

Assignment No:-13

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Batch: - Delta - DCA (Java) 2024 Date:-20/5/2024

1.

The screenshot shows a Java program named `PatternSeventeenHollowInWhile` and its execution output. The code uses nested loops to print a hollow pattern of stars for a given number `n`. The output shows the pattern for `n=6`.

```
import java.util.*;
public class PatternSeventeenHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=n;
            while(j>=i)
            {
                if(j==n || j==i || i==1)
                    System.out.print("*");
                else
                    System.out.print(" ");
                j--;
            }
            System.out.println();
            i++;
        }
    }
}
```

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternSeventeenHollowInWhile
Enter n number: 6

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

2.

The screenshot shows a Java program named `PatternEighteenHollowInWhile` and its execution output. The code uses nested loops to print a hollow pattern of stars for a given number `n`. The output shows the pattern for `n=7`.

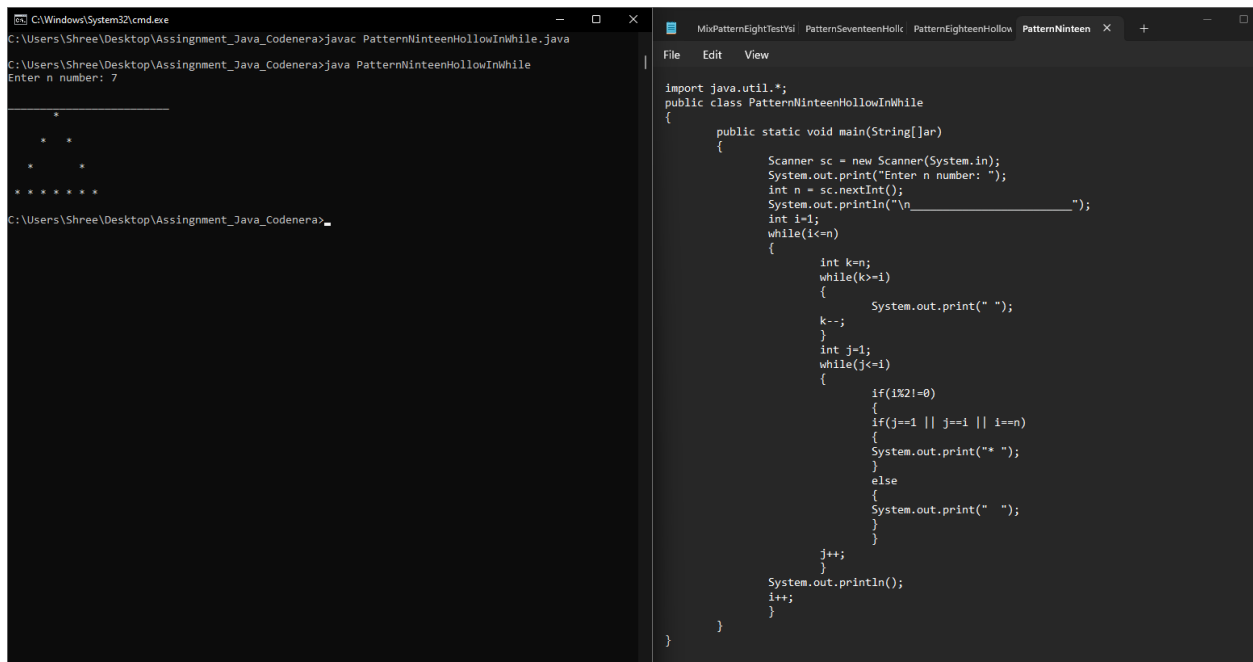
```
import java.util.*;
public class PatternEighteenHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=1;
            while(k<=i)
            {
                System.out.print(" ");
                k++;
            }
            int j=n;
            while(j>=i)
            {
                if(j==n || j==i || i==1)
                    System.out.print("*");
                else
                    System.out.print(" ");
                j--;
            }
            System.out.println();
            i++;
        }
    }
}
```

```
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternEighteenHollowInWhile
Enter n number: 7

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

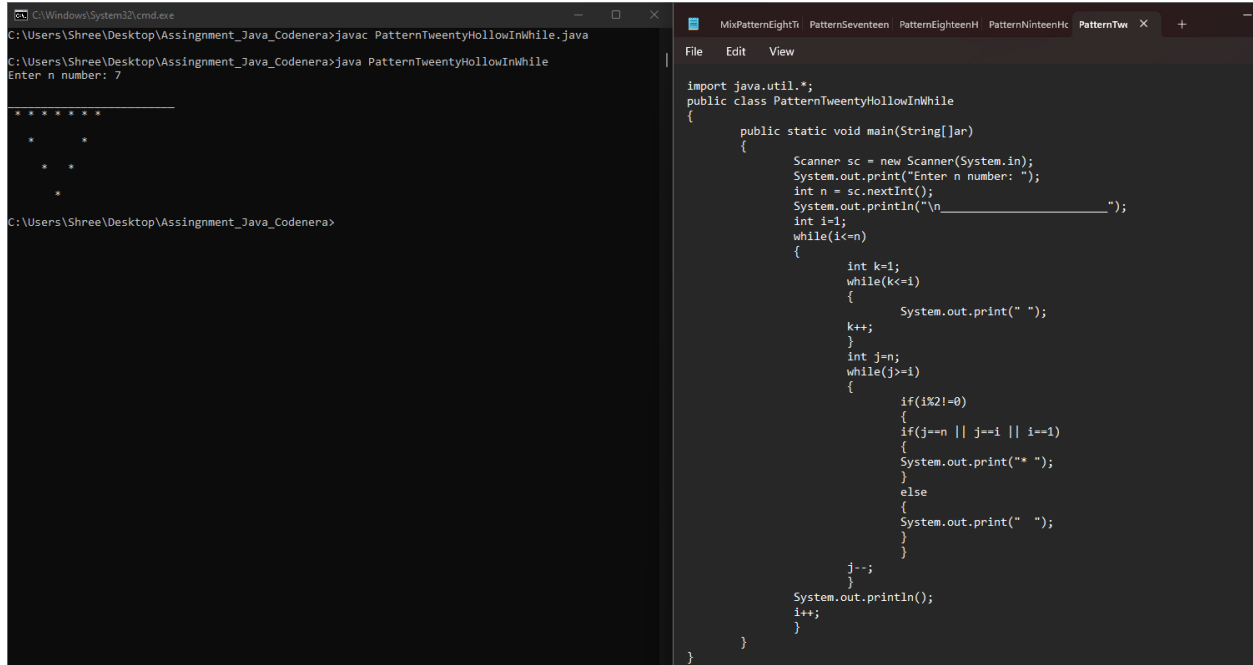
C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

3.



