Manjunath Reddy
192011373

1) Write a program to reverse a word using a loop? (Not to use inbuilt functions)
Sample Input:
String: TEMPLE
Sample Output:
Reverse String: ELPMET

Code :-

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the word to reverse  ");
      String word = input.nextLine();
      int len = word.length();
      String rev = " ";

      for (int i = len - 1; i >= 0; i--) {
         rev = rev + word.charAt(i);
      }
      System.out.println("the reversed order =  " + rev);

   }
}
```

Output :-
enter the word to reverse  TEMPLE
the reversed order =  ELPMET

2) Write a program to reverse a number using loop?(Get the input from user)
Sample Input: Number: 14567
Sample Output: Reverse Number: 76541

Code :-

```java
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number to reverse :   ");
      int n = input.nextInt();
      int rev = 0;
      while (n != 0) {
         int rem = n % 10;
         rev = rev * 10 + rem;
         n = n / 10;

      }
      System.out.println(" the reversed number is " + rev);

   }
}
```

Output :

```
 enter the number to reverse :   14567
 the reversed number is 76541
```

3) Write a program to find whether the person is eligible for vote or not. And if that particular person is not eligible, then print how many years are left to be eligible.
Sample Input: Enter your age: 7
Sample output: You are allowed to vote after 11 years

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the age :   ");
      int age = input.nextInt();

      if (age >= 18)
         System.out.print(" your are eligibilty to vote ");

      else if (age < 0)
         System.out.print(" please enter the age correctly");

      else
         System.out.println(" Your are eligibility to vote after " +
(18 - age) + " years ");

   }
}
```

Output :

enter the age :  7
Your are eligibility to vote after 11 years

4) Find the LCM and GCD of n numbers?
Sample Input: N value = 2
Number 1 = 16
Number 2 = 20

Sample Output: LCM = 80
GCD = 4

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" Enter the N valve ");
      int n = input.nextInt();
      System.out.print(" Enter the n1 valve  ");
      int n1 = input.nextInt();
      System.out.print(" Enter the n2 valve  ");
      int n2 = input.nextInt();

      int gcd = calculateGCD(n1, n2);
      System.out.println(" \n GCD of 2 numbers : " + gcd);

      int lcm = n1 * n2 / gcd;
      System.out.println(" LCM of the 2 numbers  : " + lcm);

   }

   public static int calculateGCD(int n1, int n2) {
      if (n2 == 0) {
         return n1;
      }
      return calculateGCD(n2, n1 % n2);
   }
}
```

Output :

GCD of 2 numbers : 4
 LCM of the 2 numbers  : 80

5) Write a program to print Right Triangle Star Pattern Sample Input:: n = 5

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner scanner = new Scanner(System.in);
      System.out.print("Enter the height of the right-angled triangle:
");
      int height = scanner.nextInt();

      for (int i = 1; i <= height; i++) {
         for (int j = 1; j <= i; j++) {
            System.out.print("* ");
         }
         System.out.println();
      }

      scanner.close();
   }
}
```

Output :

Enter the height of the right-angled triangle: 5

```
*
* *
* * *
* * * *
* * * * *
```

6) write the code for the particular pattern

Code ;

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the height of the traingle ");
      int n = input.nextInt();

      for (int i = 1; i <= n; i++) {
         int a = 1;
         for (int j = 1; j <= n - i; j++) {
            System.out.print("  ");
         }
         for (int k = 1; k <= i; k++) {
            System.out.print(a + "  ");
            a = a * (i - k) / k;
         }
         System.out.println();

      }
      input.close();
   }
}
```

Output :

```
 enter the height of the traingle  5
        1
      1  1
    1  2  1
  1  3  3  1
1  4  6  4  1
```

7) Write a program to print the numbers from M to N by skipping K numbers in between?
Sample Input: M = 50 N = 100 K = 7
Sample Output: 50, 58, 66, 74, …..

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the valve of M");
      int m = input.nextInt();
      System.out.print(" enter the valve of n");
      int n = input.nextInt();
      System.out.print(" enter the valve of k");
      int k = input.nextInt();

      for (int i = m; i < n; i = i + k + 1) {
         System.out.println(i);
      }

   }
}
```

