

## Assignment-2

1)

class Pattern1

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=9;i++)  
        {  
            for(int j=9;j>=i;j--)  
            {  
                System.out.print(" ");  
            }  
            for(int k=1;k<=i;k++)  
            {  
                System.out.print(i+" ");  
            }  
            System.out.println();  
        }  
    }  
}
```

Output:

```
E:\Assignment2>javac Pattern1.java
```

```
E:\Assignment2>java Pattern1
```

```
  1
 2 2
3 3 3
4 4 4 4
5 5 5 5 5
6 6 6 6 6 6
7 7 7 7 7 7 7
8 8 8 8 8 8 8 8
9 9 9 9 9 9 9 9 9
```

2)

class Pattern2

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=9;i++)  
        {  
            for(int j=9;j>i;j--)  
            {  
                System.out.print(" ");  
            }  
            for(int k=1;k<=i;k++)  
            {  
                System.out.print(k+" ");  
            }  
  
            System.out.println();  
        }  
    }  
}
```

Output:

```
E:\Assignment2>javac Pattern2.java  
E:\Assignment2>java Pattern2  
    1  
   1 2  
  1 2 3  
 1 2 3 4  
1 2 3 4 5  
1 2 3 4 5 6  
1 2 3 4 5 6 7  
1 2 3 4 5 6 7 8  
1 2 3 4 5 6 7 8 9
```

3)

class Pattern3

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=10;i++)  
        {  
            for(int j=10;j>=i-1;j--)  
            {  
                System.out.print(" ");  
            }  
            for(int p=2;p<=i;p++)  
            {  
                System.out.print(" * ");  
            }  
  
            System.out.println();  
        }  
    }  
}
```

Output:

```
E:\Assignment2>javac Pattern3.java
```

```
E:\Assignment2>java Pattern3
```

```

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

4)

class Pattern4

```
{  
    public static void main(String args[])  
    {  
        int n=9;  
        for(int i=1;i<=n;i++)  
        {  
            for(int j=n-1;j>=i;j--)  
            {  
                System.out.print(" ");  
            }  
            for(int k=i-1;k>=-(i-1);k--)  
            {  
                System.out.print(i-Math.abs(k));  
            }  
            System.out.println();  
        }  
    }  
}
```

Output:

```
13 31230 31231
E:\Assignment2>javac Pattern4.java
```

```
E:\Assignment2>java Pattern4
```

```
    1
   121
  12321
 1234321
123454321
12345654321
1234567654321
123456787654321
12345678987654321
```

5)

class Pattern5

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=9;i++)  
        {int p;  
        for(int j=1;j<=9;j++)  
        {if(j>=10-i)  
        System.out.print(j+" ");  
        else  
        System.out.print(" ");  
        }  
        for(int k=1;k<=8;k++)  
        {  
            if(k<i && i!=1)  
            {  
                p=9-k;  
                System.out.print(p+" ");  
                p=0;  
            }  
            else  
                System.out.print(" ");  
        }  
        System.out.println();  
    }  
}
```



Output:

```
E:\Assignment2>javac Pattern5.java
```

```
E:\Assignment2>java Pattern5
```

```

          9
        8 9 8
      7 8 9 8 7
    6 7 8 9 8 7 6
  5 6 7 8 9 8 7 6 5
4 5 6 7 8 9 8 7 6 5 4
3 4 5 6 7 8 9 8 7 6 5 4 3
2 3 4 5 6 7 8 9 8 7 6 5 4 3 2
1 2 3 4 5 6 7 8 9 8 7 6 5 4 3 2 1
```

6)

class Pattern7

```
{
    public static void main(String[] args)
    {
        int n=9;
        for(int i=n;i>=1;i--)
        {
            for(int j=n;j>=1;j--)
            {
                if(i>=j)
                {
                    System.out.print(" * ");
                }
                else
                {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

Output:

```
E:\Assignment2>javac Pattern7.java
```

```
E:\Assignment2>java Pattern7
```

[illegible]

7)

class Pattern9

```
{  
    public static void main(String args[])  
    {  
        int p_height=9;  
        for(int i=p_height;i>=1;i--)  
        {  
            for(int k=p_height-1;k>=i;k--)  
            {  
                System.out.print(" ");  
            }  
            for(int j=i;j>=1;j--)  
            {  
                System.out.print(i+" ");  
            }  
            System.out.println();  
        }  
    }  
}
```

Output:

```
E:\Assignment2>javac Pattern9.java
```

```
E:\Assignment2>java Pattern9
```

```
9 9 9 9 9 9 9 9 9
```

```
8 8 8 8 8 8 8 8
```

```
7 7 7 7 7 7 7
```

```
6 6 6 6 6 6
```

```
5 5 5 5 5
```

```
4 4 4 4
```

```
3 3 3
```

```
2 2
```