```
import java.util.*;
public class PatternNineteenHollowInkWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        while(i<=n)
        {
            int k=n;
            while(k>=1)
            {
                System.out.print(" ");
                k--;
            }
            int j=1;
            while(j<=1)
            {
                if(i%2!=0)
                {
                    if(j==1 || j==1 || i==n)
                    {
                        System.out.print("* ");
                    }
                    else
                    {
                        System.out.print(" ");
                    }
                }
                j++;
            }
            System.out.println();
            i++;
        }
    }
}
```

4.



```
import java.util.*;
public class PatternTwentyHollowInkWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=1;
            while(k<=1)
            {
                System.out.print(" ");
                k++;
            }
            int j=n;
            while(j>=1)
            {
                if(i%2!=0)
                {
                    if(j==n || j==1 || i==1)
                    {
                        System.out.print("* ");
                    }
                    else
                    {
                        System.out.print(" ");
                    }
                }
                j--;
            }
            System.out.println();
            i++;
        }
    }
}
```

5.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac PatternTwentyOneHollowInMhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentyOneHollowInMhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
File Edit View

import java.util.*;
public class PatternTwentyOneHollowInMhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=n;
            while(k>=i)
            {
                System.out.print(" ");
                k--;
            }
            int j=1;
            while(j<=i)
            {
                if(j==1 || j==i)
                {
                    System.out.print("* ");
                }
                else
                {
                    System.out.print("  ");
                }
                j++;
            }
            System.out.println();
        }
    }
}
```

Ln 24, Col 6 853 characters 100% Windows (CRLF) UTF-8

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac PatternTwentyOneHollowInMhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentyOneHollowInMhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
File Edit View

        }
        j++;
    }
    System.out.println();
    i++;
}
i=1;
while(i<=n)
{
    int k=1;
    while(k<=i)
    {
        System.out.print(" ");
        k++;
    }
    int j=n;
    while(j>=i)
    {
        if(j==n || j==i)
        {
            System.out.print("* ");
        }
        else
        {
            System.out.print("  ");
        }
        j--;
    }
    System.out.println();
    i++;
}
}
```

6.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac PatternTwentyTwoHollowInWhile.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java PatternTwentyTwoHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentyTwoHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=1;
            while(j<=i)
            {
                if(j==1 || j==i)
                {
                    System.out.print("*");
                }
                else
                {
                    System.out.print(" ");
                }
                j++;
            }
            System.out.println();
            i++;
        }
        i=2;
        while(i<=n)
        {
            int j=n;
```

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac PatternTwentyTwoHollowInWhile.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java PatternTwentyTwoHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```
        {
            System.out.print("*");
        }
        else
        {
            System.out.print(" ");
        }
        j++;
    }
    System.out.println();
    i++;
}
i=2;
while(i<=n)
{
    int j=n;
    while(j>=i)
    {
        if(j==n || j==i)
        {
            System.out.print("*");
        }
        else
        {
            System.out.print(" ");
        }
        j--;
    }
    System.out.println();
    i++;
}
}
```

C:\Windows\System32\cmd.exe

C:\Users\Shree\Desktop\Assignment_Java_Codenera>javac PatternTwentyThreeHollowInWhile.java
C:\Users\Shree\Desktop\Assignment_Java_Codenera>java PatternTwentyThreeHollowInWhile
Enter n number: 7

 *
 **

 **
 *
*

C:\Users\Shree\Desktop\Assignment_Java_Codenera>

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FileEditView

import java.util.*;
public class PatternTwentyThreeHollowInWhile
{
 public static void main(String[]ar)
 {
 Scanner sc = new Scanner(System.in);
 System.out.print("Enter n number: ");
 int n = sc.nextInt();
 System.out.println("\n_____");
 int i=1;
 while(i<=n)
 {
 int k=n;
 while(k>=i)
 {
 System.out.print(" ");
 k--;
 }
 int j=1;
 while(j<=i)
 {
 if(j==1 || j==i)
 {
 System.out.print("*");
 }
 else
 {
 System.out.print(" ");
 }
 j++;
 }
 System.out.println();
 i++;
 }
 }
}

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codener>javac PatternTwentyThreeHollowInWhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codener>java PatternTwentyThreeHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codener>
```

```
File Edit View

        }
        j++;
    }
    System.out.println();
    i++;
}
i=1;
while(i<=n)
{
    int k=1;
    while(k<=i)
    {
        System.out.print(" ");
        k++;
    }
    int j=n;
    while(j>=i)
    {
        if(j==n || j==i)
        {
            System.out.print("*");
        }
        else
        {
            System.out.print(" ");
        }
        j--;
    }
    System.out.println();
    i++;
}
}
```

