

```
1 package Exercise;
2
3 import java.util.Arrays;
4 import java.util.Objects;
5
6 class Address{
7     String line1;
8     String line2;
9     String line3;
10    char[] city;
11    char[] state;
12    String pin;
13
14    public Address(String parameter){
15        String[] stringArray = parameter.split("\\$
16    ");
17
18        this.line1 = stringArray[0];
19        this.line2 = stringArray[1];
20        this.line3 = stringArray[2];
21        this.city = stringArray[3].toCharArray();
22        this.state = stringArray[4].toCharArray();
23        this.pin = stringArray[5];
24    }
25
26    void print(){
27        System.out.println(this.line1 + " " + this.
28        line2+ " " + this.line3+ " " + Arrays.toString(this
29        .city)
30        + " " + Arrays.toString(this.state
31        ) + " " + this.pin);
32    }
33 }
34
35 class AddressList{
36     public static int countAddressWithCity(Address
37     [] addressList, String city){
38         int result = 0;
39         for (int i = 0; i < addressList.length; i
40         ++){
41             if (String.valueOf(addressList[i].city
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35 ).equals(city)){
36         result++;
37     }
38 }
39 if (addressList.length == 0 || city.length
    () == 0){
40     return -1;
41 }
42 return result;
43 }
44
45 public static int countAddressWithPin(Address
    [] addressList, String strP){
46     int result = 0;
47     for (int i = 0; i < addressList.length; i
    ++){
48         if (Objects.equals(addressList[i].pin,
    strP)){
49             result++;
50         }
51     }
52     if (addressList.length == 0 || strP.length
    () == 0){
53         return -1;
54     }
55     return result;
56 }
57
58 public static Address[] getAddressWithCity(
    Address[] addressList, String city){
59     Address[] resultArray = new Address[
    addressList.length];
60     int resultCount = 0;
61     for (int i = 0; i < addressList.length
    ; i++) {
62         String city1 = new String(
    addressList[i].city);
63         if (city1.equals(city)){
64             resultArray[resultCount++] =
    addressList[i];
65     }
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66         }
67         if (resultCount == 0 || addressList.
length == 0 || city.length() == 0){
68             return null;
69         }
70         return resultArray;
71     }
72
73     public static Address[] getAddressWithPin(
Address[] addressList, String strP){
74         Address[] resultArray = new Address[
addressList.length];
75         int resultCount = 0;
76         for (int i = 0; i < addressList.length; i
++) {
77             if (addressList[i].pin.equals(strP)){
78                 resultArray[resultCount++] =
addressList[i];
79             }
80         }
81         if (resultCount == 0 || addressList.length
== 0 || strP.length() == 0){
82             return null;
83         }
84         return resultArray;
85     }
86 }
87
88
89
90 public class Test {
91     public static void main(String[] args) {
92         Address x = new Address("
line1$line2$line3$city$state$pin");
93         Address y = new Address("
line1$line2$line3$city$state$pin");
94         Address[] addressList = {x,y};
95
96         System.out.println(AddressList.
countAddressWithCity(addressList, "city"));
97         System.out.println(AddressList.

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97 countAddressWithPin(addressList, "pin"));
98
99     System.out.println("city");
100     Address[] getAddressByCity = AddressList.
    getAddressWithCity(addressList, "city");
101     for (int i = 0; i < getAddressByCity.
    length; i++) {
102         getAddressByCity[i].print();
103     }
104
105     Address[] getAddressByPin = AddressList.
    getAddressWithPin(addressList, "pin");
106     for (int i = 0; i < getAddressByPin.length
    ; i++) {
107         getAddressByPin[i].print();
108     }
109
110 }
111 }
112
```

```

1 package Exercise;
2
3 //Exercie 3.1
4 class RetailStore{
5     private int[] itemId;
6     private double[] price;
7     private String itemName[];
8     public RetailStore() {
9         itemId = new int[] { 1001, 1002, 1003, 1004
10         , 1005 };
11         price = new double[] { 950.00, 750.00, 450.
12         00, 350.00, 250.00 }; itemName = new String[] {
13             "Yonex Tennis Racket-950", "Yonex
14             Badminton Racket-750",
15             "Silvers Badminton Racket-450", "
16             Cosco Badminton shuttle-350",
17             "Cosco Tennis Racket-250" };
18     }
19
20     protected double computePrice(int value) {
21         for (int i = 0; i<price.length; ++i){
22             if (itemId[i] == value) {
23                 return price[i];
24             }
25         }
26         return price[value];
27     }
28
29     protected String fetchDescription(int value) {
30         for (int i = 0; i<price.length; ++i) {
31             if (itemId[i] == value) {
32                 return itemName[i];
33             }
34         }
35         return null;
36     }
37 }
38
39 public class RetailStoreExample extends RetailStore
40 {
41     public static void main(String[] args) {

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```
37         int index;
38         RetailStore retailOne = new RetailStore();
39         String description = retailOne.
    fetchDescription(1004);
40         String StringArray[];
41         StringArray = description.split("\\s");
42         String type = StringArray[2];
43         index = type.indexOf('-');
44         String stringFromSubString = type.substring
    (index + 1);
45         String stringFromDouble = Double.toString(
    new RetailStore().computePrice(1004));
46
47         System.out.println(stringFromDouble ==
    stringFromDouble);
48         System.out.println(stringFromDouble.equals(
    stringFromDouble));
49     }
50 }
```