```java
 1   import java.util.Scanner;
 2
 3   public class DrinkMechine {
 4       public static Scanner input = new Scanner(System.in);
 5       public static void main(String[] args) {
 6
 7           // menu
 8           menu();
 9
10           int drink = drinkInput(7);
11
12           double price = getPrice(drink);
13
14           System.out.print("type sum of money you pay the mechine  -->");
15           double sum = input.nextDouble();
16
17           double odef = sum - price;
18           if (odef < 0)
19               msgOK(drink, price, sum, odef);
20           else if (odef > 0) {
21               odef(odef, drink, price);
22           }
23
24           System.out.println("\n thanks for using my drink machine! \n");
25
26       }
27
28       public static void menu()
29       {
30           System.out.println("----= My drink Machine =----");
31           System.out.println("1.\t Coffe - ness:    3.25");
32           System.out.println("2.\t coffe - black:   3.15");
33           System.out.println("3.\t Tea:            2.30");
34           System.out.println("4.\t Hot chocolate:   2.50");
35           System.out.println("5.\t Soup:           3.10");
36           System.out.println("6.\t Cola:           5.50");
37           System.out.println("7.\t Orange juice:    4.20");
38       }
39
40       /*
41       מקבל: מספר המשקה
42       מחזיר: מחיר המשקה
43       * */
44       public static double getPrice(int drink)
45       {
46           double price = 0;
47           switch (drink)
48           {
49               case 1: price = 3.25; break;
```

```java
50          case 2: price = 3.15; break;
51          case 3: price = 2.3; break;
52          case 4: price = 2.5; break;
53          case 5: price = 3.1; break;
54          case 6: price = 5.5; break;
55          case 7: price = 4.2; break;
56        }
57      return  price;
58    }
59
60    /*
61    קולט מהמשתמש מספר תקין למשקה ומחזירה אותו
62    * */
63    public static int drinkInput(int numDrink)
64    {
65      int num = 0;
66      do {
67        System.out.print("which drink would you like? -->");
68        num = input.nextInt();
69      }while (num > numDrink || num < 1);
70      return num;
71    }
72
73    public static void msgOK(int drink, double price, double sum, double odef
    )
74    {
75      System.out.println("you chose drink #" + drink);
76      System.out.println("which costs " + price + " nis");
77      System.out.println("you only paid " + sum + " nis");
78      System.out.println("you must add another " + Math.abs(odef)+ "nis");
79    }
80
81    /*
82    מקבל: את מספר המשקה  מחיר המשקה וכמה עודף יש להחזיר
83    מדפיס את כמות המטבעות שיש קיבל עודף
84    * */
85    public static void odef(double odef, int drink, double price)
86    {
87
88      int odefAG = (int)(odef *100);
89
90      int tenShekel = odefAG/1000;
91      odefAG = odefAG%1000;
92
93      int fiveShekel = odefAG/500;
94      odefAG = odefAG%500;
95
96      int twoShekel = odefAG/200;
97      odefAG = odefAG%200;
```

```java
 98
 99        int oneShekel = odefAG/100;
100        odefAG = odefAG%100;
101
102        int halfShekel = odefAG/50;
103        odefAG = odefAG%50;
104
105        int tenAg = odefAG/10;
106        odefAG = odefAG%10;
107
108        int fiveAg =0;
109        if(odefAG >0)
110            fiveAg =1;
111
112        System.out.println("you chose drink #" + drink);
113        System.out.println("which costs " + price + " nis");
114        System.out.println("You deserve a surplus of " + odef + " nis");
115        System.out.println("as follows:");
116        if (tenShekel!=0)
117            System.out.println("\t" + tenShekel + " coins of 10nis");
118        if (fiveShekel!=0)
119            System.out.println("\t" + fiveShekel + " coins of 5nis");
120        if (twoShekel!=0)
121            System.out.println("\t" + twoShekel + " coins of 2nis");
122        if (oneShekel!=0)
123            System.out.println("\t" + oneShekel + " coins of 1nis");
124        if (halfShekel!=0)
125            System.out.println("\t" + halfShekel + " coins of 0.5nis");
126        if (tenAg!=0)
127            System.out.println("\t" + tenAg + " coins of 10 ag");
128        if (fiveAg!=0)
129            System.out.println("\t" + fiveAg + " coins of 5 ag");
130
131
132    }
133
134 }
135 /*
136 ----= My drink Machine =----
137 1.  Coffe - ness:    3.25
138 2.  coffe - black:   3.15
139 3.  Tea:             2.30
140 4.  Hot chocolate:   2.50
141 5.  Soup:            3.10
142 6.  Cola:            5.50
143 7.  Orange juice:    4.20
144 which drink would you like? -->3
145 type sum of money you pay the mechine  -->50
146 you chose drink #3
```

```
147   which costs 2.3 nis
148   You deserve a surplus of 47.7 nis
149   as follows:
150       4 coins of 10nis
151       1 coins of 5nis
152       1 coins of 2nis
153       1 coins of 0.5nis
154       2 coins of 10 ag
155
156    thanks for using my drink machine!
157
158
159    ----= My drink Machine =----
160   1.  Coffe - ness:    3.25
161   2.  coffe - black:   3.15
162   3.  Tea:             2.30
163   4.  Hot chocolate:   2.50
164   5.  Soup:            3.10
165   6.  Cola:            5.50
166   7.  Orange juice:    4.20
167   which drink would you like? -->1
168   type sum of money you pay the mechine  -->3.25
169
170    thanks for using my drink machine!
171
172
173    ----= My drink Machine =----
174   1.  Coffe - ness:    3.25
175   2.  coffe - black:   3.15
176   3.  Tea:             2.30
177   4.  Hot chocolate:   2.50
178   5.  Soup:            3.10
179   6.  Cola:            5.50
180   7.  Orange juice:    4.20
181   which drink would you like? -->7
182   type sum of money you pay the mechine  -->1
183   you chose drink #7
184   which costs 4.2 nis
185   you only paid 1.0 nis
186   you must add another 3.2nis
187
188    thanks for using my drink machine!
189   * */
```