

**SSD**

OUTPUT :-

Name of the student : Deepak Manya

Address of the student : Goregaon

Roll no. of the student : 1724

Percentage of the student in HSC : 68.77

Mobile Number : 8767280300

Name of the ~~student~~ is : Deepak Manya

Address of the student is : Goregaon

Roll No. of the student is : 1724

Percentage of the student is : 68.77

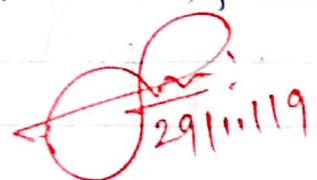
Mobile Number is : 8767280300.

PRACTICAL-01

Aim:- To study the use of different datatypes.

i) Code:-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char name[50];
    char add[50];
    int rollno;
    float percentage;
    long int mobno;
    clrscr();
    printf("Name of the student : ");
    scanf("%s", &name);
    printf("Address of the student : ");
    scanf("%s", &add);
    printf("Roll no. of the student : ");
    scanf("%d", &rollno);
    printf("Percentage of the student in HSC : ");
    scanf("%f", &percentage);
    printf("Mobile Number : ");
    scanf("%d", &mobno);
    printf("Name of the student is : %s", name);
    printf("Address of the student is : %s", add);
    printf("Roll No. of the student is : %d", rollno);
    printf("Percentage of the student in HSC is : %f", percentage);
    printf("Mobile Number is : %d", mobno);
    getch();
}
```

  
29/11/19

i) ~~Code~~ To find average of three numbers:-

```
#include < stdio.h >
#include < conio.h >
void main()
{
    int d, p, k, sum;
    float avg;
    clrscr();
    printf("Enter the first number : ");
    scanf("%d", &d);
    printf("Enter the second number : ");
    scanf("%d", &p);
    printf("Enter the third number : ");
    scanf("%d", &k);
    sum = d + p + k;
    avg = sum / 3;
    printf("The average of the three no-s is : %.f", avg);
    getch();
}
```

024

OUTPUT:-

Enter the first number: 9

Enter the second number: 7

Enter the third number: 1

The average of the three nos is: 16.33

PSO

OUTPUT:-

Enter breadth of the triangle: 4

Enter ~~breadth~~<sup>height</sup> of the triangle: 2

Enter radius of the circle: 4

The area of the triangle is: 4

The area of the circle is: 50.24

iii) To find area of triangle and circle:-

```

#include <stdio.h>
#include <conio.h>
void main()
{
    int b, h, r;
    float tri, pi = 3.14, circ;
    printf("Enter breadth of the triangle : ");
    scanf("%d", &b);
    printf("Enter height of the triangle : ");
    scanf("%d", &h);
    printf("Enter radius of the circle : ");
    scanf("%d", &r);
    tri = 0.5 * b * h;
    circ = pi * r * r;
    printf("The area of the triangle is : %.f", tri);
    printf("The area of the circle is : %.f", circ);
    getch();
}

```

250

iv)

To find circumference of the circle:-

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int r;
```

```
float ar, pi = 3.14; // ar is area and pi is value of pi
```

```
clrscr();
```

```
printf("Enter radius of the circle : ");
```

```
scanf("%d", &r);
```

~~ar = 2 \* pi \* r;~~

```
printf("The circumference of the circle is : %.2f", ar);
```

```
getch();
```

```
}
```