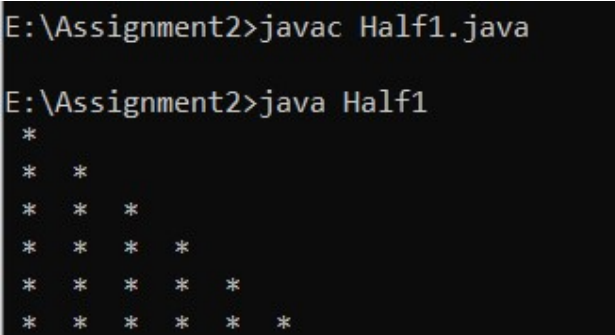
```
1
```

8)

class Half1

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=6;i++)  
        {  
            for(int j=1;j<=i;j++)  
            {  
                System.out.print(" * ");  
            }  
            System.out.println();  
        }  
    }  
}
```

Output:



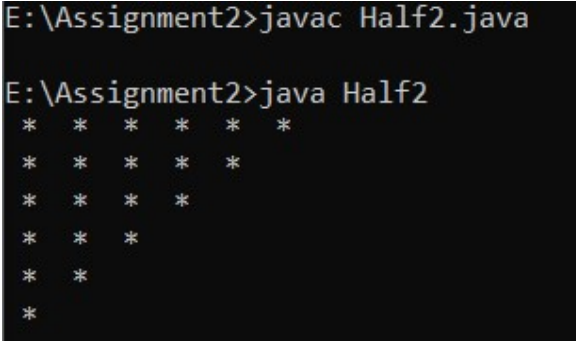
```
E:\Assignment2>javac Half1.java  
E:\Assignment2>java Half1  
 *  
*  *  
*  *  *  
*  *  *  *  
*  *  *  *  *  
*  *  *  *  *  *
```

9)

class Half2

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=6;i++)  
        {  
            for(int j=6;j>=i;j--)  
            {  
                System.out.print(" * ");  
            }  
            System.out.println();  
        }  
    }  
}
```

Output:



```
E:\Assignment2>javac Half2.java  
  
E:\Assignment2>java Half2  
* * * * *  
* * * *  
* * *  
* *  
*  
*
```

10)

```
public class Hltriangle
{
    public static void main(String[] args)
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter N : ");
        int n=sc.nextInt();
        System.out.print("Enter Symbol : ");
        char c = sc.next().charAt(0);
        int i=n;
        int j;
        while(i>0)
        {
            if(i==1 || i==n)
            {
                j=1;
                while(j <=i)
                {
                    System.out.print(c);
                    j++;
                }
            }
            else
            {
                j=1;
                while(j<=i)
                {
                    if(j==1 || j==i)
                        System.out.print(c);
                    else
                        System.out.print(" ");
                    j++;
                }
            }
            System.out.println();
            i--;
        }
    }
}
```

Output:



```
E:\Assignment2>javac Half3.java
```

```
E:\Assignment2>java Half3
```

```
Enter N :
```

```
6
```

```
Enter Symbol : *
```

```
*****
```

```
*      *
```

```
*      *
```

```
*      *
```

```
***
```

```
*
```

11)

class Full1

```
{  
    public static void main(String args[])  
    {  
        for(int i=1;i<=6;i++)  
        {  
            for(int j=6;j>=i;j--)  
            {  
                System.out.print(" ");  
            }  
            for(int k=1;k<=i;k++)  
            {  
                System.out.print(" * ");  
            }  
            for(int m=2;m<=1;m++)  
            {  
                System.out.print(" * ");  
            }  
            System.out.println();  
        }  
    }  
}
```

Output:

```
E:\Assignment2>javac Full1.java
```

```
E:\Assignment2>java Full1
```

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

12)

```
import java.util.Scanner;

public class Full2
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the number of rows: ");

        int rows = sc.nextInt();
        for (int i= 0; i<= rows-1 ; i++)
        {
            for (int j=0; j<=i; j++)
            {
                System.out.print(" ");
            }
            for (int k=0; k<=rows-1-i; k++)
            {
                System.out.print(" * " + " ");
            }
            System.out.println();
        }
        sc.close();

    }
}
```

Output:

```
E:\Assignment2>javac Full2.java
```

```
E:\Assignment2>java Full2
```

```
Enter the number of rows:
```

```
6
```

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

13)

```
import java.util.Scanner;

class Full3
{
    public static void main (String args[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter the rows: ");
        int rows=sc.nextInt();
        System.out.print("Enter the symbol: ");
        char ch=sc.next().charAt(0);
        for(int i=1; i<=rows; i++)
        {
            for(int j=i; j<=rows; j++)
            {
                System.out.print(" ");
            }
            for(int j=1; j<=(2*i-1); j++)
            {
                if(i==rows || j==1 || j==(2*i-1))
                {
                    System.out.print(ch);
                }
                else
                {
                    System.out.print(" ");
                }
            }
        }
        System.out.println(" ");
    }
}
```

```
}  
}  
}
```

Output:

```
E:\Assignment2>java Full3  
Enter the rows: 6  
Enter the symbol: *  
  *  
 * *  
*   *  
 *   *  
*     *  
 *     *  
*       *  
*****
```