8.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac PatternTwentyFourHollowInWhile.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java PatternTwentyFourHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentyFourHollowInWhile
{
    public static void main(String[]Jar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=n;
            while(k>=i)
            {
                System.out.print(" ");
                k--;
            }
            int j=1;
            while(j<=n)
            {
                if(i%2!=0)
                if(j==1 || i==n || i==1 || j==n)
                {
                    System.out.print("*");
                }
                else
                {
                    System.out.print(" ");
                }
                j++;
            }
            System.out.println();
            i++;
        }
    }
}
```

9.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac PatternTwentyFiveHollowInWhile.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java PatternTwentyFiveHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentyFiveHollowInWhile
{
    public static void main(String[]Jar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=1;
            while(k<=i)
            {
                System.out.print(" ");
                k++;
            }
            int j=1;
            while(j<=n)
            {
                if(i%2!=0)
                if(j==1 || i==n || i==1 || j==n)
                {
                    System.out.print("*");
                }
                else
                {
                    System.out.print(" ");
                }
                j++;
            }
            System.out.println();
            i++;
        }
    }
}
```

10.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac PatternTwentySixHollowInWhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentySixHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentySixHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=1;
            while(j<=i)
            {
                System.out.print("*");
                j++;
            }
            int k=n;
            while(k>=i+1)
            {
                System.out.print(" ");
                k--;
            }
            j=1;
            while(j<=i)
            {
                System.out.print("*");
                j++;
            }
            System.out.println();
            i++;
        }
        i=1;
        n=n-1;
    }
}
```

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac PatternTwentySixHollowInWhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentySixHollowInWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentySixHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=n;
            while(j>=i)
            {
                System.out.print("*");
                j--;
            }
            int k=1;
            while(k<=i)
            {
                System.out.print(" ");
                k++;
            }
            j=n;
            while(j>=i)
            {
                System.out.print("*");
                j--;
            }
            System.out.println();
            i++;
        }
    }
}
```

11.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentySevenHollowInkWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>

import java.util.*;
public class PatternTwentySevenHollowInkWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=n;
            while(j>=i)
            {
                System.out.print("**");
                j--;
            }
            int k=1;
            while(k<=i-1)
            {
                System.out.print(" ");
                k++;
            }
            j=n;
            while(j>=i)
            {
                System.out.print("**");
                j--;
            }
            System.out.println();
            i++;
        }
        i=1;
        while(i<=n)
```

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentySevenHollowInkWhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingment_Java_Codenera>

import java.util.*;
public class PatternTwentySevenHollowInkWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=1;
            while(j<=i)
            {
                System.out.print("**");
                j++;
            }
            int k=n-1;
            while(k>=i)
            {
                System.out.print(" ");
                k--;
            }
            j=1;
            while(j<=i)
            {
                System.out.print("**");
                j++;
            }
            System.out.println();
            i++;
        }
        i=1;
        while(i<=n)
```


12.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac PatternTwentyEightHollowInkWhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentyEightHollowInkWhile
Enter n number: 7

  *
 * *
* * *
 * *
  *

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentyEightHollowInkWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=n;
            while(k>=i)
            {
                System.out.print(" ");
                k--;
            }
            int j=1;
            while(j<=i)
            {
                if(j==1 || j==i)
                {
                    System.out.print("* ");
                }
                else
                {
                    System.out.print(" ");
                }
                j++;
            }
            System.out.println();
            i++;
        }
        i=2;
```

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac PatternTwentyEightHollowInkWhile.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternTwentyEightHollowInkWhile
Enter n number: 7

  *
 * *
* * *
 * *
  *

C:\Users\Shree\Desktop\Assingment_Java_Codenera>
```

```
        }
        else
        {
            System.out.print(" ");
        }
        j++;
    }
    System.out.println();
    i++;
}
i=2;
while(i<=n)
{
    int k=1;
    while(k<=i)
    {
        System.out.print(" ");
        k++;
    }
    int j=n;
    while(j>=i)
    {
        if(j==n || j==i)
        {
            System.out.print("* ");
        }
        else
        {
            System.out.print(" ");
        }
        j--;
    }
    System.out.println();
    i++;
}
}
```

13.

