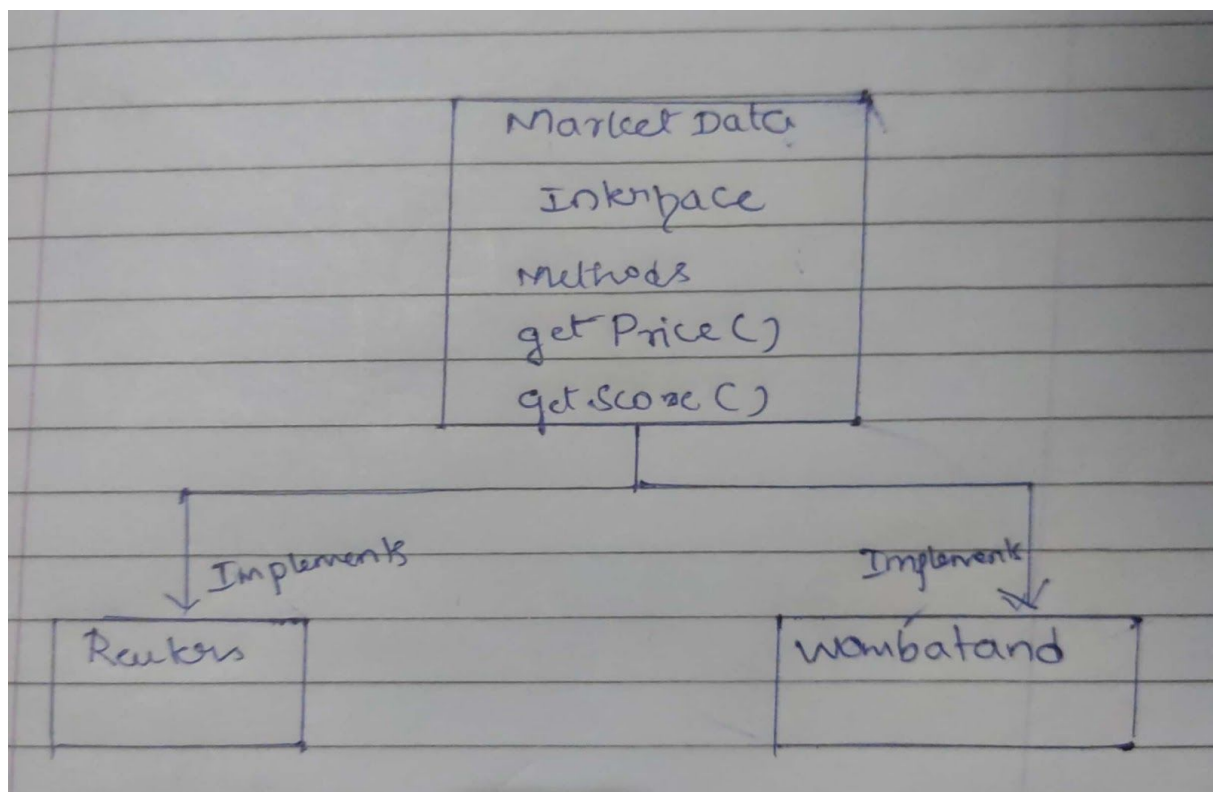
SmartPhone Class is abstract class



2.

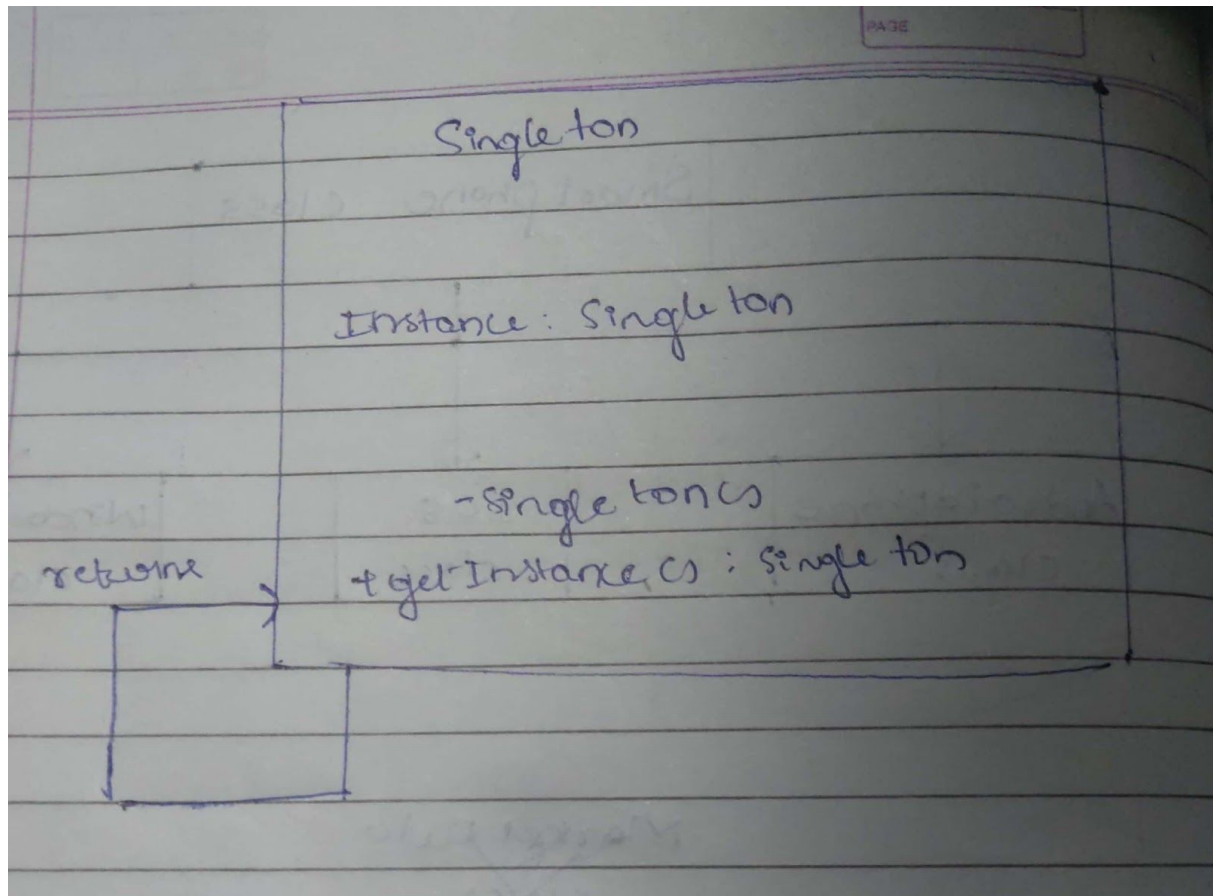
### PATTERN : **Observer Pattern**

MarketData is a interface it contains all the methods and all the vendors will implement from it



4.

Singleton design pattern : It defined a class that has only one instance and provides a global point of access to it



## Code for thread-safe singleton in Java

```
public class Singleton
{
    private static Singleton uniqueInstance;
    private Singleton() { };
    public static synchronized Singleton getInstance()
    {
        if (uniqueInstance == null)
        {
            uniqueInstance = new Singleton();
        }
        return uniqueInstance;
    }
}
```

## Lazy Loaded Singleton class

```
public class Singleton
{
    private static Singleton uniqueInstance = new Singleton();
    private Singleton()
    {
    }
    public static Singleton getInstance()
    {
        return uniqueInstance;
    }
}
```

4

