

Assignment No:-11

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Batch: - Delta - DCA (Java) 2024 Date:-16/5/2024

1.

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

```

import java.util.*;
public class DimondPatternUsingWhileAndFor
{
    public static void main(String[] ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        for(int i=1;i<=n;i++)
        {
            for(int k=5;k>=i;k--)
            {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++)
            {
                System.out.print("* ");
            }
            System.out.println();
        }
        for(int i=n-1;i>=1;i--)
        {
            for(int k=n;k>=i;k--)
            {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++)
            {
                System.out.print("* ");
            }
            System.out.println();
        }
        System.out.println("_____");

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {

```

```

        int k=5;
        while(k>=i)
        {
            System.out.print(" ");
            k--;
        }

        int j=1;
        while(j<=i)
        {
            System.out.print("* ");
            j++;
        }
        System.out.println();
    i++;
}
i=n-1;
while(i>=1)
{
    int k=n1;
    while(k>=i)
    {
        System.out.print(" ");
        k--;
    }

    int j=1;
    while(j<=i)
    {
        System.out.print("* ");
        j++;
    }
    System.out.println();
    i--;
}

}

```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac DimondPatternUsingWhileAndFor.java
```

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

```
Enter n number :
```

```
5
```

```
Using for loop
```

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

```
Enter n number :
```

```
5
```

```
Using while loop
```

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

2.

*

* *

* * *

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* *

*

```

import java.util.*;
public class HorizontalTrianglePatternUsingWhileAndFor
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        for(int i=1;i<=n;i++)
        {
            for(int k=5;k>=i;k--)
            {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
        for(int i=n-1;i>=1;i--)
        {
            for(int k=n;k>=i;k--)
            {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
        System.out.println("_____");

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {

```

```

        int k=5;
        while(k>=i)
        {
            System.out.print(" ");
            k--;
        }

        int j=1;
        while(j<=i)
        {
            System.out.print("*");
            j++;
        }
        System.out.println();
    i++;
}
i=n-1;
while(i>=1)
{
    int k=n1;
    while(k>=i)
    {
        System.out.print(" ");
        k--;
    }

    int j=1;
    while(j<=i)
    {
        System.out.print("*");
        j++;
    }
    System.out.println();
    i--;
}

}
}

```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac HorizontalTrianglePatternUsingWhileAndFor.java
```

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

```
Enter n number :
```

```
5
```

```
Using for loop
```

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

```
Enter n number :
```

```
5
```

```
Using while loop
```

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


3.

*

* *

* * *

* * * *

* * * * *

```

import java.util.*;
public class NintyDegreeTrianglePatternUsingWhileAndFor
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        for(int i=1;i<=n;i++)
        {
            for(int k=5;k>=i;k--)
            {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
        System.out.println("_____");

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {
            int k=5;
            while(k>=i)
            {
                System.out.print(" ");
                k--;
            }

            int j=1;
            while(j<=i)
            {
                System.out.print("*");
                j++;
            }
            j++;
            System.out.println();
            i++;
        }
    }
}

```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac NintyDegreeTrianglePatternUsingWhileAndFor.java
```

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

```
Enter n number :
```

```
5
```

```
Using for loop
```

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

```
Enter n number :
```

```
5
```

```
Using while loop
```

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

4.

*

* *

* * *

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* * * * *

* * * *

* * *

* *

*

```

import java.util.*;
public class VerticallyTrianglePatternUsingWhileAndFor
{
    public static void main(String[] ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        for(int i=1;i<=n;i++)
        {
            for(int j=1;j<=i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
        for(int i=n-1;i>=1;i--)
        {
            for(int j=1;j<=i;j++)
            {
                System.out.print("*");
            }
            System.out.println();
        }
        System.out.println("_____");

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {
            int j=1;
            while(j<=i)
            {
                System.out.print("*");
            }
            j++;
        }
        System.out.println();
        i++;
    }
}

```