OUTPUT:-

026

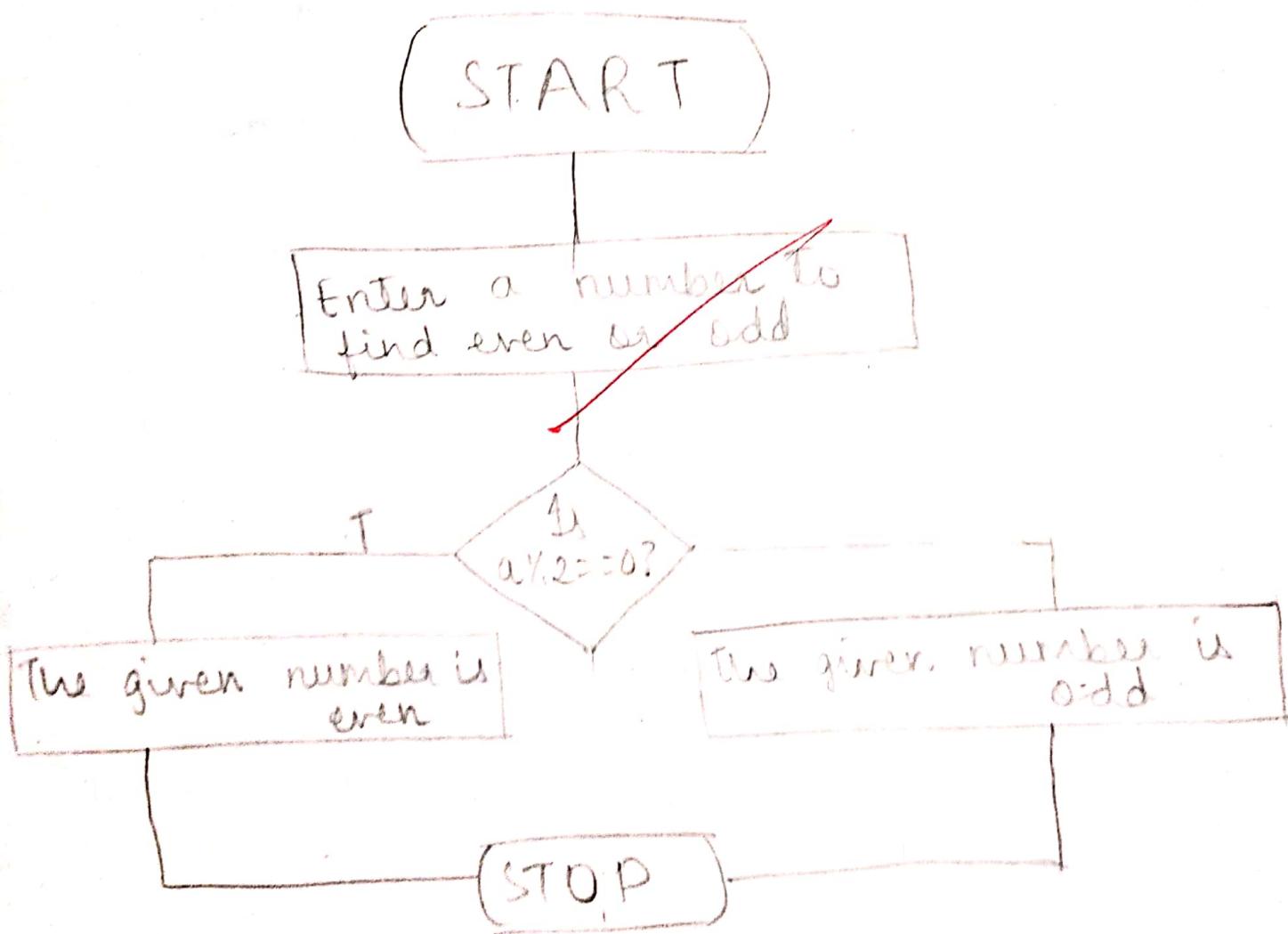
Enter radius of the circle: 9

The circumference of the circle is: 56.52

**Ques: OUTPUT:-**

Enter a number to find even or odd : 9

The given number is odd.



PRACTICAL - 03

Aim:- To study programs based on decision statements.

i) To find odd and even numbers:-

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
    int a;
```

```
    clrscr();
```

```
    printf("Enter a number to find even or odd : ");
```

```
    scanf("%d", &a);
```

```
    if (a % 2 == 0)
```

```
{
```

```
        printf("The given number is even");
```

```
}
```

```
    else
```

```
{
```

```
        printf("The given number is odd");
```

```
}
```

```
    getch();
```

```
3.
```

58.

ii) To find leap year:-

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int a;
```

```
clrscr();
```

```
printf("Enter any year:");
```

```
scanf("%d", &a);
```

```
if(a%4 == 0)
```

```
{
```

```
if(a%100 == 0)
```

```
{
```

```
if(a%400 == 0)
```

```
{
```

```
printf("Entered year is a leap year");
```

```
}
```

```
else
```

```
{
```

```
printf("The given year is not a leap year");
```

```
}
```

```
else
```

```
{
```

```
printf("The given year is a leap year");
```

```
}
```