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac PatternTwentyNineHollowInMhile.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java PatternTwentyNineHollowInMhile
Enter n number: 7

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

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```
import java.util.*;
public class PatternTwentyNineHollowInMhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int k=1;
            while(k<=i)
            {
                System.out.print(" ");
                k++;
            }
            int j=n;
            while(j>=i)
            {
                if(j==n || j==i || i==1)
                {
                    System.out.print("* ");
                }
                else
                {
                    System.out.print(" ");
                }
                j--;
            }
            System.out.println();
            i++;
        }
    }
}
```

```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac PatternTwentyNineHollowInMhile.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java PatternTwentyNineHollowInMhile
Enter n number: 7

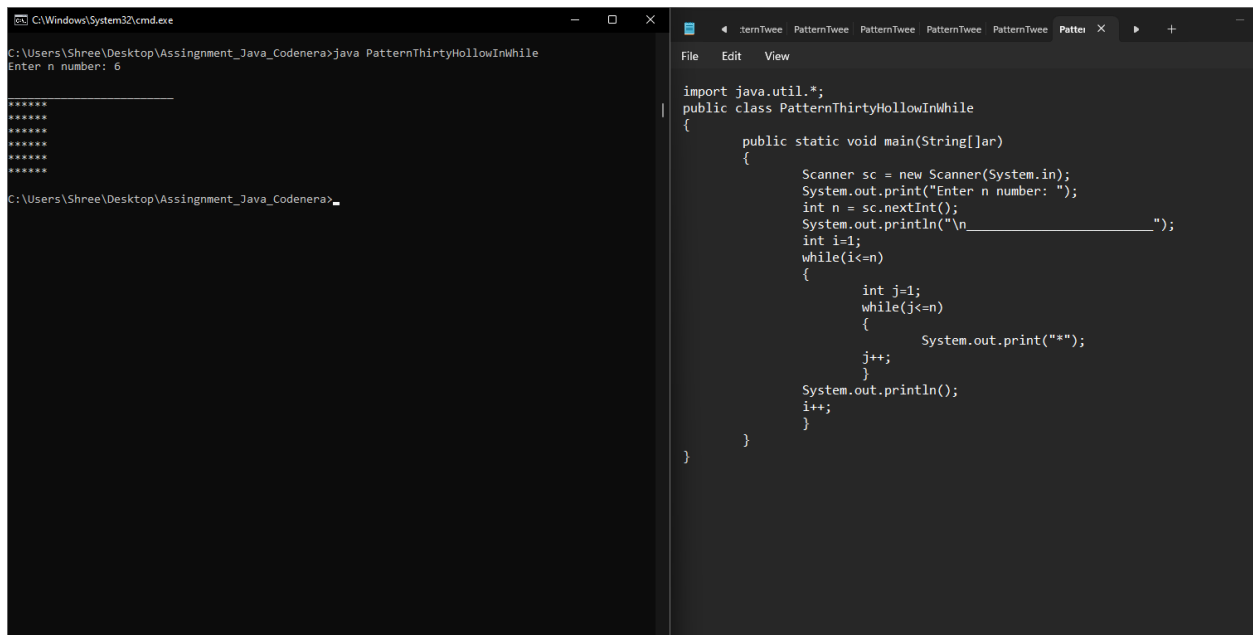
* * * * *
*       *
*      *
*     *
*    *
*   *
*  *
* *
* * * * *

