**OBSERVER PATTERN**

import java.util.\*;

interface Stock {

void registerObserver(Observer o);

void removeObserver(Observer o);

void notifyObservers();

}

interface Observer {

void update(String stockName, double price);

}

class StockMarket implements Stock {

private List<Observer> observers = new ArrayList<>();

private String stockName;

private double stockPrice;

@Override

public void registerObserver(Observer o) {

observers.add(o);

}

@Override

public void removeObserver(Observer o) {

observers.remove(o);

}

@Override

public void notifyObservers() {

for (Observer o : observers) {

o.update(stockName, stockPrice);

}

}

public void setStockPrice(String stockName, double price) {

this.stockName = stockName;

this.stockPrice = price;

System.out.println("\n[StockMarket] " + stockName + " updated to $" + price);

notifyObservers();

}

}

class MobileApp implements Observer {

private String name;

public MobileApp(String name) {

this.name = name;

}

@Override

public void update(String stockName, double price) {

System.out.println(name + " (MobileApp): " + stockName + " is now $" + price);

}

}

class WebApp implements Observer {

private String name;

public WebApp(String name) {

this.name = name;

}

@Override

public void update(String stockName, double price) {

System.out.println(name + " (WebApp): " + stockName + " is now $" + price);

}

}

public class Main {

public static void main(String[] args) {

StockMarket stockMarket = new StockMarket();

Observer mobileApp = new MobileApp("InvestorPro");

Observer webApp = new WebApp("TradeNow");

stockMarket.registerObserver(mobileApp);

stockMarket.registerObserver(webApp);

stockMarket.setStockPrice("AAPL", 190.50);

stockMarket.setStockPrice("GOOGL", 2785.30);

stockMarket.removeObserver(mobileApp);

stockMarket.setStockPrice("MSFT", 322.10);

}

}