Che

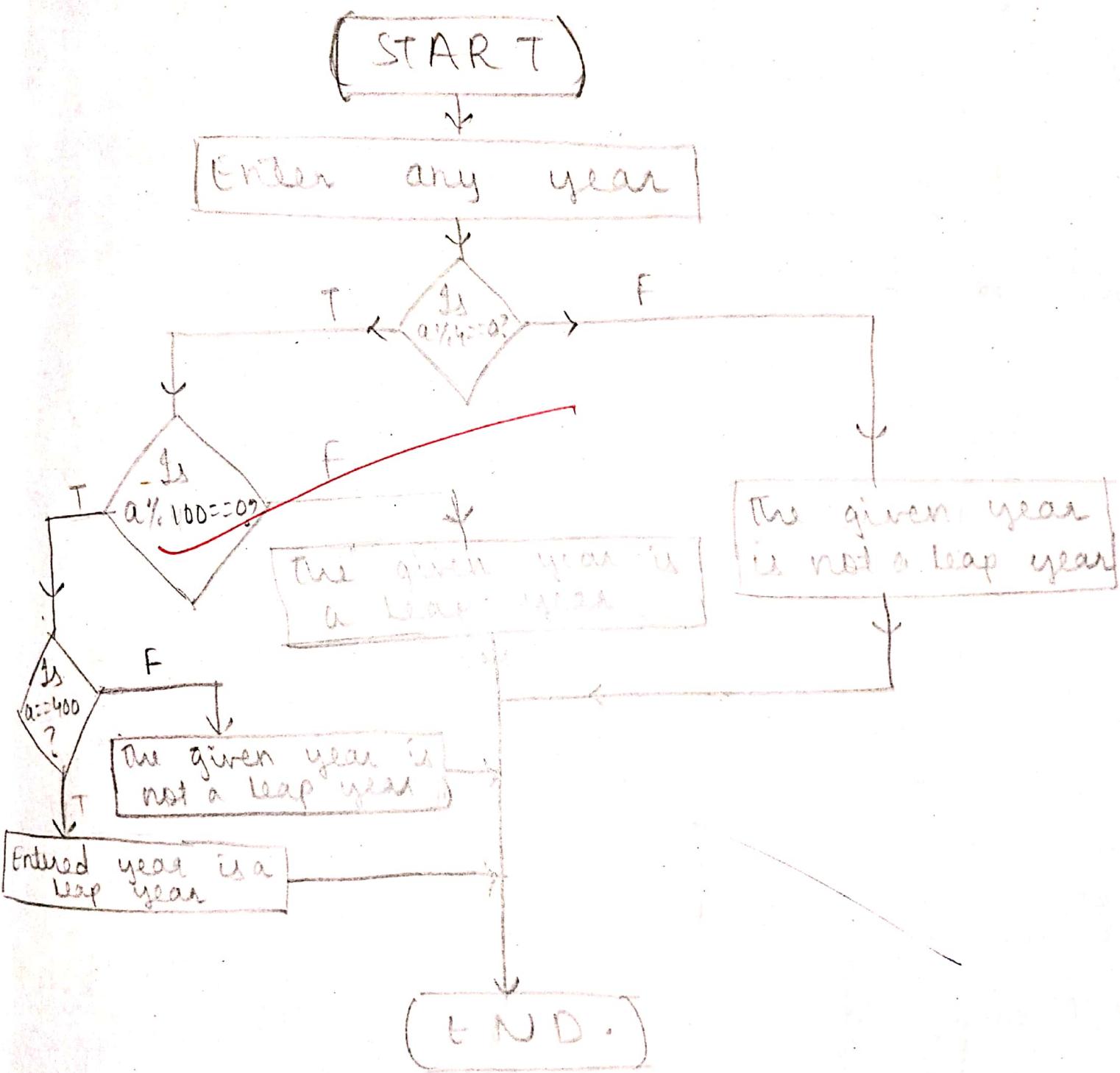
```
{
```

OUTPUT:-

Enter any year: 2400

Entered year is a leap year

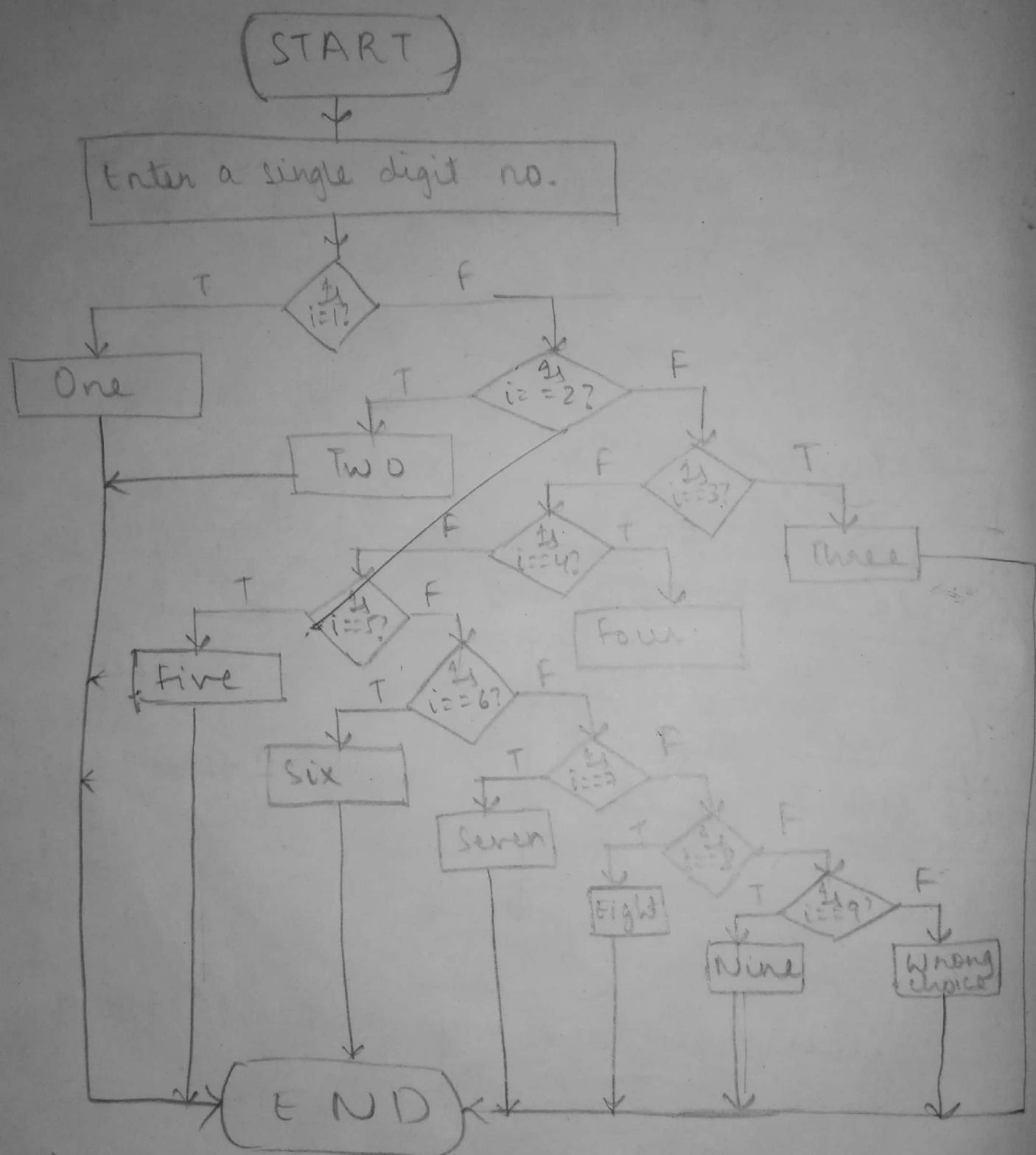
028



8.S.O. OUTPUT:-

Enter any single digit no.: 9

Nine



```

printf("The given year is not a leap year");
}
getch();
}

```

iii) To print the given digit in words:-

```

#include <stdio.h>
#include <conio.h>
void main()
{
    int i;
    printf("Enter a single digit no.:");
    scanf("%d", &i);
    if (i==1)
    {
        printf("In One");
    }
    else if (i==2)
    {
        printf("In Two");
    }
    else if (i==3)
    {
        printf("In Three");
    }
    else if (i==4)
    {
        printf("In Four");
    }
}

