

Statement of work:

Suppose we have a sports news site. This news site has certain followers. Followers can be added separately. You can new news to website. When a news item is added to this site, it automatically be gone news to the followers.

After you become a member, news's notification be gone to followers for every news added. In this way, followers are informed. You can subscribe to sport news.

I want you to be notified of the news that has been added since you subscribed the site. I do not want to be notified of subscribed members after the news is added. So I used the observer pattern.

The screenshot displays an IDE with a project named 'project1'. The project structure on the left includes a 'src' directory with packages 'default package', 'follower', 'model', and 'newsManagement', each containing Java files. The 'bin' directory contains 'maven-archiver', 'maven-status', 'project1-1.0.jar', and 'pom.xml'. The main code file is 'Main.java', which implements the Observer pattern for a sports news site. The code defines a 'FootballNews' class and a 'FootballFollower' class. The 'main' method creates a 'FootballNews' object, adds two followers ('ROJDA' and 'EYUP'), and then adds two news items ('BITCOIN' and 'CIFTLIK BANK'). Each time a news item is added, it notifies all subscribed followers. The output window at the bottom shows the execution results, confirming that each news item is notified to both followers.

```
11
12 // @Author ROJDA SARIKAMIŞ
13
14 public static void main(String[] args) {
15     // TODO Auto-generated method stub
16
17     sportNews footballnews = new FootballNews();
18     footballnews.subscribe(new FootballFollower("ROJDA"));
19     footballnews.subscribe(new FootballFollower("EYUP"));
20
21     footballnews.addNewNews(new News(" BITCOIN ",
22         " Bitcoin news's comment"));
23
24     footballnews.subscribe(new FootballFollower("IŞIL"));
25     footballnews.subscribe(new FootballFollower("ONUR"));
26
27     footballnews.addNewNews(new News("CIFTLIK BANK",
28         "Ciftlikbank new's comment"));
29
30     footballnews.subscribe(new FootballFollower("BARAN"));
31
32 }
```

Output

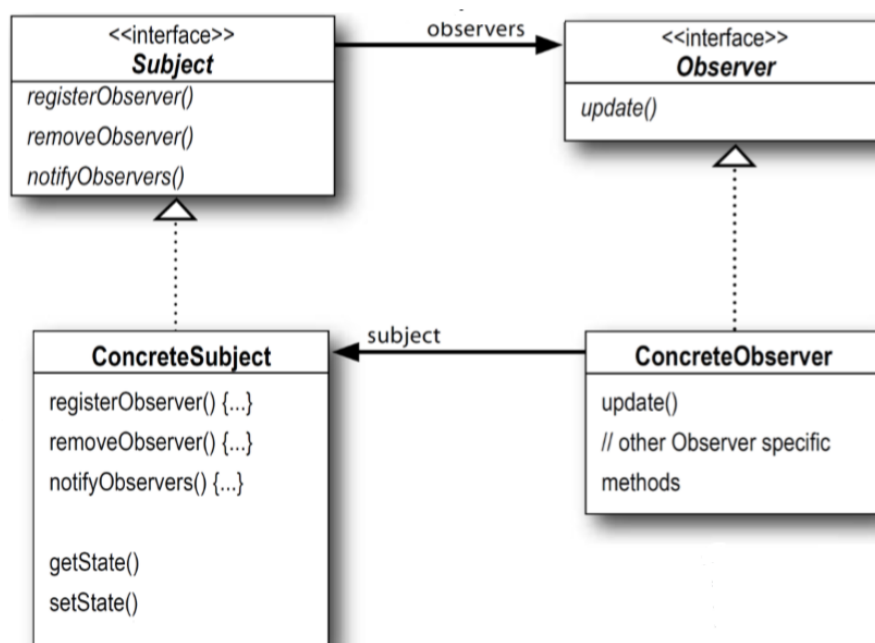
```
<terminated> Main [Java Application] C:\Program Files\Java\jre-9.0.4\bin\javaw.exe (7 Ni
The BITCOIN title news gone ROJDA in followers.
The BITCOIN title news gone EYUP in followers.
The CIFTLIK BANK title news gone ROJDA in followers.
The CIFTLIK BANK title news gone EYUP in followers.
The CIFTLIK BANK title news gone IŞIL in followers.
The CIFTLIK BANK title news gone ONUR in followers.
```

Design Pattern:

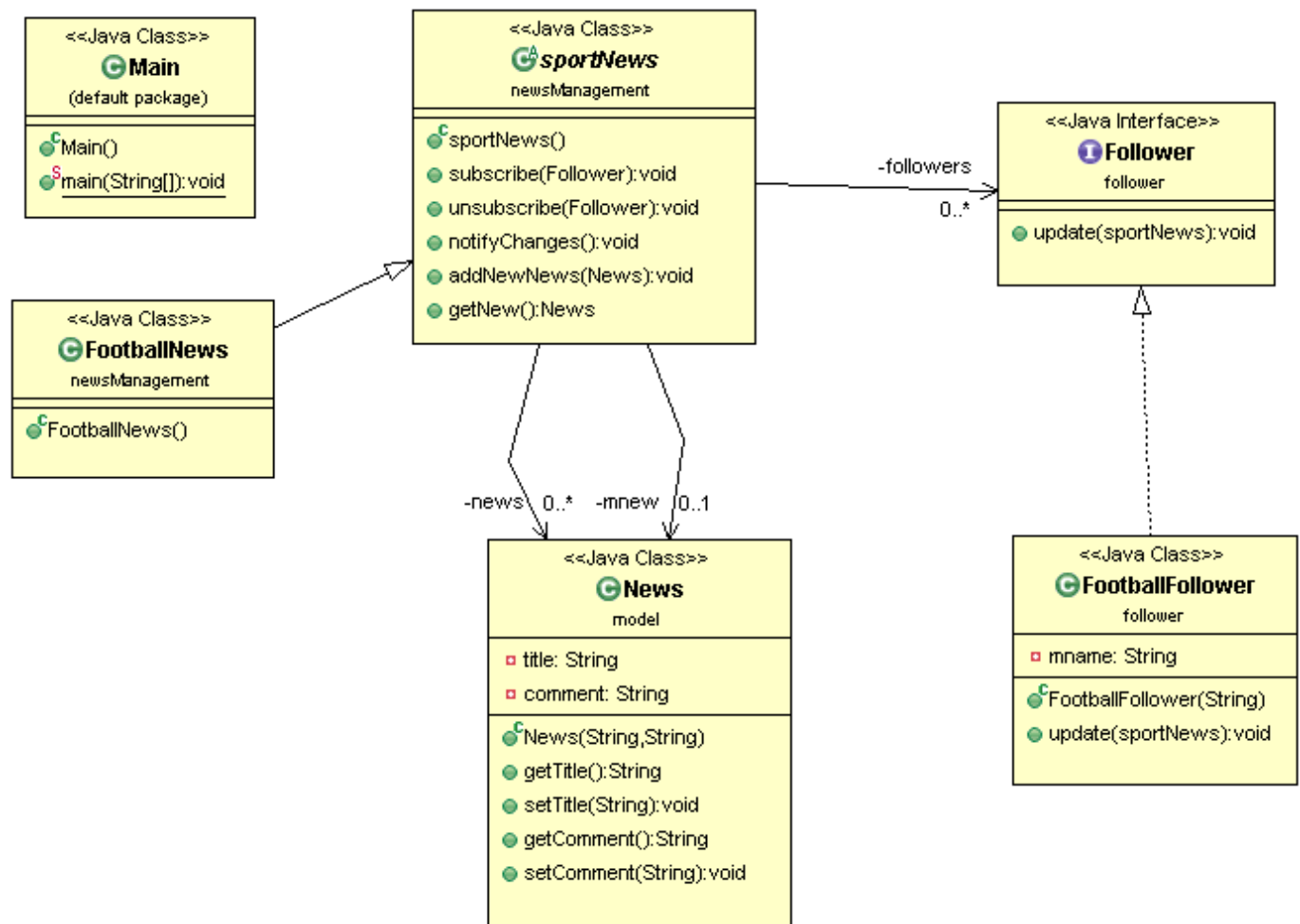
I chose The Observer Pattern. Observer Pattern defines a one-to-many dependency between objects so that when one object changes state, all of its dependents are notified and updated automatically. The observer pattern is a software design pattern in which an object, called the subject, maintains a list of its dependents, called observers, and notifies them automatically of any state changes, usually by calling one of their methods. It is mainly used to implement distributed event handling systems, in "event driven" software. Most modern languages such as C# have built in "event" constructs which implement the observer pattern components, for easy programming and short code. The observer pattern is also a key part in the familiar model-view-controller (MVC) architectural pattern.^[1] The observer pattern is implemented in numerous programming libraries and systems, including almost all GUI toolkits.

The sole responsibility of a subject is to maintain a list of observers and to notify them of state changes by calling their `update()` operation.

The responsibility of observers is to register (and unregister) themselves on a subject (to get notified of state changes) and to update their state (synchronize their state with subject's state) when they are notified



UML:



Also I have the file "umlDiagram.ucls" I Draw a detailed class diagram using UML Diagram Drawing Tool. You can look at uml in the program.

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