PATTEN PROGRAM

1) Star patten
2) Number patten
3) Alphabet patten

RULES

1) How many row
2) How many col in particular row
3) What to print

```java
import java.util.Scanner;
class patten2{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        int count=1;
        for(int i=1;i<=num;i++){
            for(int j=1;j<=i;j++){
                System.out.print(count+" ");
                count++;
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
4
1
2 3
4 5 6
7 8 9 10
```

```java
1   import java.util.Scanner;
2   class patten1{
        Run main | Debug main
3       public static void main(String[] args) {
4           Scanner sc=new Scanner(System.in);
5           int no=sc.nextInt();
6
7           for(int i=1;i<=no;i++){
8               for(int j=1;j<=i;j++){
9                   System.out.print(j+" ");
10              }
11              System.out.print("\n");
12          }
13          for(int i=no;i>0;i--){
14              for(int j=1;j<=i;j++){
15                  System.out.print(j+" ");
16              }
17              System.out.print("\n");
18          }
19      }
20  }
```

Output

```
5
1
1 2
1 2 3
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

```java
import java.util.Scanner;
class patten1{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int no=sc.nextInt();
        for(int i=no;i>0;i--){
            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }

        for(int i=1;i<=no;i++){
            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }

    }
}
```

Output

```
PS E:\BEA032> java patten1
5
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
PS E:\BEA032>
```

```java
import java.util.Scanner;
class patten2{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        int count=1;
        for(int i=1;i<=num;i++){
            for(int j=1;j<=i;j++){
                System.out.print(count+" ");
                count++;
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
PS E:\BEA032> java patten2
5
1
2 3
4 5 6
7 8 9 10
11 12 13 14 15
PS E:\BEA032>
```

```java
import java.util.Scanner;
class prymid{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        for(int i=1;i<=num;i++){
            for (int j = 1; j <= num - i; j++) {
                System.out.print(" ");
            }

            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
PS E:\BEA032> java prymid
5
    1
   1 2
  1 2 3
 1 2 3 4
1 2 3 4 5
PS E:\BEA032>
```

```java
import java.util.Scanner;
class prymid{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        for(int i=1;i<=num;i++){
            for (int j = 1; j <= num - i; j++) {
                System.out.print(" ");
            }

            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
        for(int i=num;i>0;i--){
            for (int j = 1; j <= num - i; j++) {
                System.out.print(" ");
            }

            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
    1
   1 2
  1 2 3
 1 2 3 4
1 2 3 4 5
1 2 3 4 5
 1 2 3 4
  1 2 3
   1 2
    1
```

```java
import java.util.Scanner;
class prymid{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
          for(int i=num;i>0;i--){
              for (int j = 1; j <= num - i; j++) {
                  System.out.print(" ");
              }

            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
            for(int i=1;i<=num;i++){
                for (int j = 1; j <= num - i; j++) {
                    System.out.print(" ");
                }

            for(int j=1;j<=i;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
```

Output

```
5
1 2 3 4 5
 1 2 3 4
  1 2 3
   1 2
    1
    1
   1 2
  1 2 3
 1 2 3 4
1 2 3 4 5
```

```java
import java.util.Scanner;
class pattenshift{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        for(int i=1;i<=num;i++){
            for(int j=i;j<=num;j++){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
PS E:\BEA032> java pattenshift
5
1 2 3 4 5
2 3 4 5
3 4 5
4 5
5
```

```java
import java.util.Scanner;
class pattenshift{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        for(int i=num;i>=1;i--){
            for(int j=i;j>=1;j--){
                System.out.print(j+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
PS E:\BEA032> java pattenshift
7
7 6 5 4 3 2 1
6 5 4 3 2 1
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```

```java
import java.util.Scanner;
class pattenshift{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        for(int i=num;i>=1;i--){
            for(int j=num;j>=i;j--){
                System.out.print(i+" ");
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
5
5
4 4
3 3 3
2 2 2 2
1 1 1 1 1
```

```java
J pattenshift.java > ...
1    import java.util.Scanner;
2    class pattenshift{
     Run main | Debug main
3        public static void main(String[] args) {
4            Scanner sc=new Scanner(System.in);
5            int num=sc.nextInt();
6            for(int i=num;i>=1;i--){
7                for(int j=i;j>=1;j--){
8                    System.out.print(i+" ");
9                }
10               System.out.print("\n");
11           }
12       }
13   }
14
```

