}

find the Factorial of n;

```
import. Java. util scanner;
public class Factorial {
  Public static void main (string [] args) {
    Int n = new scanner (system. in). nextInt(), fact=1;
    for (int i=1; i<=n; i++) fact *= i;
    system. out. Print (" Factorial of " +n+ ' is " + fact);
  }
}
```

Input : 6
output: Factorial of 6 is 720

2) write a Program to print the below pattern.

```
Import java. util. scanner;
Public class number pattern {
 Public static void main (string [] args) {
 int n = new scanner (system. in). nextint(), k=1;
 for (int i=1; i<=n; i++) {
 for (int j=1; j<i, j++) {
  System. out. Print (k* k + " ");
  k++;
 }
 System out. println();
                                   }
                                 }
                               }
```

Input : 4

Out put

```
1
4 9
16 25 36
49 64 81 100
```

33. Write a program to find the number of Composite numbers in an array of elements.

```
public class Composite number {
public static void main( string[] args) {
Int [] arr. = {16, 18, 27, 16, 23, 21, 19};

Int Count = 0 ;

for (int num ; arr) if (is Composite (num)) cont-
System. out. printin ("number of Composit
                          numbers =" + count);

}
Public static boolean is Composite (int num) {
if (num <=1) return false;
for (int i=2, i <= math. sqrt (num); i++ if (num%
                                  i==0) return true;
 return false.
 }
```

```
    }
  }
```

out put:

number of composite numbers = 5.

34. Find the nth odd number after n odd number

```
import java. util. Scanner;
public class Find Nth oddnumber {
    public static void main (String[] args) {
        int n= new Scanner (system.in): nextInt();
        int result = n* 4-1;
        System. out. println( n+ "th odd number after
                       "+n+" odd nums = "+reult);
    }
}
```

Input: 4

Out put: 4th odd num after 4odd nums =15

35. write a program that finds whether a given Character is present in a string or not. In case it is present it print the index at which it is present. Do not use built in find functions to search the character.

```
Import. Java. util. Scanner;

Public class find character instring {

public static void main (string []arg) {

Scanner input = new Scanner (System.in);
system.out. print ("Enter string: ");
String str = input. next line ()
System.out. print ("Enter char to search: ")
Char c = input. next () , char At(0);
int index = -1

for (int i=0; i< str. length (); i++){
If (str. Char At (i) ==c) {
Index = i;
break;
}
}.
if (index >= 0) {
system. out. printin ( c+" found in index
                                  +index);
} else {
system.out printin {"Char not found");
}
} }
```

```
Input  Enter string: I am a programmer
       Enter char to search: p

output : p found in index : 7
```

36) write a program to print the below pattern.

```
import java. util. Scanner;
public class number pattern {
  public static void main (string[] args) {
   Scanner input = new Scanner ( system . in);
   int n= input. next int();
   for (int i=1; i<=2 * n-1; i++) {
     int (num = i <= n ? i : 2 * n - i ;
     for (int j =1; j <=num; j++) {
     System. out. print (num +" ");

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

―

input : 4

output:

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

7. Program to find whether the given number is Armstrong number or not

```
import Java.util. scanner;
Public Class Armstrong number {
public static void main (string[] args)
Scanner input = new Scanner(system.in
int n= input. next Int ();
int arm =0, num=n;
while (num>o) {
```

```
int. digit =num% 10;

arm + = digit * digit * digit

num /= 10

}
if (n == arm) {
System. out. printin("Armstrong number");
} else {
System.out printin ("not Armstrong");
 }
}
}
```

Input: 153, out put: Armstrong number

38) write a program to arrange the Letters of the word alphabetically in reverse order

```
import Java , util, Scanner

import java . util, Arrays;
```

```
Public class Reverse Alphabetical. order {
 public static void main (string []args) {

   Scanners input = new Scanner(System.in);
   Char [] arr = input. nextline (). to charArray()
   Array. Sort (arr);
  for (int i = arr. Length -1; i>o, i--) {
   System. out print (arr[i] + " ");
 }
 }
}
```

Input : MOSQUE

out put : USQOME

39, write a program that accepts a string from user and displays the same string after remoring vowels from it.

```
Import Java . util. Scanner;
 public class Remove vowels {
  public static void main (string [] arg ){
```

```
Scanner input = new Scanner( System.in);

String result = input. nextLine(). replace All("
                              [aeiou AEiou]", "");

System.out. println(" String without vowels; "+result)

  }

}
```

Input: we can play the game.

Output: String without vowels: wcn ply th gm.

40) write a program to print hollow square Dollar pattern?

```
Import java. util. Scanner;

Public class Hollow Squar pattern {

Public static void main (String [] args) {

Scanner input = new Scanner( System.in);

Char c = input. next(). Char At(0);

for (int i=1; i <=5; i++) {

for int j =1; j <=5; j++) {
```

```
System. out. print (i==1 || j=1 || i==5 || j==5 ?
                                          (:") + " ")
}
System. out. println()
}
}
}
```

input. 5

out put

```
$ $ $ $ $
$       $
$       $
$       $
$ $ $ $ $
```