

Competencies #2: Objects

1. UML



CindyChenProject/src/project/UML

```
2
3 Medication
4 -genericName:String
5 -numOfUsers: int
6 -mainPurpose: String
7 -yearPublic: int
8
9 +getGenericName(): String
10 +setGenericName(genericName: String): void
11
12 +getNumOfUsers(): int
13 +getNumOfUsers(numOfUsers: int): void
14
15 +getMainPurpose(): String
16 +setMainPurpose(mainPurpose:String): void
17
18 +getYearPublic(): int
19 +setYearPublic(yearPublic: int): void
20
21 +toString(): String
22
23 +equals(med: Medication): boolean
24
25 +compareTo(med: Medication): int
```

2. Class

```

Medication.java X
1 package project;
2
3 public class Medication implements Comparable<Medication>{
4     private String genericName;
5     private int numOfUsers;
6     private String mainPurpose;
7     private int yearPublic;
8
9     public Medication(String genericName, int numOfUsers, String mainPurpose, int yearPublic) {
10         this.genericName = genericName;
11         this.numOfUsers = numOfUsers;
12         this.mainPurpose = mainPurpose;
13         this.yearPublic = yearPublic;
14     }
15
16     public String getGenericName() {
17         return genericName;
18     }
19
20     public void setGenericName(String genericName) {
21         this.genericName = genericName;
22     }
23
24     public int getNumOfUsers() {
25         return numOfUsers;
26     }
27
28     public void setNumOfUsers(int numOfUsers) {
29         this.numOfUsers = numOfUsers;
30     }
31
32     public String getMainPurpose() {
33         return mainPurpose;
34     }
35
36     public void setMainPurpose(String mainPurpose) {
37         this.mainPurpose = mainPurpose;
38     }
39
40     public int getYearPublic() {
41         return yearPublic;
42     }
43
44     public void setYearPublic(int yearPublic) {
45         this.yearPublic = yearPublic;
46     }
47
48     public String toString() {
49         return this.genericName + "\t " + this.numOfUsers + "\t " + this.mainPurpose + "\t " + this.yearPublic + "\t";
50     }
51
52     public boolean equals(Medication med) {
53         if(this.getGenericName().equalsIgnoreCase(med.getGenericName())) {
54             return true;
55         } else {
56             return false;
57         }
58     }
59
60     @Override
61     public int compareTo(Medication med) {
62         if(this.getGenericName().compareTo(med.getGenericName()) > 0) {
63             return 1;
64         } else if(this.getGenericName().compareTo(med.getGenericName()) < 0) {
65             return -1;
66         } else {
67             return 1;
68         }
69     }
70 }
71
72

```