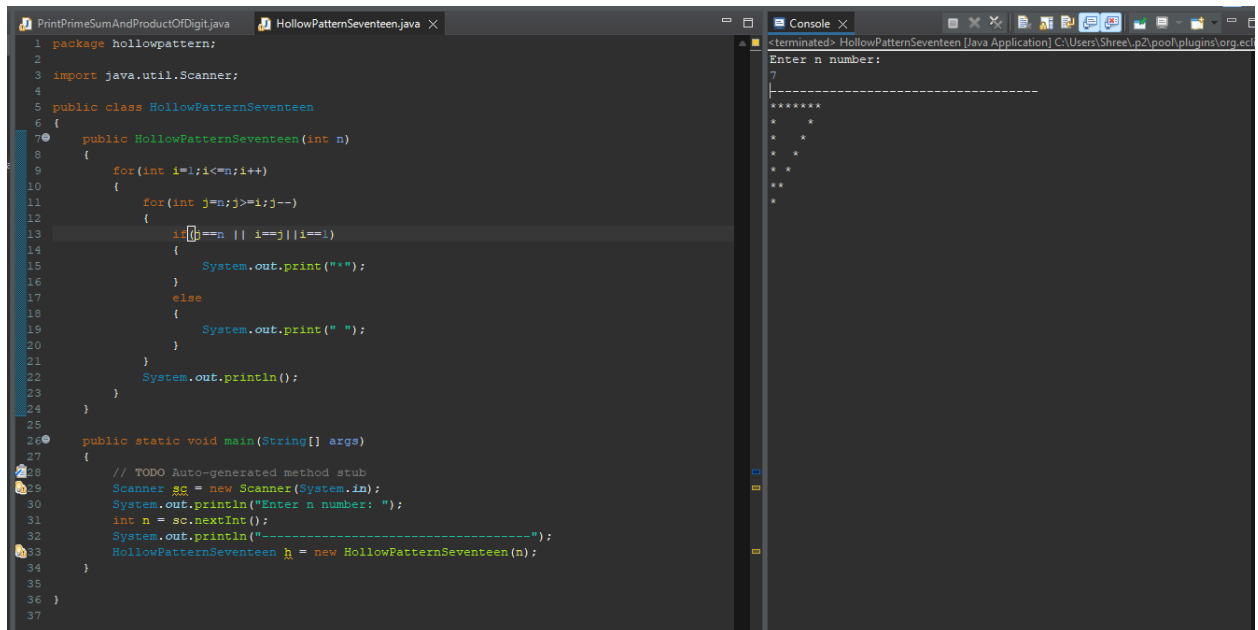


## Assignment No:-22

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Batch: - Delta - DCA (Java) 2024      Date:-4/6/2024

1.



```
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternSeventeen
6 {
7     public HollowPatternSeventeen(int n)
8     {
9         for(int i=1;i<=n;i++)
10         {
11             for(int j=n;j>=1;j--)
12             {
13                 if(i==n || i==j || i==1)
14                 {
15                     System.out.print("*");
16                 }
17                 else
18                 {
19                     System.out.print(" ");
20                 }
21             }
22             System.out.println();
23         }
24     }
25
26     public static void main(String[] args)
27     {
28         // TODO Auto-generated method stub
29         Scanner sc = new Scanner(System.in);
30         System.out.println("Enter n number: ");
31         int n = sc.nextInt();
32         System.out.println("-----");
33         HollowPatternSeventeen h = new HollowPatternSeventeen(n);
34     }
35 }
36
37
```

Console Output:

```
<terminated> HollowPatternSeventeen [Java Application] C:\Users\Shree\p2\poo\plugins\org.ecl
Enter n number:
7
-----
* *
* *
* *
* *
* *
* *
*