```

    }
    i=n1-1;
    while(i>=1)
    {
        int j=1;
        while(j<=i)
        {
            System.out.print("*");

            j++;
        }
        System.out.println();

        i--;
    }
}

```

Output:

```

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac VerticallyTrianglePatternUsingWhileAndFor.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java VerticallyTrianglePatternUsingWhileAndFor
Enter n number :
5
Using for loop
*
**
***
****
*****
****
***
**
*

Enter n number :
5
Using while loop
*
**
***
****
*****
****
***
**
*

```

5.

1

2 1

3 2 1

4 3 2 1

5 4 3 2 1

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

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {
            int j=i;
            while(j>=1)
            {
                System.out.print(j+" ");
                j--;
            }
            System.out.println();
            i++;
        }
    }
}
```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac NumPatternUsingWhileAndFor.java

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java NumPatternUsingWhileAndFor
Enter n number :
5
Using for loop
1
2 1
3 2 1
4 3 2 1
5 4 3 2 1

Enter n number :
5
Using while loop
1
2 1
3 2 1
4 3 2 1
5 4 3 2 1
```


6.

1

2 3

3 4 5

4 5 6 7

5 6 7 8 9

```

import java.util.*;
public class QSixNumPatternUsingWhileAndFor
{
    public static void main(String[]ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        int c=1;
        for(int i=1;i<=n;i++)
        {
            c=i;
            for(int j=1;j<=i;j++)
            {
                System.out.print(c+" ");
                c++;
            }
            System.out.println();
        }
        System.out.println("_____");

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1,s=1;
        while(i<=n1)
        {
            s=i;
            int j=1;
            while(j<=i)
            {
                System.out.print(s+" ");
                s++;
            }
            j++;
            System.out.println();
            i++;
        }
    }
}

```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java QSixNumPatternUsingWhileAndFor
Enter n number :
5
Using for loop
1
2 3
3 4 5
4 5 6 7
5 6 7 8 9

Enter n number :
5
Using while loop
1
2 3
3 4 5
4 5 6 7
5 6 7 8 9
```

7.

1 2 3 4 5

2 3 4 5

3 4 5

4 5

5

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

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {
            int j=i;
            while(j<=n1)
            {
                System.out.print(j+" ");
                j++;
            }
            System.out.println();
            i++;
        }
    }
}
```

Output:

```
C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac QSevenNumPatternUsingWhileAndFor.java

C:\Users\Shree\Desktop\Assingment_Java_Codenera>java QSevenNumPatternUsingWhileAndFor
Enter n number :
5
Using for loop
1 2 3 4 5
2 3 4 5
3 4 5
4 5
5

Enter n number :
5
Using while loop
1 2 3 4 5
2 3 4 5
3 4 5
4 5
5
```

8.

1

1 2 3

1 2 3 4 5

1 2 3 4 5 6 7

1 2 3 4 5 6 7 8 9

```

import java.util.*;
public class QEightNumPatternUsingWhileAndFor
{
    public static void main(String[] ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        for(int i=1;i<=5;i++)
        {
            for(int j=1;j<=n;j++)
            {
                if(i==1 && j==1)
                {
                    System.out.print(j+" ");
                }
                else if(i==2 && j>=1 && j<=3)
                {
                    System.out.print(j+" ");
                }
                else if(i==3 && j>=1 && j<=5)
                {
                    System.out.print(j+" ");
                }
                else if(i==4 && j>=1 && j<=7)
                {
                    System.out.print(j+" ");
                }
                else if(i==5 && j>=1 && j<=9)
                {
                    System.out.print(j+" ");
                }
            }
            System.out.println();
        }
        System.out.println("_____");