```

Fr.  
17/01/2020

```

else if (i==5)
{
    printf("In Five");
}
else if (i==6)
{
    printf("In Six");
}
else if (i==7)
{
    printf("In Seven");
}
else if (i==8)
{
    printf("In Eight");
}
else if (i==9)
{
    printf("In Nine");
}
else
{
    printf("Wrong choice");
}
getch();

```

PSO

## PRACTICAL - 04

Aim:- To study use of different loops.

- i) To print even nos between 1 to 50 using while loop:-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i=1;
    clrscr();
    while (i<=50)
    {
        if (i%2==0)
        {
            printf("%d", i);
        }
        i++;
    }
    getch();
}
```

# OUTPUT:-

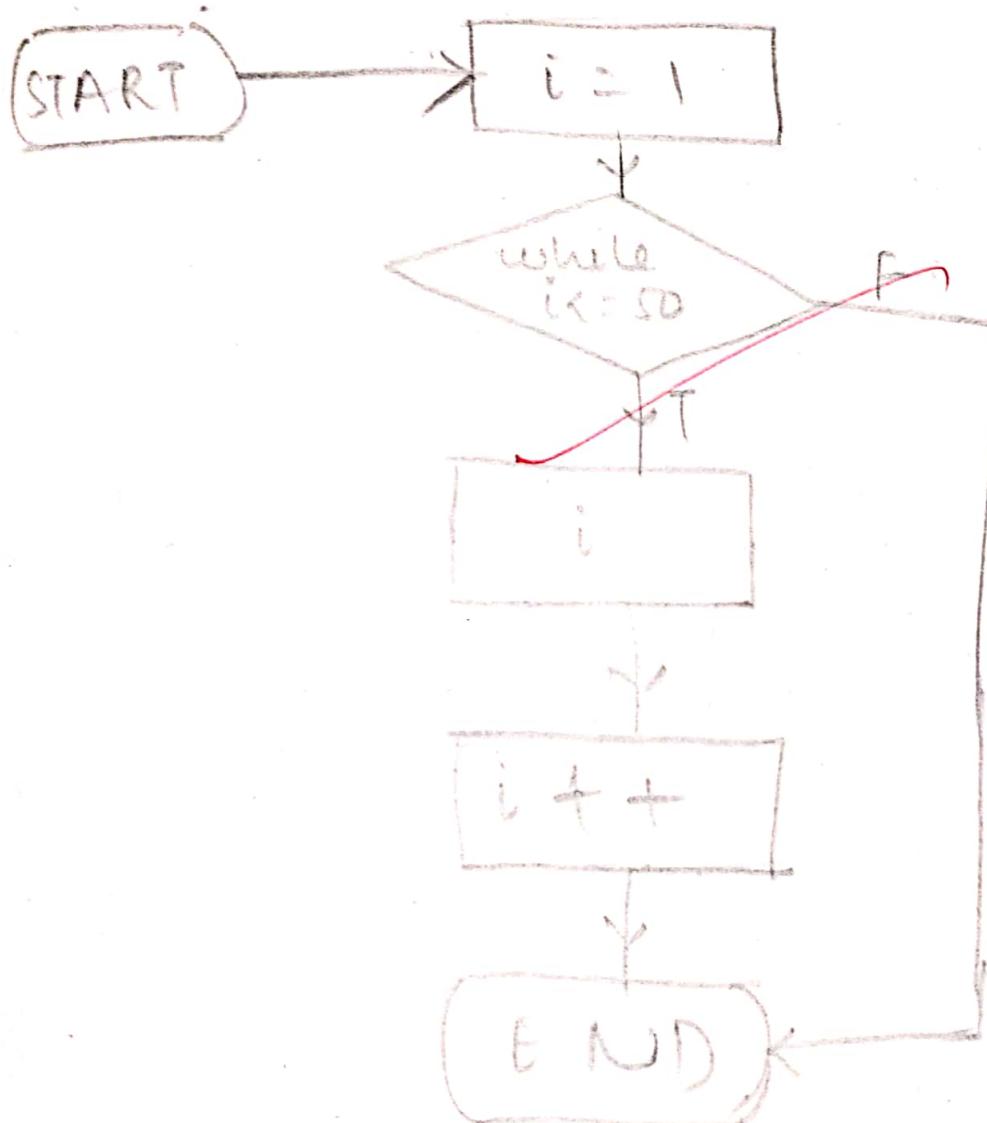
2  
4  
6  
8  
10  
12  
14  
16

18  
20  
22  
24  
26  
28  
30  
32

34  
36  
38  
40  
42  
44  
46  
48

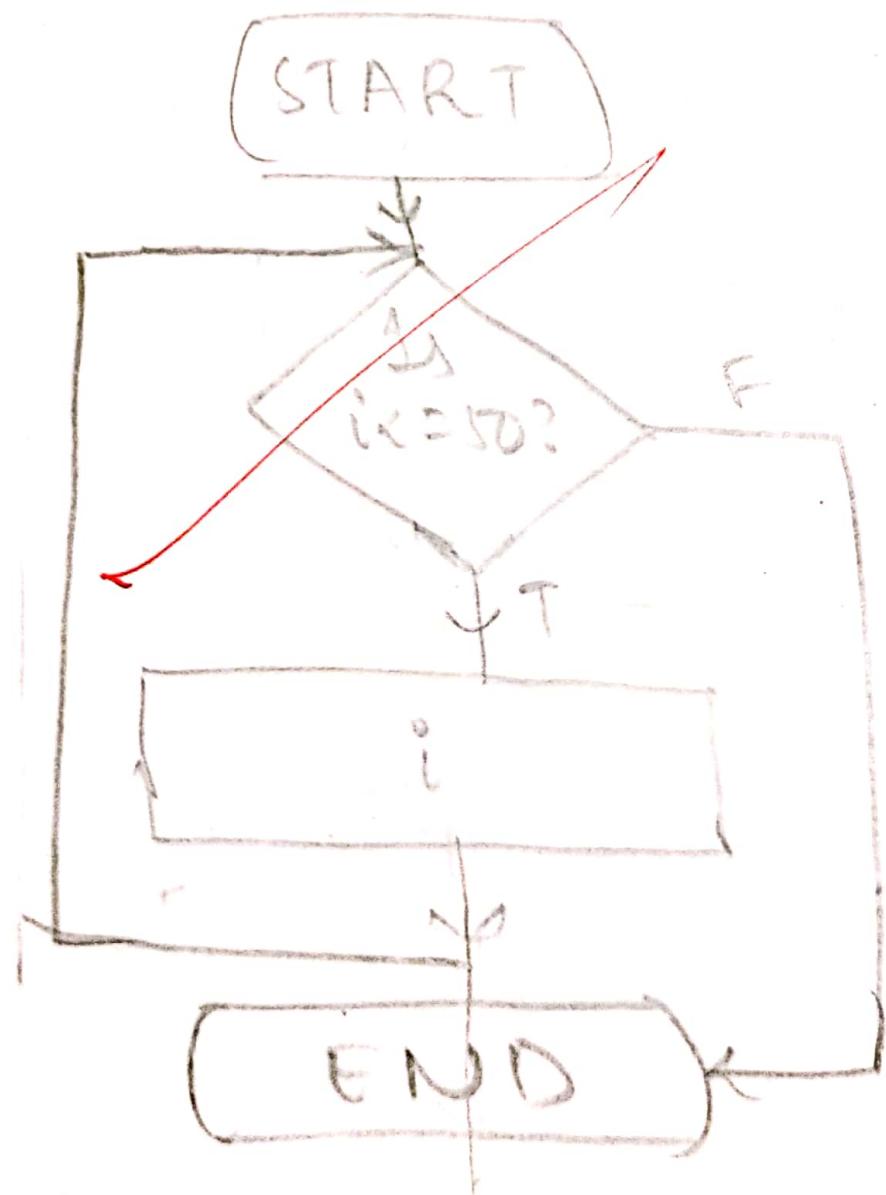
50

030



## Q80 OUTPUT:-

|    |    |    |
|----|----|----|
| 1  | 19 | 37 |
| 3  | 21 | 39 |
| 5  | 23 | 41 |
| 7  | 25 | 43 |
| 9  | 27 | 45 |
| 11 | 29 | 47 |
| 13 | 31 | 49 |
| 15 | 33 |    |
| 17 | 35 |    |



ii) To find odd nos between 1 to 50 using do while loop:-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i=1;
    clrscr();
    do
    {
        printf("%d", i);
        i = i + 2;
    }
    while (i<=50);
    getch();
}
```