```

```
PrintPrimeSumAndProductOfDigits.java  HollowPatternSeventeen.java  HollowPatternEighteen.java  x
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternEighteen
6 {
7     public HollowPatternEighteen(int n)
8     {
9         for (int i=1;i<=n;i++)
10         {
11             for (int k=1;k<=i;k++)
12             {
13                 System.out.print(" ");
14             }
15             for (int j=n;j>=i;j--)
16             {
17                 if (j==n || i==j || i==1)
18                 {
19                     System.out.print("*");
20                 }
21                 else
22                 {
23                     System.out.print(" ");
24                 }
25             }
26             System.out.println();
27         }
28     }
29
30     public static void main(String[] args)
31     {
32         // TODO Auto-generated method stub
33         Scanner sc = new Scanner(System.in);
34         System.out.println("Enter n number: ");
35         int n = sc.nextInt();
36         System.out.println("-----");
37         HollowPatternEighteen h = new HollowPatternEighteen(n);
38     }
39 }
40 }
```

```
PrintPrimeSumAndPro... HollowPatternSeventeen... HollowPatternEighteen... HollowPatternNineteen... X
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternNineteen
6 {
7
8     public HollowPatternNineteen(int n)
9     {
10         for(int i=1;i<=n;i++)
11         {
12             for(int k=n;k>=i;k--)
13             {
14                 System.out.print(" ");
15             }
16             for(int j=1;j<=i;j++)
17             {
18                 if(j==1 || i==j || i==n)
19                 {
20                     System.out.print("* ");
21                 }
22                 else
23                 {
24                     System.out.print("  ");
25                 }
26             }
27             System.out.println();
28         }
29     }
30
31     public static void main(String[] args)
32     {
33         // TODO Auto-generated method stub
34         Scanner sc = new Scanner(System.in);
35         System.out.println("Enter n number: ");
36         int n = sc.nextInt();
37         System.out.println("-----");
38         HollowPatternNineteen h = new HollowPatternNineteen(n);
39     }
40 }
41 }
```

Console X

<terminated> HollowPatternNineteen [Java Application] C:\Users\Shree\p2\pool\plu

Enter n number:  
7

-----

```

      *
    * *
  * * *
* * * *
* * * * *
* * * * *
* * * * *
```

4.

```

1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternTwenty
6 {
7     public HollowPatternTwenty(int n)
8     {
9         for(int i=1;i<=n;i++)
10         {
11             for(int k=1;k<=i;k++)
12             {
13                 System.out.print(" ");
14             }
15             for(int j=n;j>=i;j--)
16             {
17                 if(j==n || i==j || i==1)
18                 {
19                     System.out.print("* ");
20                 }
21                 else
22                 {
23                     System.out.print(" ");
24                 }
25             }
26             System.out.println();
27         }
28     }
29
30     public static void main(String[] args)
31     {
32         // TODO Auto-generated method stub
33         Scanner sc = new Scanner(System.in);
34         System.out.println("Enter n number: ");
35         int n = sc.nextInt();
36         System.out.println("-----");
37         HollowPatternTwenty h = new HollowPatternTwenty(n);
38     }
39 }
40

```

Console Output:

```

Enter n number:
7
-----
* * * * *
*   *   *
*     * *
*       *
*        *
*         *
*          *

```

5.

```

1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternTwentyOne
6 {
7
8     public HollowPatternTwentyOne(int n)
9     {
10         for(int i=1;i<=n;i++)
11         {
12             for(int k=n;k>=i;k--)
13             {
14                 System.out.print(" ");
15             }
16             for(int j=1;j<=i;j++)
17             {
18                 if(j==1 || i==j)
19                 {
20                     System.out.print("* ");
21                 }
22                 else
23                 {
24                     System.out.print(" ");
25                 }
26             }
27             System.out.println();
28         }
29
30         for(int i=2;i<=n;i++)
31         {
32             for(int k=1;k<=i;k++)
33             {
34                 System.out.print(" ");
35             }
36             for(int j=n;j>=i;j--)
37             {
38                 if(j==n || i==j)
39                 {
40                     System.out.print("* ");
41                 }
42             }
43             System.out.println();
44         }
45     }
46 }
47

```

Console Output:

```

Enter n number:
7
-----
          *
        * *
      * * *
    * * * *
  * * * * *
* * * * * *
* * * * * *
          *
        * *
      * * *
    * * * *
  * * * * *
* * * * * *
          *