Output =
enter the valve of M = 50
enter the valve of n = 100
enter the valve of k = 7
50
58
66
74
82
90
98

8) Write a program for matrix addition?
Sample Input:
Mat1 = 1 2
5 3
Mat2 = 2 3
4 1
Code :

```
public class Manju {
   public static void main(String[] args) {
      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();
      }

   }
}
```

Output :

3 5
9 4

9)Write a program that would sort a list of names in alphabetical order Ascending or Descending, choice get from the user?
Sample Input: Banana ,Carrot, Radish ,Apple ,Jack .
Order(A/D) : A
Sample Output: Apple, Banana, Carrot, Jack, Radish.

Code :

```
import java.util.Scanner;
import java.util.Arrays;

public class Manju

{
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      String arr[] = { " Banana", "Carrot", "Radish", "Apple", "Jack"
};
      System.out.print(" enter the order to A for asending and D for
desending ");
      char order = input.nextLine().charAt(0);
      int len = arr.length;
      if (order == 'A') {

         for (int i = 0; i < len; i++) {
            for (int j = i + 1; j < len; 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));

      }

      if (order == 'D') {
         for (int i = 0; i < len; i++) {
            for (int j = i + 1; i < len; i++) {
               if (arr[i].compareTo(arr[j]) < 0) {
                  String temp = arr[i];
                  arr[i] = arr[j];
                  arr[j] = temp;
               }
            }
         }
         System.out.println(Arrays.toString(arr));
      }
   }
```

```
}
```

Output =
Apple
Banana
Carrot
Jack
Radish

9) Write a program to print the following pattern
Sample Input: Enter the number to be printed: 1
Max Number of time printed: 3

Code:

```
import java.util.Scanner;
public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number to be printed ");
      int x = input.nextInt();
      System.out.print(" enter the max number of times printed ");
      int n = input.nextInt();
      for (int i = 1; i <= n; i++) {
         for (int j = 1; j <= i; j++) {
            System.out.print(x);
         }
         System.out.println();
      }
      for (int i = n - 1; i >= 1; i--) {
         for (int j = 1; j <= i; j++) {
            System.out.print(x);
         }
         System.out.println();
      }

   }
}
```

Output :
1
11
111
11
1

10) Write a program to print the Inverted Full Pyramid pattern

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number of lines  ");
      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(" *");
         }
         System.out.println();
      }
   }
}
```

Output:

enter the number of lines  5

```
* * * * *
 * * * *
  * * *
   * *
    *
```

11)  Write a program to find the square root of a perfect square number(print both the positive and negative values)
 Sample Input: Enter the number : 6561
Sample Output: Square Root: 81, -81

Code :

```java
import java.util.Scanner;
import java.lang.Math;

public class Manju {
   public static void main(String args[]) {
      Scanner input = new Scanner(System.in);
      System.out.print("Enter the number  ");
      double n = input.nextInt();
      double sqrt = Math.pow(n, 0.5);
      double sq = Math.sqrt(n);
      System.out.println(sqrt + "," + "-" + sqrt);
   }
}
```

Output :
Square Root: 81, -81

12) Write a program to print hollow SquareDollar pattern?

Code :

```java
import java.util.Scanner;
import java.lang.Math;
```

```java
public class Manju {
   public static void main(String args[]) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number of rows ");
      int n = input.nextInt();
      System.out.print(" enter the number of columns ");
      int n1 = input.nextInt();

      for (int i = 0; i < n; i++) {
         for (int j = 0; j < n1; j++) {
            if (i == 0 || j == 0 || i == n - 1 || j == n - 1)
               System.out.print(" $ ");
            else
               System.out.print("  ");
         }
         System.out.println();
      }

   }
}
```

Output :

```
 enter the number of rows 5
 enter the number of columns 5
$ $ $ $ $
$     $
$     $
$     $
$ $ $ $ $
```

13) Program to find whether the given number is Armstrong number or not

Sample Input: Enter number : 153

Sample Output: Given number is Armstrong number

Code :

