Assignment - 5.

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① Prime and composite number.

```
import java.util.Scanner;
Public class main {
    public static void main (String args[]){
int[] arr = {4, 54, 29, 71, 7, 59, 98, 23};
int com = 0, prl = 0;
for(int num : arr) {
    int count = 0;
for (int i = 1; i <= num; i++){
        if(num % i == 0) count++;
}
if (count > 2) count++;
    else if (count == 2) prl++;
}
System.out.println ("composite numbers: %d, com, Pri);
}
}
```

(12) mth maximum num and nth min numbers in array.

=
```
import java.util.Scanner;
Public class main{
    public static void main (String[] args){
    Int[] arr = {14, 16, 87, 36, 25, 89, 34};
    Array.sort (arr);
    Int m = 1, n = 3;
    int max = arr [arr.length - m];
    Int min = arr [n-1];
System.out.println (m, max, n, min; max + min, max - min);
}
}
```

(13) Write a program to print total amount available in ATM machine.

=
```
public class ATM {
    public static void main (String args[]){
    Int [] denomination = {500, 100, 200, 2000};
    Int[] quantities = {4, 20, 32, 1};
    Int totalBal = 0;
for (Int i=0 ; i < denomination.len ; i++){
    total bal += denomination[i] * quantities [i];
}
System.out.println ("total balance: " + total bal);
}
}
```

(45) write a program to find the square root of perfect square number.

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```
import java.util.scanner;
class main{
    public static void main (String args[]);
scanner input =new scanner (system.in);
double n = input.nextInt();
double sqrt =math.sqrt(n);
system.out.println (sqrt +"+"+"-"+sqrt);
}
}
```

(46) write a program for print inverted pyramid pattern

=
```
import java.util.scanner;
class main{
    public static void main (string args[]){
scanner input =new scanner (system.in);
int n= input.nextInt();
for (int i=n; i>=1; i--){
for (int j=0; j<n-i; j++){
        system.out.print (" ");}
for (int k=1; k<=i; k++){
}        system.out.print ("*");}
```

(47) write program for matrix multiplication.

```
import java.util.Scanner;
class main {
    public static 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];
    for (Int i=0 ; i<r ; i++) {
        for ( Int j=0 ; j<c; j++){
        mat1[i][j] =Input.nextInt();
        }
}
for (int i=0 ; i<r ; i++ {
    for (Int j=0 ; j<c ; j++) {
        mat2 [i][j] = Intul.nextInt();
    }
}
int sum [][] = new Int [r][c];
for (int i=0 ; i<r ; i++) {
    for ( Int j=0 ; j<c ; j++) {
        Sum [i][j] =0;
    for (int k=0 ; k<c ; k++) {
```

```
sum[i][j] = sum[i][j] + mat1[i][k] * mat2[k][j];
}
System.out.println(sum[i][j] + "\t");
}
}
```

(18) write a program using choice to check

```
import java.util.Scanner;
class main {
public static void main(String args[]){
Scanner input = new Scanner(System.in);
String s1 = s1.length();
for (int i = len-1; i>=0; i--)
{
s2 = s2 + s1.charAt(i);
}
if (s1.equals(s2)) {
System.out.println("palindrome");
}
else {
System.out.println("Not a palindrome");
}
```

(4.9) Write a program to convert Decimal numbers equivalent to Binary number and octal numbers?

:

```
import java.util.Scanner;
class main {
    public static void main (String args[]) {
Scanner Input = new Scanner (System.in);
int dec = 15;
String bin = Integer.toBinaryString (dec);
String oct = Integer.toOctalString (dec);
System.out.println ("Binary numbers: "+bin);
System.out.println ("Octal numbers: "+oct);
}
}
```

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```
import java.util.Scanner;
class main{
    public static void main (String args[]){
Scanner Input =new Scanner (System.in);
int a, b;
double bonus =0;
System.out.println ("Enter the grade:");
char a = input.next().charAt(0);
System.out.println (" Enter the salary:");
int b = input.nextInt();
if (a1 =='A')
{
    bonus = b1 * (0.05);
    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");
}
}.
```