

Object Oriented Programming

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TP01

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Class: I3-GIC (C)

J TP01_1.java > TP01_1 > main(String[])

```
1 public class TP01_1 { TP01_1.java is a non-project file, only syntax errors are
  Run | Debug
2 public static void main(String[] arg) {
3     System.out.println(x: "Hello, Dara!");
4 }
5 }
6
```

Output

```
PS D:\Documents\ITC_I3\Programming\Java\Code> javac TP01_1.java
PS D:\Documents\ITC_I3\Programming\Java\Code> java TP01_1
Hello, Dara!
PS D:\Documents\ITC_I3\Programming\Java\Code>
```

J TP01_2.java > TP01_2

```
1 public class TP01_2 { TP01_2.java is a non-project file, only syntax errors are
  Run | Debug
2 public static void main(String[] args) {
3     System.out.printf(format: "\\n\\t\\t\\t%15s\\n",...args: "Line break.");
4     System.out.printf(format: "\\t\\t\\t\\t\\t%15s\\n",...args: "Tabulation.");
5     System.out.printf(format: "\\\"'\\t\\t\\t%15s\\n",...args: "Single Quote.");
6     System.out.printf(format: "\\\"\\\"\\t\\t\\t%15s\\n",...args: "Double Quote.");
7     System.out.printf(format: "\\\"\\\"\\\"\\t\\t\\t%15s\\n",...args: "\\ Sign.");
8     System.out.printf(format: "\\\"\\\"\\\"\\\"\\t\\t\\t%15s\\n",...args: "\\\"\\\"\\ Sign.");
9     System.out.printf(format: "//\\t\\t\\t%15s\\n",...args: "Line Comment.");
10    System.out.printf(format: "/*...*/\\n\\t\\t%15s\\n",...args: "Block Comment.");
11    System.out.printf(format: "\\\"\\\"\\\"\\\"\\t\\t\\t%15s\\n",...args: "Text block.");
12
13 }
14 }
15
```

Output

```
\\n\\t\\t\\t Line break.
\\t\\t\\t\\t\\t Tabulation.
\\\"'\\t\\t\\t Single Quote.
\\\"\\\"\\t\\t\\t Double Quote.
\\\"\\\"\\\"\\t\\t\\t \\ Sign.
\\\"\\\"\\\"\\\"\\t\\t\\t \\\"\\\"\\ Sign.
//\\t\\t\\t Line Comment.
/*...*/\\n\\t\\t Block Comment.
\\\"\\\"\\\"\\\"\\t\\t\\t Text block.
```

3.Display shapes

```
TP01_3.java > TP01_3
1 public class TP01_3 { TP01_3.java is a non-project file, only syntax errors are reported
2     public static void main(String[] args) {
3
4         System.out.println(x: "-----");
5         System.out.println(x: "A.");
6         System.out.println(x: "-----");
7         for(int i=0; i<6; i++) {
8             for(int j=0; j<25; j++) {
9                 if(i==0 || i==5) {
10                     System.out.print(s: "*");
11                 }
12                 else {
13                     if(j==0 || j==24) {
14                         System.out.print(s: "*");
15                     }
16                     else {
17                         System.out.print(s: " ");
18                     }
19                 }
20             }
21         }
22         System.out.println();
23     }
```

Output

```
-----
A.
-----
*****
*                                     *
*                                     *
*                                     *
*                                     *
*****
-----
```

```

23
24 //B.
25 System.out.println(x: "-----");
26 System.out.println(x: "B.");
27 System.out.println(x: "-----");
28
29 for(int i=0; i<5; i++) {
30     for(int j=0; j<9; j++) {
31         if(j < 4-i) {
32             System.out.print(s: " ");
33         }
34         else if(j <= 4+i) {
35             System.out.print(s: "*");
36         }
37         else {
38             break;
39         }
40     }
41 }
42 System.out.println();
43 }
44

```

Output

```

-----
B.
-----
      *
     ***
    *****
   ********
  *********
 *****
-----

```

```

45 //C.
46 System.out.println(x: "-----");
47 System.out.println(x: "C.");
48 System.out.println(x: "-----");
49
50 for(int i=0; i<5; i++) {
51     for(int j=0; j<(2*i+1); j++) {
52         System.out.print(s: "*");
53     }
54     System.out.println();
55 }
56
57 //D.
58 System.out.println(x: "-----");
59 System.out.println(x: "D.");
60 System.out.println(x: "-----");
61
62 for(int i=0; i<5; i++) {
63     for(int j=9; j>0; j--) {
64         if(j>(2*i+1)) {
65             System.out.print(s: " ");
66         }
67         else
68             System.out.print(s: "*");
69     }
70     System.out.println();
71 }
72

```

Output

```

-----
C.
-----
*
***
*****
*****
*****
-----
D.
-----
          *
        ***
      *****
    *****
  *****
-----

```

```

73 //E.
74 System.out.println(x: "-----");
75 System.out.println(x: "E.");
76 System.out.println(x: "-----");
77
78 for(int i=0; i<5; i++) {
79     for(int j=9; j>0; j--) {
80         if(j>(2*i+1) || j>(9-2*i)) {
81             System.out.print(s: " ");
82         }
83         else
84             System.out.print(s: "*");
85     }
86     System.out.println();
87 }
88
89 //F.
90 System.out.println(x: "-----");
91 System.out.println(x: "F.");
92 System.out.println(x: "-----");
93
94 for(int i=0; i<5; i++) {
95     for(int j=0; j<9; j++) {
96         if(j<4-i || j<i) {
97             System.out.print(s: " ");
98         }
99         else if(j <= 4+i && j<=8-i) {
100             System.out.print(s: "*");
101         }
102         else {
103             break;
104         }
105     }
106     System.out.println();
107 }
108

```

Output

E.

```

      *
     ***
    *****
   *****
  *****
 *

```

F.

```

      *
     ***
    *****
   *****
  *****
 *

```

```

108
109 //G.
110 System.out.println(x: "-----");
111 System.out.println(x: "G.");
112 System.out.println(x: "-----");
113
114 for(int i=0; i<5; i++) {
115     for(int j=0; j<5; j++) {
116         if(j<i && j<4-i) {
117             System.out.print(s: " ");
118         }
119         else if(j<5-i || j<i+1) {
120             System.out.print(s: "*");
121         }
122         else {
123             break;
124         }
125     }
126     System.out.println();
127 }
128
129

```

Output

```

-----
G.
-----
*****
   ***
   *
   ***
*****
-----

```

```

129
130 //H.
131 System.out.println(x: "-----");
132 System.out.println(x: "H.");
133 System.out.println(x: "-----");
134 int w = 9; //Weight
135 int h = (w+1)/2; //Height
136 int spaceOut = 0;
137 int spaceIn = 0;
138 // spaceOut = (w-1)/2 - 2i
139 // spaceIN = T(w-2) ... 1st: 4i-1
140
141 for(int i=0; i<h; i++) {
142     if(i <= (h-1)/2) {
143         spaceOut = (w-1)/2 - 2*i;
144         spaceIn = 4*i-1;
145     }
146     else {
147         spaceOut += 2;
148         spaceIn -= 4;
149     }
150     for(int j=0; j<w; j++) {
151         if (j==spaceOut || j==spaceIn+spaceOut+1) { //Print * when j reach to the place that space stoped
152             System.out.print(s: "*");
153         } else {
154             System.out.print(s: " ");
155         }
156     }
157     System.out.println();
158 }

```

Output

```

-----
H.
-----
      *
     * *
    *   *
   *     *
  *       *
 *         *

```