180

iii) To find factorial :-

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
    int fact = 1, a, i;
```

```
    clrscr();
```

```
    printf("Enter any number to find factorial : ");
```

```
    scanf("%d", &a);
```

```
    for (i = 1; i <= a; i++)
```

```
{
```

~~```
    fact = fact * i;
```~~

```
}
```

```
    printf("The factorial of the number is : %d", fact);
```

```
    getch();
```

```
3.
```

OUTPUT:-

032

Enter any number to find factorial: 5  
The factorial of the number is: 120

( START )

Enter any number to find factorial

for i=1 to n

F

Fact = Fact \* i

The factorial of the given number is: fact

( END )

**SEE**

**OUTPUT:-**

Enter 1st Number: 4

Enter 2nd Number: 2

The Addition is : 6

The Subtraction is : 2

The Multiplication is : 8

The division is : 2.0

PRACTICAL-02

Aim:- To study use of various operators.

i) Use of Arithmetic Operators :-

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int ret a, b, add, sub, mul;
```

```
float div;
```

```
p disc();
```

```
printf("Enter 1st Number :");
```

```
scanf("%d", &a);
```

```
printf("Enter 2nd Number :");
```

```
scanf("%d", &b);
```

```
add = a + b;
```

```
sub = a - b;
```

```
mul = a * b;
```

```
div = a / b;
```

```
printf("The Addition is : %d", add);
```

```
printf("The Subtraction is : %d", sub);
```

```
printf("The Multiplication is : %d", mul);
```

```
printf("The division is : %.2f", div);
```

```
getch();
```

```
}
```

880

ii) Use of ternary operator:

```
#include <stdio.h>
```

```
#include <conio.h>
```

```
void main()
```

```
{
```

```
int a, b;
```

```
clrscr();
```

```
printf("Enter 1st number:"); scanf("%d", &a);
```

```
printf("Enter 2nd number:"); scanf("%d", &b);
```

~~```
scanf("%d", &a);
```~~~~```
scanf("%d", &b);
```~~

