

Assignment - 4

- 1.) Write a program to count all the prime and composite numbers entered by the user.

```
int arr[] = {4, 54, 29, 71, 7, 59, 98, 23};
```

```
int com = 0, pri = 0;
```

```
for (int i = 0; i < arr.length; i++)
```

```
{ int c = 0;
```

```
  for (int j = 1; j < arr[i]; j++)
```

```
  { if (arr[i] % j == 0)
```

```
    c++;
```

```
  }
```

```
  if (c > 1)
```

```
    com++;
```

```
  else
```

```
    pri++;
```

```
system.out.print("composite number: " + com);
```

```
system.out.print("\n prime number: " + pri);
```

- 2.) Find the Mth maximum number and Nth minimum number in an array and then find.

```
int arr[] = {14, 16, 87, 36, 25, 89, 34};
```

```
int len = arr.length;
```

```
for (int i = 0; i < len; i++) {
```

```
  for (int j = i + 1; j < len; j++) {
```

```
    if (arr[i] > arr[j]) {
```

```
      int temp = arr[i];
```

```
      arr[i] = arr[j];
```

```

arr[i] = temp;
    }
}
int m=1, n=3;
int max=arr[Len-m];
int min=arr[n-1];
System.out.print(m+"maximum number=" + max);
System.out.print("\n" + n+"minimum number=" + min);
int sum=max+min;
int diff=max-min;
System.out.print("\n sum=" + sum);
System.out.print("\n Difference=" + diff);

```

3) Write a program to print the total amount available in the ATM machine with the conditions applied.

```

int n1=500, d1=4, n2=100, d2=20, n3=200, d3=32, n4=2000, d4=1;
int total=(n1*d1)+(n2*d2)+(n3*d3)+(n4*d4);
System.out.print("Total Available balance in ATM:" + total);

```

4) Write a program using choice to check

```

String s1="MADAM";
String s2="";
int len=s1.length();
for(int i=len-1; i>=0; i--)
{
    s2=s2+s1.charAt(i);
}

```

```

if(s1.equals(s2))
    System.out.print("Palindrom");
else
    System.out.print("Not palindrom");

```


5.) Write a program to convert decimal number equivalent to binary number and octal numbers?

```
int dec = 15;
String bin = Integer.toBinaryString(dec);
String oct = Integer.toOctalString(dec);
System.out.println("Binary number=" + bin);
System.out.println("Octal number=" + oct);
```

6.) In an organization they decide to give bonus to all the employees on New year. A 5% bonus on salary 10%.. If the salary of the employee is less than \$10,000, gets 2% bonus.

```
Scanner input = new Scanner(System.in);
int a, b;
```

```
}
else if (a1 == 'B')
{
```

```
    bonus = b1 * (0.1);
    if (b1 < 10000)
```

```
    {
        bonus = bonus + b1 * (0.02);
    }
```

```
System.out.println("Salary=" + b1);
System.out.println("bonus=" + bonus);
System.out.println("total to be paid=" + (b1 + bonus));
```

```
} else {
```

```
    System.out.println("Enter valid grade");
}
```

7.) Write a program to find

7.) Write a program to print the first n perfect numbers.

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

```
int n = input.nextInt();
```

```
int sum = 0, temp = 0;
```

```
for (int j = 2; j <= 1000; j++)
```

```
{ if (n > temp)
```

```
sum = 1;
```

```
for (int i = 2; i < j; i++)
```

```
{ if (j % i == 0)
```

```
sum = sum + i;
```

```
}
```

```
if (sum == j)
```

```
{ System.out.print(j + " ");
```

```
temp = temp + 1;
```

```
}
```

8.) Write a program to print the first n perfect numbers.

```
int a1 = 90;
```

```
int a2 = 91;
```

```
int a3 = 92;
```

```
int a4 = 93;
```

```
int total = (a1 + a2 + a3 + a4);
```

```
float avg = total / 4;
```

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

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

```
if (avg > 75)
```

```
{ System.out.print("distinction");
```

```
else if (avg >= 60 & avg < 75)
```

```
System.out.print("first Division");
```

```
else if (avg > 40 & avg < 50)
```

```
System.out.print("Third Division");
```

```
System.out.print("Fail");
```

7) 1

7) 10

9.) write a program to calculate tax given the following conditions

```
Scanner input = new Scanner(System.in);
int income = input.nextInt();
float tax;
if (income <= 15000)
    System.out.println("Tax = " + income / 10);
else if (income >= 30000 & income <= 50000)
    System.out.println("Tax = " + income * 30);
else
    System.out.println("Tax = " + income * 30);
```

10.) Write a program to enter the marks of a students in four subjects.

```
int a1 = 90;
int a2 = 92;
int a3 = 92;
int a4 = 93;
int total = (a1 + a2 + a3 + a4);
float avg = total / 4;
System.out.println(total);
System.out.println(avg);
if (avg >= 75)
    System.out.println("Distinction");
else if (avg >= 50 & avg < 75)
    System.out.println("First Division");
else if (avg >= 40 & avg < 50)
    System.out.println("Second Division");
else if (avg >= 30 & avg < 40)
    System.out.println("Third Division");
else
    System.out.println("Fail");
```

8)