

# Q1. What a Program(WAP) to print Alphabets A,B,C,D,E,F,G,H using pattern programming logic?

```
Ans public class assignmentQ1 {

    public static void main(String[] args) {
        int n = 5;
        for(int i =0; i<n; i++) {
            for(int j =0; j<n; j++) {
                if ( i==0 && j>0 && j<(n-1) || j==0 && i>0 || i==(n-1)/2 && j<=(n-1) || j==(n-1) &&
i>0) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.print(" ");
            for(int j=0; j < n; j++) {
                if(i==0 && j<(n-1) || j==0 || i==(n-1)/2 && j<(n-1) || i==(n-1) && j<(n-1) || j==(n-1) && i != 0 && i
!=(n-1)/2 && i!=(n-1) ) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.print(" ");
            for (int j=0; j<n; j++) {
                if (i==0 && j!=0 || j==0 && i!=0 && i!=n-1 || i==(n-1) && j!=0) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }

            System.out.print(" ");
            for (int j = 0; j < n; j++) {
                if (i==0 && j<(n-1) || j==0 || j==(n-1) && i>0 && i<(n-1)|| i==n-1 && j<(n-1)) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.print(" ");
            for(int j =0; j<n; j++) {
                if ( i==0 || j==0 || i==n-1 || i==(n-1)/2 ) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.print(" ");
            for(int j =0; j<n; j++) {
                if ( i==0 || j==0 || i==(n-1)/2 && j<(n)/2 ) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.print(" ");
            for (int j=0; j<n; j++) {
                if (i==0 && j!=0 || j==0 && i!=0 && i!=n-1 || i==(n-1) && j!=0 || j==(n-1) && i>(n)/2 || i==(n-1)/2 &&
j> (n-1)/2 ) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.print(" ");
        }
    }
}
```

```

        for(int j=0; j<n; j++) {

            if (j==0 || j== n-1 || i== (n-1)/2) {
                System.out.print("*");

            }
            else {
                System.out.print(" ");
            }
        }

        System.out.println(); }

    }
}

```

#### Output:-

```

PS D:\desktop\java pw> cd "d:\desktop\java pw\" ; if ($?) { javac assignmentQ1.java } ; if ($?)
{ java assignmentQ1 }
***      ****      ****      *****      ****      *      *
*      *      *      *      *      *      *      *      *      *
*****      ****      *      *      *      *****      **      *      **      *****
*      *      *      *      *      *      *      *      *      *      *
*      *      ****      ****      ****      *****      *      ****      *      *

```

### Q2. Write a program to print triangle using star pattern programming logic ?

Ans. `public class assignmentQ2 {`

```

    public static void main(String[] args) {
        int n=11;
        for (int i=0; i<n; i++) {
            for(int j=0; j<n; j++) {
                if (i+j==(n-1)/2 || j-i==(n-1)/2 || i==(n-1)/2) {
                    System.out.print("*");

                }
                else {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}

```

#### Output:-

```

PS D:\desktop\java pw> cd "d:\desktop\java pw\" ; if ($?) { javac assignmentQ2.java } ; if ($?)
{ java assignmentQ2 }
      *
     * *
    *  *
   *   *
  *    *
 *     *
*****

```

### Q3. WAP to print?

Ans. `public class complaxPettren2 {`

```

    public static void main(String[] args) {
        int n = 14;
        for (int i = 0; i < n; i++) {
            for (int j = 0; j < n; j++) {
                if (i+j<=(n-1)/2|| j-i>=(n-1)/2 || i==0 ||j==0 || i==(n-1) || j==(n-1)) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
        }
    }
}

```

```

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

```

Output:-

```

PS D:\desktop\java pw> cd "d:\desktop\java pw\" ; if ($?) { javac
complaxPettren2.java } ; if ($?) { java complaxPettren2 }

```

```

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

```

**Q4. Write a Program to print PW SKILLS using pattern programming logic?**

**Ans.** `public class assignmentQ4 {`

```

    public static void main(String[] args) {
        int n=5;
        for (int i=0; i<n; i++) {
            for(int j=0; j<n; j++) {
                if(i==0 && j<(n-1) || j==0 || j==(n-1) && i>0 && i<(n-1)/2 || i==(n-1)/2 && j<(n-1)){
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }

            for (int j = 0; j < n; j++) {
                if (j==0 || j==(n-1) || i==j && i > (n-1)/2 || i==(n-1)/2 && j==(n-1)/2 || i==n-2 && j!=(n-1)/2)
            {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");

        for (int j = 0; j < n; j++) {
            if (i==0 && j!=0 || j==0 && i>0 && i< (n-1)/2 || i==(n-1)/2 && j!=0 && j< (n-1) || j==(n-1) &&
            i>(n-1)/2 && i!=(n-1) || i==(n-1) && j<(n-1)) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }

        System.out.print(" ");
        for(int j =0; j<n; j++) {
            if ( i==0 || j==(n-1)/2 || i==n-1 ) {

