

```

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;

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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 {
76     System.out.println("you chose drink #" + drink);
77     System.out.println("which costs " + price + " nis");
78     System.out.println("you only paid " + sum + " nis");
79     System.out.println("you must add another " + Math.abs(odef) + "nis");
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;

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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

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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  * */
```