

NewsAgency.java

```
1 // NewsAgency.java
2 // Class representing a news agency that notifies registered news channels about new news.
3 import java.util.ArrayList;
4 import java.util.List;
5
6 public class NewsAgency implements Subject {
7     private List<Observer> observers = new ArrayList<>(); // List of registered observers.
8     private List<String> topics = new ArrayList<>(); // List of news topics.
9
10    // Method to add a new topic.
11    public void addTopic(String topic) {
12        topics.add(topic);
13    }
14
15    // Method to register an observer.
16    @Override
17    public void registerObserver(Observer o) {
18        observers.add(o);
19    }
20
21    // Method to remove an observer.
22    @Override
23    public void removeObserver(Observer o) {
24        observers.remove(o);
25    }
26
27    // Method to notify all registered observers about new news.
28    @Override
29    public void notifyObservers(String news) {
30        for (Observer observer : observers) {
31            observer.update(news);
32        }
33    }
34
35    // Method to post news to a specific topic.
36    public void postNews(String news, String topic) {
37        if (topics.contains(topic)) {
38            System.out.println("News Posted: " + news);
39            notifyObservers(news);
40        } else {
```

```
41         System.out.println("Topic not found: " + topic);
42     }
43 }
44 }
45 }
```