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
    }
}

```

```

        System.out.println("Using while loop");
        int i=1;
        while(i<=5)
        {
            int j=1;
            while(j<=n1)
            {
                if(i==1 && j==1)
                {
                    System.out.print(j+" ");
                }
                else if(i==2 && j>=1 && j<=3)
                {
                    System.out.print(j+" ");
                }
                else if(i==3 && j>=1 && j<=5)
                {
                    System.out.print(j+" ");
                }
                else if(i==4 && j>=1 && j<=7)
                {
                    System.out.print(j+" ");
                }
                else if(i==5 && j>=1 && j<=9)
                {
                    System.out.print(j+" ");
                }
                j++;
            }
            System.out.println();
            i++;
        }
    }
}

```

Output:

```

C:\Users\Shree\Desktop\Assingment_Java_Codenera>javac QEightNumPatternUsingWhileAndFor.java
C:\Users\Shree\Desktop\Assingment_Java_Codenera>java QEightNumPatternUsingWhileAndFor
Enter n number :
9
Using for loop
1
1 2 3
1 2 3 4 5
1 2 3 4 5 6 7
1 2 3 4 5 6 7 8 9

Enter n number :
9
Using while loop
1
1 2 3
1 2 3 4 5
1 2 3 4 5 6 7
1 2 3 4 5 6 7 8 9

```


9.

2 2

3 3 3

4 4 4 4

5 5 5 5 5

```

import java.util.*;
public class QNineNumPatternUsingWhileAndFor
{
    public static void main(String[] ar)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter n number :");
        int n = sc.nextInt();
        System.out.println("Using for loop");
        int c=2,c1=3,c2=4,c3=5;
        for(int i=1;i<=5;i++)
        {
            for(int j=1;j<=n;j++)
            {
                if(i==1 && j>=4 && j<=5)
                {
                    System.out.print(" "+c);
                }
                else if(i==2 && j>=3 && j<=5)
                {
                    System.out.print(" "+c1);
                }
                else if(i==3 && j>=2 && j<=5)
                {
                    System.out.print(c2+" ");
                }
                else if(i==4 && j>=1 && j<=5)
                {
                    System.out.print(c3+" ");
                }
                else
                {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
        System.out.println("_____");
    }
}

```

```

System.out.println("Enter n number :");
int n1 = sc.nextInt();
System.out.println("Using while loop");
int i=1;
int a=2,a1=3,a2=4,a3=5;
while(i<=5)
{
    int j=1;
    while(j<=n1)
    {
        if(i==1 && j>=4 && j<=5)
        {
            System.out.print(" "+a);
        }
        else if(i==2 && j>=3 && j<=5)
        {
            System.out.print(" "+a1);
        }
        else if(i==3 && j>=2 && j<=5)
        {
            System.out.print(a2+" ");
        }
        else if(i==4 && j>=1 && j<=5)
        {
            System.out.print(a3+" ");
        }
        else
        {
            System.out.print(" ");
        }
        j++;
    }
    System.out.println();
    i++;
}
}

```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac QNineNumPatternUsingWhileAndFor.java
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java QNineNumPatternUsingWhileAndFor
Enter n number :
9
Using for loop
  2 2
 3 3 3
4 4 4 4
5 5 5 5 5

Enter n number :
9
Using while loop
  2 2
 3 3 3
4 4 4 4
5 5 5 5 5
```

10.

1 1 1 1 1

2 2 2 2

3 3 3

4 4

5

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

        System.out.println("Enter n number :");
        int n1 = sc.nextInt();
        System.out.println("Using while loop");
        int i=1;
        while(i<=n1)
        {
            int j=i;
            while(j<=n1)
            {
                System.out.print(i+" ");
            }
            j++;
        }
        System.out.println();
        i++;
    }
}
```

Output:

```
C:\Users\Shree\Desktop\Assingnment_Java_Codenera>javac QTenNumPatternUsingWhileAndFor.java

C:\Users\Shree\Desktop\Assingnment_Java_Codenera>java QTenNumPatternUsingWhileAndFor
Enter n number :
5
Using for loop
1 1 1 1 1
2 2 2 2
3 3 3
4 4
5

Enter n number :
5
Using while loop
1 1 1 1 1
2 2 2 2
3 3 3
4 4
5
```