```
import java.util.Scanner;
import java.lang.Math;

public class Manju {
   public static void main(String args[]) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number  ");
      int n = input.nextInt();
      int num = n;
      int arm = 0;

      while (num != 0) {
         int rem = num % 10;
         arm = arm + (rem * rem * rem);
         num = num / 10;
      }
      if (n == arm)
         System.out.println(" given number is an armstrong number ");
      else
         System.out.println(" givenn number is not armstrong number
");

   }
}
```

Code :
Given number is Armstrong number

14) Write a program to print the below pattern

```
import java.util.Scanner;
import java.lang.Math;

public class Manju {
   public static void main(String args[]) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number  ");
      int n = input.nextInt();
```

```
      for (int i = 1; i <= n; i++) {
         for (int j = 1; j <= i; j++) {
            System.out.print(i);
         }
         System.out.println();
      }
      for (int i = n - 1; i >= 1; i--) {
         for (int j = 1; j <= i; j++) {
            System.out.print(i);
         }
         System.out.println();

      }
   }

}
```

Output =

enter the number 4
1
22
333
4444
333
22
1

15) Find the factorial of n?
Sample Input: N = 6
Sample Output: 6 Factorial = 720

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String args[]) {
      Scanner input = new Scanner(System.in);
```

```
      System.out.print(" enter the number  ");
      int n = input.nextInt();
      int fact = 1;
      for (int i = 1; i <= n; i++) {
         fact = fact * i;

      }
      System.out.println(" Factorial " + fact);

   }

}
```

Output :  Factorial = 720

15)  Program to find the frequency of each element in the array.
Sample Input & Output: {1, 2, 8, 3, 2, 2, 2, 5, 1}

Code :

```
import java.util.Arrays;
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      int a[] = new int[] { 1, 2, 8, 3, 2, 2, 2, 5, 1 };
      int t[] = new int[a.length];
      int visited = -1;
      for (int i = 0; i < a.length; i++) {
         int count = 1;
         for (int j = i + 1; j < a.length; j++) {
            if (a[i] == a[j]) {
               count++;
               t[j] = visited;
            }
         }
         if (t[i] != visited)
            t[i] = count;
```

```
      }
      for (int i = 0; i < a.length; i++) {
         if (t[i] != visited)
            System.out.println(a[i] + " " + t[i]);
      }
   }
}
```

Output :
1 2
2 4
8 1
3 1
5 1

16) Write a program to find the square, cube of the given decimal number
Sample Input: Given Number: 0.6
Sample Output: Square Number: 0.36 Cube Number:0.216

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the number ");
      Float n = input.nextFloat();
      Float Square = n * n;
      System.out.println(" Square " + Square);

      Float Cube = n * n * n;
      System.out.println(" Cube  " + Cube);

   }
}
```

Output :
enter the number 0.6
Square 0.36
Cube 0.21600002

17) Write a program to print consonants and vowels separately in the given word
Sample Input: Given Word: Engineering Sample Output:
Consonants: n g n r n g .
Vowels: e i e ei

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" Enter the word : ");
      String name = input.nextLine();
      int len = name.length();
      char a[] = new char[len];
      char vow[] = new char[len];
      char con[] = new char[len];
      int v = 0, c = 0;
      for (int i = 0; i < len; i++) {
         a[i] = name.charAt(i);
         if (a[i] == 'a' || a[i] == 'e' || a[i] == 'i' || a[i] == 'o'
|| a[i] == 'u'
               || a[i] == 'A' || a[i] == 'E' || a[i] == 'I' || a[i] ==
'O' || a[i] == 'U') {
            vow[v] = a[i];
            v++;
         } else {
            con[c] = a[i];
            c++;
         }
      }
      System.out.print("Consonants: ");
      for (int i = 0; i < v; i++) {
         System.out.print(vow[i]);
```

```
      }
      System.out.print("\nvowels: ");
      for (int j = 0; j < c; j++) {
         System.out.print(con[j]);
      }
   }
}
```

Output :
Enter the word : Engineering
Consonants: Eieei

18) Write a program to print the given number is Perfect number or not?
Sample Input: Given Number: 6
Sample Output: It's a Perfect Number

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter  the number ");
      int n = input.nextInt();
      int fact = 0;
      for (int i = 1; i < n; i++)

      {
         if (n % i == 0)
            fact = fact + i;
      }
      if (n == fact)
         System.out.println(" given number is perfect number ");
      else
         System.out.println(" it is not an perfect number ");