```





```
HollowPatte... HollowPatte... HollowPatte... HollowPatte... HollowPatte... x 32
21 }
22     else
23     {
24         System.out.print(" ");
25     }
26 }
27 System.out.println();
28 }
29
30 for(int i=2;i<=n;i++)
31 {
32     for(int k=1;k<=i;k++)
33     {
34         System.out.print(" ");
35     }
36     for(int j=n;j>=i;j--)
37     {
38         if(j==n || i==j)
39         {
40             System.out.print("*");
41         }
42         else
43         {
44             System.out.print(" ");
45         }
46     }
47     System.out.println();
48 }
49 }
50
51 public static void main(String[] args)
52 {
53     // TODO Auto-generated method stub
54     Scanner sc = new Scanner(System.in);
55     System.out.println("Enter n number: ");
56     int n = sc.nextInt();
57     System.out.println("-----");
58     HollowPatternTwentyThree h = new HollowPatternTwentyThree(n);
59 }
60
61 }
```

```
<terminated> HollowPatternTwentyThree [Java Application] C:\Users\Shree
Enter n number:
7
-----
*
**
* *
* *
* *
* *
* *
* *
* *
*

```

8.

```
HollowPatte... HollowPatte... HollowPatte... HollowPatte... HollowPatte... x 34
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternTwentyFour
6 {
7     public HollowPatternTwentyFour(int n)
8     {
9         for(int i=1;i<=n;i++)
10         {
11             for(int k=n;k>=i;k--)
12             {
13                 System.out.print(" ");
14             }
15             for(int j=1;j<=n;j++)
16             {
17                 if(i&2!=0)
18                 {
19                     if(j==1 || i==n || j==n || i==1)
20                     {
21                         System.out.print("*");
22                     }
23                     else
24                     {
25                         System.out.print(" ");
26                     }
27                 }
28                 System.out.println();
29             }
30         }
31     }
32
33     public static void main(String[] args)
34     {
35         // TODO Auto-generated method stub
36         Scanner sc = new Scanner(System.in);
37         System.out.println("Enter n number: ");
38         int n = sc.nextInt();
39         System.out.println("-----");
40         HollowPatternTwentyFour h = new HollowPatternTwentyFour(n);
41     }
42 }
```

```
<terminated> HollowPatternTwentyFour [Java Application] C:\Users\Shree
Enter n number:
7
-----
*****
* *
* *
*****

```

```
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternTwentyFive
6 {
7
8     public HollowPatternTwentyFive(int n)
9     {
10         for(int i=1;i<=n;i++)
11         {
12             for(int k=1;k<=i;k++)
13             {
14                 System.out.print(" ");
15             }
16             for(int j=1;j<=n;j++)
17             {
18                 if(i%2!=0)
19                 if(j==1 || i==n||j==n|| i==1)
20                 {
21                     System.out.print("*");
22                 }
23                 else
24                 {
25                     System.out.print(" ");
26                 }
27             }
28             System.out.println();
29         }
30     }
31
32     public static void main(String[] args)
33     {
34         // TODO Auto-generated method stub
35         Scanner sc = new Scanner(System.in);
36         System.out.println("Enter n number: ");
37         int n = sc.nextInt();
38         System.out.println("-----");
39         HollowPatternTwentyFive h = new HollowPatternTwentyFive(n);
40     }
41
42 }
```

```
PrintPrimeSu... HollowPatte... HollowPatte... HollowPatte... X X X  
1 package hollowpattern;  
2  
3 import java.util.Scanner;  
4  
5 public class HollowPatternTwentySix  
6 {  
7  
8     public HollowPatternTwentySix(int n)  
9     {  
10         for(int i=1;i<=n;i++)  
11         {  
12             for(int j=1;j<=i;j++)  
13             {  
14                 System.out.print("**");  
15             }  
16             for(int k=n-1;k>=i;k--)  
17             {  
18                 System.out.print(" ");  
19             }  
20             for(int j=1;j<=i;j++)  
21             {  
22                 System.out.print("**");  
23             }  
24             System.out.println();  
25         }  
26  
27         for(int i=1;i<=n;i++)  
28         {  
29             for(int j=n-1;j>=i;j--)  
30             {  
31                 System.out.print("**");  
32             }  
33             for(int k=1;k<=i;k++)  
34             {  
35                 System.out.print(" ");  
36             }  
37             for(int j=n-1;j>=i;j--)  
38             {  
39                 System.out.print("**");  
40             }  
41             System.out.println();  
42         }  
43     }  
44 }
```





```

15 }
16 for(int k=1;k<=i;k++)
17 {
18     System.out.print(" ");
19 }
20 for(int j=n;j>=i;j--)
21 {
22     System.out.print("*");
23 }
24 System.out.println();
25 }
26
27 for(int i=2;i<=n;i++)
28 {
29     for(int j=1;j<=i;j++)
30     {
31         System.out.print(" ");
32     }
33     for(int k=n-1;k>=i;k--)
34     {
35         System.out.print(" ");
36     }
37     for(int j=1;j<=i;j++)
38     {
39         System.out.print("*");
40     }
41     System.out.println();
42 }
43
44 public static void main(String[] args)
45 {
46     // TODO Auto-generated method stub
47     Scanner sc = new Scanner(System.in);
48     System.out.println("Enter n number: ");
49     int n = sc.nextInt();
50     System.out.println("-----");
51     HollowPatternTwentySeven h = new HollowPatternTwentySeven(n);
52 }
53
54 }
55
56