```

```

        System.out.print("*");
    }
    else {
        System.out.print(" ");
    }
}
System.out.print(" ");
for (int j=0; j<n; j++) {
    if (j==0 || i+j==(n-1)/2 || i-j==(n-1)/2) {
        System.out.print("*");
    }
    else {
        System.out.print(" ");
    }
}
System.out.print(" ");
for (int j=0; j<n; j++) {
    if (i==(n-1) || j==0) {System.out.print("*");
    }
    else {System.out.print(" ");
    }
}
System.out.print(" ");
for (int j=0; j<n; j++) {
    if (i==(n-1) || j==0) {System.out.print("*");
    }
    else {System.out.print(" ");
    }
}
System.out.print(" ");
for (int j = 0; j <n; j++) {
    if (i==0 && j!=0 || j==0 && i>0 && i< (n-1)/2 || i==(n-1)/2 && j!=0 && j< (n-1) || j==(n-1)
&& i>(n-1)/2 && i!=(n-1) || i==(n-1) && j<(n-1)) {
        System.out.print("*");
    }
    else {
        System.out.print(" ");
    }
}

System.out.println();
}
}
}

```

Output :-

```

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

```

**Q5. Write your full name using pattern logic?**

**Ans.**

```

public class assignmentQ5 {
    public static void main(String[] args) {
        int n=5;
        for(int i=0; i<n; i++) {
            for(int j=0; j<n; j++) {
                if (i-j==(n-1)/2 || i+j ==(n-1)+(n-1)/2) {
                    System.out.print("*");
                }
                else {
                    System.out.print(" ");
                }
            }
        }
    }
}

```

```

        System.out.print(" ");
        for(int j =0; j<n; j++) {
            if ( i==0 || j==(n-1)/2 || i==n-1 ) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");
        for(int j=0; j<n; j++) {
            if ( i-j==(n-1)/2 || i+j ==(n-1)+(n-1)/2 ) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");
        for(int j =0; j<n; j++) {
            if ( i==0 || j==0 || i==n-1 || i==(n-1)/2 ) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");
        for (int j=0; j<n; j++) {
            if ( j==0 || i+j==(n-1)/2 || i-j==(n-1)/2 ) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");
        for (int j = 0; j <n; j++) {
            if ( i==0 && j!=0 || j==0 && i>0 && i<= (n-1)/2 || i==(n-1)/2 && j!=0 && j< (n-1) || j==(n-1) &&
i>(n-1)/2 && i!=(n-1) || i==(n-1) && j<(n-1)) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");
        for(int j=0; j<n; j++) {

            if (j==0 || j== n-1 || i== (n-1)/2) {
                System.out.print("*");
            }

            else {
                System.out.print(" ");
            }
        }
        System.out.print(" ");
        for(int j =0; j<n; j++) {
            if ( i==0 && j>0 && j<(n-1)/2 || j==0 && i>0 || i==(n-1)/2 && j<=(n-1)/2 || j==(n-1)/2 && i>0) {
                System.out.print("*");
            }
            else {
                System.out.print(" ");
            }
        }
    }
    System.out.print(" ");for(int j=0; j < n; j++) {
        if(i==0 && j<(n-1) || j==0 || i==(n-1)/2 && j<(n-1) && j<=(n-1) || j==(n-1) && i != 0 && i !=(n-1)/2
&& i<=(n-1) ) {
            System.out.print("*");
        }
        else {
            System.out.print(" ");
        }
    }
}

```

```

System.out.print(" ");
for (int j=0; j<n; j++) {
    if (j==0 || j==n-1 || i==j && i < n-2 || i+j==n-1 && i < n-2) {
        System.out.print("*");
    }
    else {
        System.out.print(" ");
    }
}
System.out.print(" ");
for (int j =0; j<n; j++) {
    if ( i==0 && j>0 && j<(n-1)/2 || j==0 && i>0 || i==(n-1)/2 && j<=(n-1)/2 || j==(n-1)/2 && i>0) {
        System.out.print("*");
    }
    else {
        System.out.print(" ");
    }
}
System.out.println();
}
}
}

```

Output :-

```

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

```