   }
```

```
}
```

Output :
enter  the number 6
 given number is perfect number

19)  Find the year of the given date is leap year or not Sample Input: Enter Date: 04/11/1947
Sample Output: Given year is Non Leap Year

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print("Enter year: ");
      String year = input.next();
      String a[] = year.split("/");
      String d = a[2];
      int num = Integer.parseInt(d);
      if ((num % 4 == 0 && num % 100 != 0) || num % 400 == 0)
         System.out.println("It is a leap year");
      else
         System.out.println("Not a leap year");
   }
}
```

Output :
Enter year: 04/11/1947
Not a leap year

21) Write a program to count all the prime and composite numbers entered by the user.
Sample Input:

Enter the numbers 4 ,54, 29, 71, 7 ,59, 98, 23.

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      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.println("\nPrime number: " + pri);

   }
}
```

Output :
Composite Number: 3
Prime number: 5

22)
Find the Mth maximum number and Nth minimum number in an array and then find the sum of it and difference of it. Sample Input:
Array of elements = {14, 16, 87, 36, 25, 89, 34}
M = 1
N = 3

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      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[j] = 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("\nSum = " + sum);
      System.out.print("\nDifference = " + Diff);

   }
}
```

Output :
1 maximum number = 89
3 minimum number = 25
Sum = 114
Difference = 64

23) Write a program to convert Decimal number equivalent to Binary number and octal numbers?
Sample Input: Decimal Number: 15
Sample Output: Binary Number = 1111

Octal = 17

Code : import java.util.Scanner;

```
public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the decimal number ");
      int dec = input.nextInt();
      String bin = Integer.toBinaryString(dec);
      String oct = Integer.toOctalString(dec);
      System.out.println(" octal number " + oct);
      System.out.println(" binary number " + bin);

   }
}
```

Output :
Binary Number = 1111
Octal = 17

24) Write a program to calculate tax given the following conditions:
a. If income is less than or equal to 1,50,000 then no tax
b. If taxable income is 1,50,001 – 3,00,000 the charge 10% tax
c. If taxable income is 3,00,001 – 5,00,000 the charge 20% tax
d. If taxable income is above 5,00,001 then charge 30% tax

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the income  ");
      int income = input.nextInt();
      float tax;
      if (income <= 150000)
         System.out.print(" no tax ");
      else if (income >= 150001 && income <= 300000)
         System.out.println("Tax= " + income / 10);
```

```
      else if (income >= 300001 && income <= 500000)
         System.out.println("Tax= " + income / 20);
      else
         System.out.println("Tax= " + income / 30);

   }
}
```

Output :
enter the income  200000
Tax= 20000

25) Write a program to print the multiplication table of number m up to n.
Sample Input: M = 4 N = 5
Sample Output: 1x4=4
2x4=8
 3x4=12
4x4=16
5x4=20

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the M valve  ");
      int m = input.nextInt();
      System.out.print(" Enter the N valve ");
      int n = input.nextInt();

      for (int i = 1; i <= n; i++) {
         System.out.println(i + "x" + m + "=" + (i * m));
      }

   }
}
```

Output :
enter the M valve  4
 Enter the N valve 5
1x4=4
2x4=8
3x4=12
4x4=16
5x4=20

26)
3.Write a program to read the numbers until -1 is encountered. Find the average of positive numbers and negative numbers entered by user. Sample Input: Enter -1 to exit…
Enter the number: 7
Enter the number: -2
Enter the number: 9
Enter the number: -8
 Enter the number: -6
 Enter the number: -4
Enter the number: 10
 Enter the number: -1

Code ;

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      int i = 0, j = 0;
      int n = 0;
      int s1 = 0, s2 = 0;
      int possum = 0, negsum = 0;
      while (n != -1) {
         n = input.nextInt();
         if (n == -1)
            break;
         if (n > 0) {
```

```
            i++;
            s1 = s1 + n;
         } else {
            j++;
            s2 = s2 + n;
         }
      }
      System.out.println(i);
      System.out.println(j);
      double pos = (s1 / i);
      double neg = s2 / j;
      System.out.println("The average of positive: " + pos);
      System.out.println("The average of negative: " + neg);