```

Console

```

<terminated> HollowPatternTwentySeven [Java Application] C:\Users\Shree\p2\pool\p...
Enter n number:
8
-----
*****
*****
*****
*****
***
**
*
**
**
***
*****
*****
*****
*****
*****

```

12.

```

1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternTwentyEight
6 {
7
8     public HollowPatternTwentyEight(int n)
9     {
10         for(int i=1;i<=n;i++)
11         {
12             for(int k=n;k>=i;k--)
13             {
14                 System.out.print(" ");
15             }
16             for(int j=1;j<=i;j++)
17             {
18                 if(j==1 || i==j)
19                 {
20                     System.out.print("*");
21                 }
22                 else
23                 {
24                     System.out.print(" ");
25                 }
26             }
27             System.out.println();
28         }
29
30         for(int i=2;i<=n;i++)
31         {
32             for(int k=1;k<=i;k++)
33             {
34                 System.out.print(" ");
35             }
36             for(int j=n;j>=i;j--)
37             {
38                 if(j==n || i==j)
39                 {
40                     System.out.print("*");
41                 }
42                 else

```

Console

```

<terminated> HollowPatternTwentyEight [Java Application] C:\Users\Shree\p2\pool\p...
Enter n number:
12
-----
          *
        * *
       * * *
      * * * *
     * * * * *
    * * * * *
   * * * * *
  * * * * *
 * * * * *
* * * * *
 * * * * *
  * * * *
   * * * *
    * * * *
     * * *
      * *
       *

```



```
21     }
22     else
23     {
24         System.out.print(" ");
25     }
26     }
27     System.out.println();
28 }
29
30 for(int i=2;i<=n;i++)
31 {
32     for(int k=n;k>=i;k--)
33     {
34         System.out.print(" ");
35     }
36     for(int j=1;j<=i;j++)
37     {
38         if(j==1 || i==j || i==n)
39         {
40             System.out.print("* ");
41         }
42         else
43         {
44             System.out.print(" ");
45         }
46     }
47     System.out.println();
48 }
49 }
50
51 public static void main(String[] args)
52 {
53     // TODO Auto-generated method stub
54     Scanner sc = new Scanner(System.in);
55     System.out.println("Enter n number: ");
56     int n = sc.nextInt();
57     System.out.println("-----");
58     HollowPatternTwentyNine h = new HollowPatternTwentyNine(n);
59 }
60
61 }
62 }
```