Output

```
PS E:\BEA032> java pattenshift
5
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
```

```
J pattenshift.java > ⚙ pattenshift > ⓨ main(String[] args)
 1     import java.util.Scanner;
 2     class pattenshift{
           Run main | Debug main
 3         public static void main(String[] args) {
 4             Scanner sc=new Scanner(System.in);
 5             int num=sc.nextInt();
 6             for(int i=1;i<=num;i++){
 7                 for(int j=num;j>=i;j--){
 8                     System.out.print(i+" ");
 9                 }
10                 System.out.print("\n");
11             }
12         }
13     }
14
```

Output

```
PS E:\BEA032> java pattenshift
5
1 1 1 1 1
2 2 2 2
3 3 3
4 4
5
```

```
J pattenshift.java > pattenshift > main(String[] args)
1    import java.util.Scanner;
2    class pattenshift{
         Run main | Debug main
3        public static void main(String[] args) {
4            Scanner sc=new Scanner(System.in);
5            int num=sc.nextInt();
6            for(int i=num;i>=1;i-=2){
7                for(int j=1;j<=i;j++){
8                    System.out.print(j+" ");
9                }
10               System.out.print("\n");
11           }
12       }
13   }
14
```

Output

```
PS E:\BEA032> java pattenshift
7
1 2 3 4 5 6 7
1 2 3 4 5
1 2 3
1
```

```java
import java.util.Scanner;
class pattenshift{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int num=sc.nextInt();
        for(int i=1;i<=num;i++){
            for(int j=1;j<=num;j++){
                if(i==1||j==1||i==num||j==num){
                    System.out.print("* ");//single Space
                }
                else{
                    System.out.print("  ");//Double Spacesss
                }
            }
            System.out.print("\n");
        }
    }
}
```
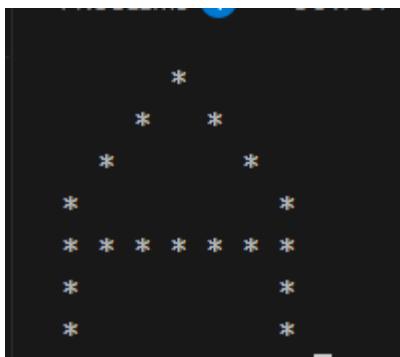
Output

```
PS E:\BEA032> java pattenshift
7
* * * * * * *
*           *
*           *
*           *
*           *
*           *
* * * * * * *
```

```java
pattenshift.java > pattenshift > main(String[] args)
1    import java.util.Scanner;
2    class pattenshift{
         Run main | Debug main
3        public static void main(String[] args) {
4            Scanner sc=new Scanner(System.in);
5            int num=sc.nextInt();
6            int mid=(num+1)/2;
7            for(int i=1;i<=num;i++){
8                for(int j=1;j<=num;j++){
9                    if(i<=mid&&Math.abs(j-mid)==i-1||i==mid+1||(i>mid+1&&(j==1||j==num))){
10                       System.out.print("* ");//single Space
11                   }
12                   else{
13                       System.out.print("  ");//Double Spacesss
14                   }
15               }
16               System.out.print("\n");
17           }
18       }
19   }
```

OutPut

```java
import java.util.Scanner;
class patten3{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int no=sc.nextInt();
        int count=65;
        for(int i=1;i<=no;i++){
            for(int j=1;j<=i;j++){
                System.out.print((char)count+" ");
                count++;
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
PS E:\BEA032> java patten3
5
A
B C
D E F
G H I J
K L M N O
```

```java
import java.util.Scanner;
class patten3{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int no=sc.nextInt();
        int count=65;
        for(int i=1;i<=no;i++){
            for (int j = 1; j <= no - i; j++) {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++){
                System.out.print((char)count+" ");
            }

            System.out.print("\n");
            count++;
        }
    }
}
```

Output

```
PS E:\BEA032> java patten3
5
    A
   B B
  C C C
 D D D D
E E E E E
```

```java
import java.util.Scanner;
class patten3{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int no=sc.nextInt();
        int count;
        for(int i=1;i<=no;i++){
            count=65;
            for (int j = 1; j <= no - i; j++) {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++){                  int count
                System.out.print((char)count+" ");
                count++;
            }
            System.out.print("\n");
        }

    }
}
```

Output

```
PS E:\BEA032> java patten3
5
    A
   A B
  A B C
 A B C D
A B C D E
PS E:\BEA032>
```

```java
import java.util.Scanner;
class patten3{
    Run main | Debug main
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
        int no=sc.nextInt();
        int count;
        for(int i=no;i>=0;i--){
            count=65;
            for (int j = 1; j <= no - i; j++) {
                System.out.print(" ");
            }
            for(int j=1;j<=i;j++){
                System.out.print((char)count+" ");
                count++;
            }
            System.out.print("\n");
        }
    }
}
```

Output

```
PS E:\BEA032> java patten3
5
A B C D E
 A B C D
  A B C
   A B
    A
```