   }
}
```

Output :
The average of negative numbers is: -5.0
The average of positive numbers is : 8.66666667

27)
Write a Program to Find the Nth Largest Number in a array. Sample Input: List : {14, 67, 48, 23, 5, 62}
N = 4
Sample Output:
4 th Largest number: 23

Code :

```
import java.util.Arrays;
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);

      int a[] = { 14, 67, 48, 23, 5, 62 };
      int len = a.length;
      Arrays.sort(a);
```

```
        int N = 4;
        System.out.println(N + " Largest number: " + a[len - N]);

    }
}
```

Output :
4 Largest number: 23

28)
Write a Java Program to Convert a Given Number of Days in Terms of Years, Weeks & Days.
Sample Input&Output:: Enter the number of days:756
No. of years:2
No. of weeks:3
No. of days:5

Code :

```
import java.util.Arrays;
import java.util.Scanner;

public class Manju {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print(" enter the number of days ");
        int num = input.nextInt();
        int years = num / 365;
        System.out.println("years: " + years);
        int weeks = (num % 365) / 7;
        System.out.println("weeks: " + weeks);
        int days = (num % 365) % 7;
        System.out.println("Days: " + days);

    }
}
```

Output :
enter the number of days 756
years: 2
weeks: 3
Days: 5

29) Write a Program to create a list of all numbers in a range which are perfect squares and the sum of the digits of the number is less than 10.
Sample Input & Output: Enter lower range: 1
Enter upper range: 40
[1, 4, 9, 16, 25, 36]

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the lower  range ");
      int lower = input.nextInt();
      System.out.print(" enter the upper range ");
      int upper = input.nextInt();
      int i = 0, x = 1;
      while (i < upper) {
         int sum = 0;
         int y = x * x;
         int t = y;
         while (y != 0) {
            int rem = y % 10;
            sum = sum + rem;
            y = y / 10;
         }
         if (sum < 10) {
            System.out.print(t + " ");
         }
         i = x * x;
         x++;
      }
   }
```

```
}
```

Output :
enter the lower range 1
enter the upper range 40
1 4 9 16 25 36

29) Write a Program to create an array with the First Element as the Number and Second Element as the Square of the Number.
Sample Input:
Enter the lower range:45
Enter the upper range:49

Code :

```
import java.util.Scanner;

public class Manju {
   public static void main(String[] args) {
      Scanner input = new Scanner(System.in);
      System.out.print(" enter the lower  range ");
      int lower = input.nextInt();
      System.out.print(" enter the upper range ");
      int upper = input.nextInt();
      for (int i = lower; i <= upper; i++) {
         System.out.println("(" + i + "," + (i * i) + ")" + " ");
      }

   }
}
```

Output :
enter the lower range 45
enter the upper range 49

(45,2025)
(46,2116)
(47,2209)
(48,2304)
(49,2401)

30) Develop a code to Reverse and Add a Number until you get a Palindrome. Sample Input
If 7325 is input number, then 7325 (Input Number) + 5237 (Reverse Of Input Number) = 12562 12562 + 26521 = 39083 39083 + 38093 = 77176 77176 + 67177 = 144353 144353 + 353441 = 497794 (Palindome)

Code :

```
import java.util.Scanner;
public class Manju
{
 public static int revnum(int num)
 {
 int rev=0;
 while(num!=0)
 {
 int rem=num%10;
 rev=rev*10+rem;
 num=num/10;
 }
 return rev;
 }
 public static boolean check(int num)
 {
 int rev= revnum(num);
 if(num==rev)
 return true;
 else
 return false;
 }
 public static void add(int num)
 {
 if(check(num)) {
```

```
System.out.println("palindrome");
}
else
{
while(!check(num))
{
int rev=revnum(num);
int sum=num+rev;
System.out.println(num+"+"+rev+"="+sum);
num=sum;
}
}
}
public static void main(String[] args)
{
Scanner input=new Scanner(System.in);
int num=input.nextInt();
add(num);
}
}
```

Output :
12562 + 26521 = 39083 39083 + 38093 = 77176 77176 + 67177 = 144353 144353 + 353441 = 497794
It is an palindrome