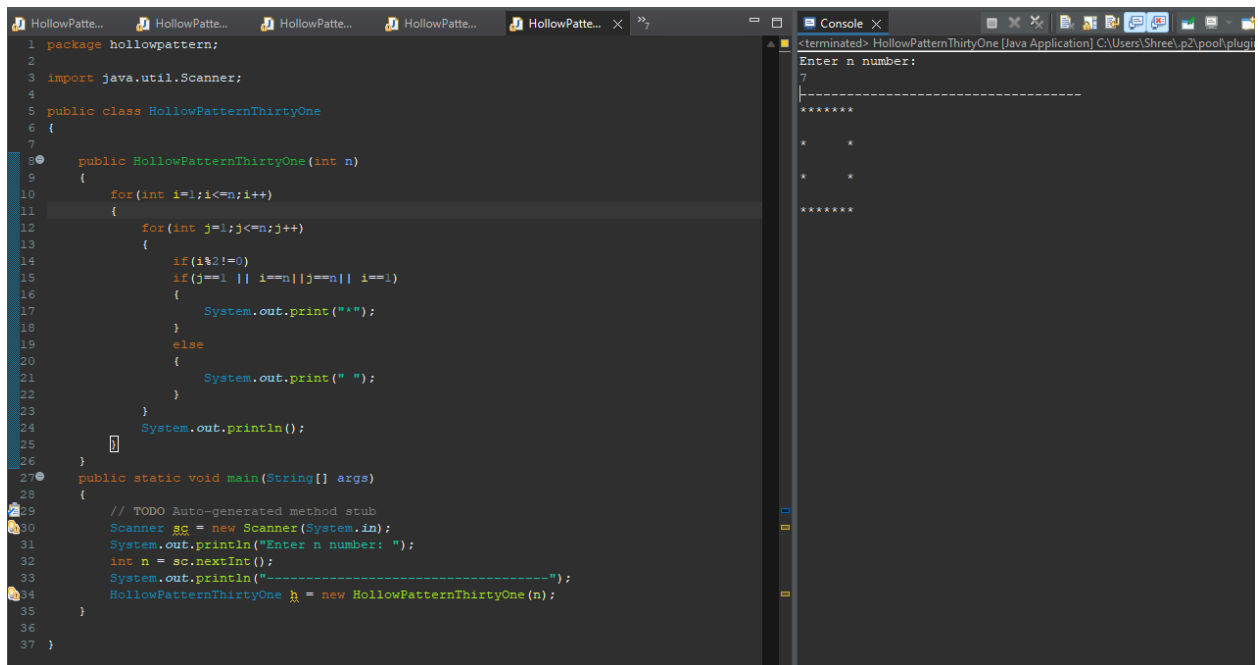
<terminated> HollowPatternTwentyNine [Java Application] C:\Users\Shree\p2\plugins\...  
Enter n number:  
8  
-----  
\* \* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \*

14.

```
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternThirty
6 {
7
8     public HollowPatternThirty(int n)
9     {
10         for(int i=1;i<=n;i++)
11         {
12             for(int j=1;j<=n;j++)
13             {
14
15                 System.out.print(" ");
16
17             }
18             System.out.println();
19         }
20     }
21
22     public static void main(String[] args)
23     {
24         // TODO Auto-generated method stub
25         Scanner sc = new Scanner(System.in);
26         System.out.println("Enter n number: ");
27         int n = sc.nextInt();
28         System.out.println("-----");
29         HollowPatternThirty h = new HollowPatternThirty(n);
30     }
31 }
32 }
```

<terminated> HollowPatternThirty [Java Application] C:\Users\Shree\p2\p...  
Enter n number:  
7  
-----  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

15.



The screenshot shows an IDE with a Java file named `HollowPatternThirtyOne` and a console window. The code defines a class `HollowPatternThirtyOne` with a `main` method that takes a number `n` and prints a hollow pattern of stars. The console output shows the pattern for `n=7`.

```
1 package hollowpattern;
2
3 import java.util.Scanner;
4
5 public class HollowPatternThirtyOne
6 {
7
8     public HollowPatternThirtyOne(int n)
9     {
10         for(int i=1;i<=n;i++)
11         {
12             for(int j=1;j<=n;j++)
13             {
14                 if(i%2!=0)
15                     if(j==1 || i==n || j==n || i==1)
16                     {
17                         System.out.print("*");
18                     }
19                     else
20                     {
21                         System.out.print(" ");
22                     }
23             }
24             System.out.println();
25         }
26     }
27
28     public static void main(String[] args)
29     {
30         // TODO Auto-generated method stub
31         Scanner sc = new Scanner(System.in);
32         System.out.println("Enter n number: ");
33         int n = sc.nextInt();
34         System.out.println("-----");
35         HollowPatternThirtyOne h = new HollowPatternThirtyOne(n);
36     }
37 }
```

Console Output:

```
<terminated> HollowPatternThirtyOne [Java Application] C:\Users\Shree\p2\pooh.plugin
Enter n number:
7
-----
*****
*   *
*   *
*****
```