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1. write a program for matrix addition;

```
scanner input = new scanner (system.in);
int mat1 [] [] = { {1,2}, {5,3}};
int mat2 [] [] = { {2,3}, {4,1}};
int mat_sum [] [] = new int [2] [2];
int len = mat1. length;
for (int i=0; i< len; i++)
{
  for (int j=0; j< len; j++)
  mat_sum [i] [j] = mat1 [i] [j] + mat2 [i] [j];
  system. out. print (mat_sum [i] [j] + "\t");
}
system. out. println ();
```

2 write a program to print rectangle pattern Get the symbol as input from user.

```
class Wfor {
  static void printrectangle (int n, int w)
{
  for (int i=0; i<n; i++)
{
  system. out. println ();
```

```
    for(int j=0; j<w; j++)
    {
      if(i==0||i=n-1||j=0||j==w-1)
      {
        system.out.println("0");
      }
      else {
        system.out.println(" ");
      }
    }
  }
  print static void main(string args[])
  {
      int n=4, w=5;
      print rectangle(n,w);
    }
}
```

2. write a program that would sort a list of names in alphabetical ascending or descending. choice get from the user.

```
import java.util.scanner;
class main {
public static void main(string args[]){
scanner input = new scanner(system.in);
string arr[] = {"Banana","Apple","carrot","Radish","Jack"}
int len = arr.length();
char order = input.next().charAt(0);
```

4 write program for matrix multiplication?

```
import java.util.scanner
public class main
{
public void main (String[] args)
scanner input = new Scanner (System.in);
int r = input.nextInt();
int c = input.nextInt();
int mat1[][] = new int[r][c];
int mat2[][] = new int[r][c];
int (int p=0; p<0; j++)
{
for (int f=0; i<0; j++)
{
mat1[i][j] = input.nextInt();
}
}
for int i=0; i<r; i++)
{
for int j=0; j<c; j++)
{
mat2[i][j] = input.nextInt();
}
}
int sum[][] = new int[r][c];
int (int p=0, i<r, i++)
{
sum(i)(j) = sum[i][j] + [mat[i][k] * mat2[k][j]);
}
System.out.println();
}.
```

Write a program to point the special character separately and print of special in the line?

```
import java.util.scanner;
public math
{
  public static void main (string[]. args)
  scanner input = new scanner (. sem. in));
  string s = input.next linear;
  int len = s length ();
  char a[] = new char [len];
  int sp = 0;
for (int i=0 ; i<len; i++)
{
a[i] = s char A (i);
if (a[i]) = 65 & a[i]<=90 || a[i] >=97 a[i]<=122
    if a[i] >=48 && a[i]<=57)
{
}
else
}
  sp++;
  system. out. print (a[i]);}
}
system. out. print ("\n" + sp);
```

write a program to print all the composite the number between a and b?

```
import a java util . scanner;
public main
{
public = static void main { string [ ]. args ]
scanner = input = new scanner (system. in;
int a = input . next int ();
int b = input. next int ();
for int i = a+1 ) i < = b;  i++)
{
int  c = 0;
for (int j = 1; f < = b; j++)
{
if (p % j = = 1)
   (++;
}
if (< 2)
system. out. print < j + " ");
```

8. write a program to print the inverted full pyramid pattern?

```
import java . util. scanner;
public main
{public = static void main (string [ ]. args).
```

```
scanner input = new scanner ( system.in );
  int n = input next int ();
for (int i = n; i >= 1; i --)
{
  for (int j = 0; j < n-i; j++)
{
  system.out part (" ");
for (int k = 1; k <= i ; k++)
{ system out. print ("*");
}
system out. print (n();
```

9. Find the mean, median, mode of the array of number.

```
  import java util scanner.
  public main
{
  public = static void main (string [] args)
scanner input = new scanner ( system. in )
int a [] = { 6, 18, 23, 16, 23 21, 19 };
  int len = a length;
  int sum = 0;
for (int i=0; i< len ; i++
{
  sum = sum + a[i];
```

```
if order == 'A' ){
for (int i =0; i< len; i++ ){
for (int j = i+1; j < arr.length; j++) {
if (arr[i].compareTo(arr[j])>0) {
  string temp = arr[i];
        arr[i] = arr[j];
        arr[j] = temp;
    }
  }
}
System.out.println(arrays.toString(arr));
}
else if (order == 'D' ){
for (int i =0; i< len; i++ ){
 for( int i =i+1; i< arr.length; i++ ){
if arr[i].compare(sdar[i])<0){
   string temp =arr[i];
   arr[i] = arr[j];
   arr[j] = temp;
  }
 }
}
system.out.print to (array.s to string(arr));
}
```

```
    } int temp = a[i]
}
}
}

{ int mid = len/2
system.out.print(" median :" +a[mid- break;)
 break:
} else
for (int i=0; i<len; i++)
{ for (int j = i+1; j<len; j++)
{
 if (a[i] == a[j])
{
system.out.println(node " + a[i]);
 break
 }
}
}
```

10. Find the factorial of (n)

```
 import java.util.scanner;
 public main
{ public static void main (string[] args
scanner input = new scanner system.in);
  int n = input.next int();
  int fact = 1;
 for (int i=1; i<=n; i++
{
 fact = fact * i;
} system.out.print(fact);
```