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>
```

```

        }
        else
        {
            System.out.print(" ");
        }
        j--;
    }
    System.out.println();
    i++;
}
i=2;
while(i<=n)
{
    int k=n;
    while(k>=i)
    {
        System.out.print(" ");
        k--;
    }
    int j=1;
    while(j<=i)
    {
        if(j==1 || j==i || i==n)
        {
            System.out.print("* ");
        }
        else
        {
            System.out.print(" ");
        }
        j++;
    }
    System.out.println();
    i++;
}
}
```

14.

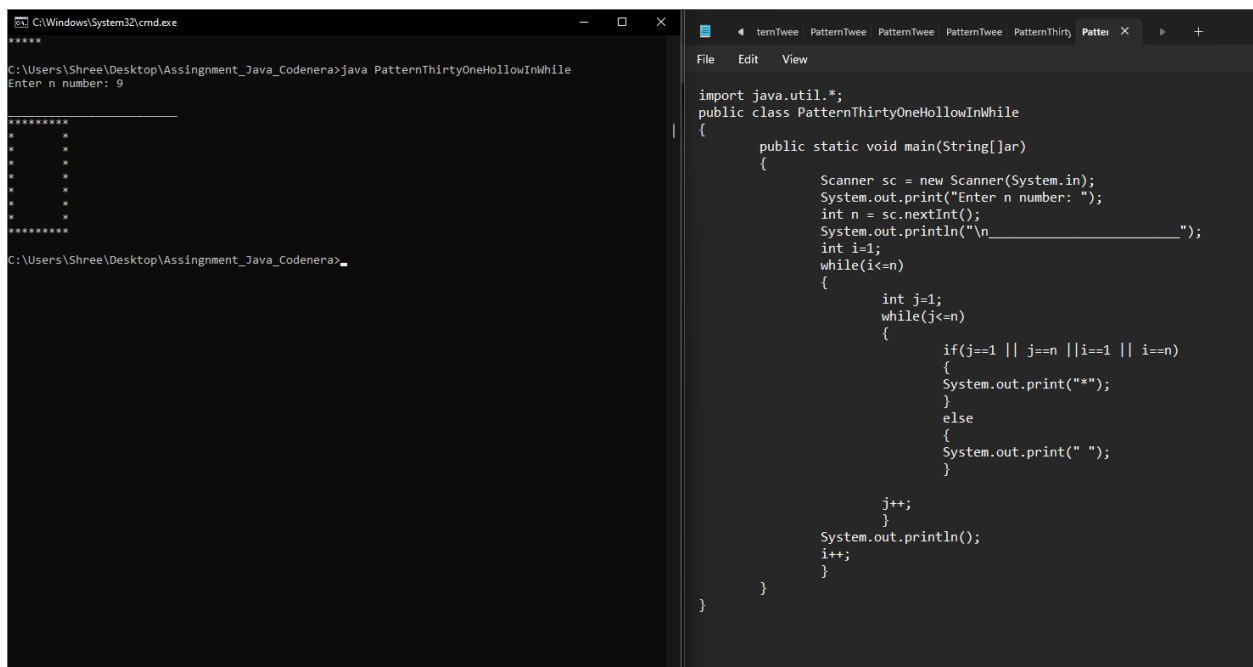


```
C:\Windows\System32\cmd.exe
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternThirtyHollowInWhile
Enter n number: 6

*****
*****
*****
*****
*****
*****
C:\Users\Shree\Desktop\Assingment_Java_Codenera>_

import java.util.*;
public class PatternThirtyHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=1;
            while(j<=n)
            {
                System.out.print("*");
                j++;
            }
            System.out.println();
            i++;
        }
    }
}
```

15.



```
C:\Windows\System32\cmd.exe
*****
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java PatternThirtyOneHollowInWhile
Enter n number: 9

*****
*  *
*  *
*  *
*  *
*  *
*  *
*  *
*  *
*  *
*****
C:\Users\Shree\Desktop\Assingment_Java_Codenera>_

import java.util.*;
public class PatternThirtyOneHollowInWhile
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter n number: ");
        int n = sc.nextInt();
        System.out.println("\n_____");
        int i=1;
        while(i<=n)
        {
            int j=1;
            while(j<=n)
            {
                if(j==1 || j==n || i==1 || i==n)
                {
                    System.out.print("*");
                }
                else
                {
                    System.out.print(" ");
                }
            }
            j++;
            System.out.println();
            i++;
        }
    }
}
```