```
(a > b) ? printf("The first number is greater") :
```

```
printf("The second number is greater");
```

```
getch();
```

```
}
```

034

OUTPUT:-

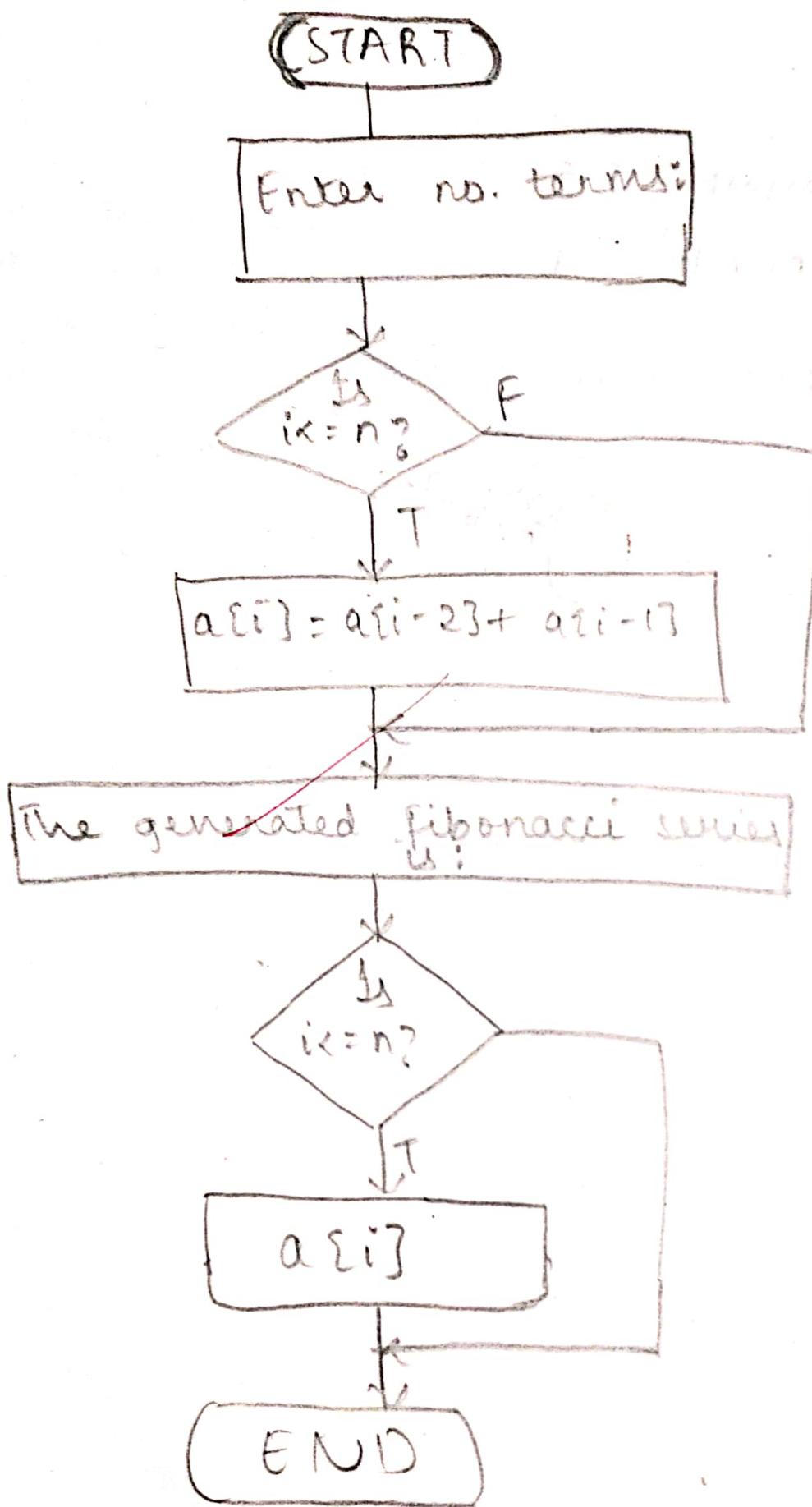
Enter 1st number: 8

Enter 2nd number: 9

The second ~~number~~ is greater.

*Fri.  
07/02/2020*

# #1] flowchart :-



PRACTICAL-5

Aim :- To study use of arrays.

#1] fibonacci series :-

Step 1:- Start

Step 2:- Include the required libraries. In the void main function, declare the required variables. Now give the user function.

Step 3:- Enter the appropriate ~~ser~~ message using printf to ask ask an input from the user. Assign it to a variable using scanf. Initialize 1<sup>st</sup> two elements of array as 0, 1. Assign a for loop to create fibonacci series.

Step 4:- Assign one more for loop to print the fibonacci series. Use the getch function and end the program.

Step 5:- END

Source code :-

```
#include <ios.h>
#include <conio.h>
void main()
{
    int a[20], n, i;
    clrscr();
    printf("Enter no. of terms\n");
    scanf("%d", &n);
}
```

Q32.

```
'a[0]=0';
'a[1]=1';
for(i=2; i<n; i++)
{
    a[i] = a[i-2] + a[i-1];
}
printf("The generated fibonacci series is:\n");
for (i=0; i<n; i++)
{
    printf("%d ", a[i]);
}
getch();
```

#2] Algorithm:- Sum of arrays.

Step 1:- Start

Step 2:- Import Include the corresponding libraries. In the void main function, firstly declare an array of size 20. Initialize sum=0.

Step 3:- Declare the required variables. Now call the user method. Print an appropriate message to import accept n less than 20 and assign it to a variable using scanf.

Step 4:- Using for loop, accept the numbers in each element of array from the user.

## OUTPUT :-

Enter no. of terms:

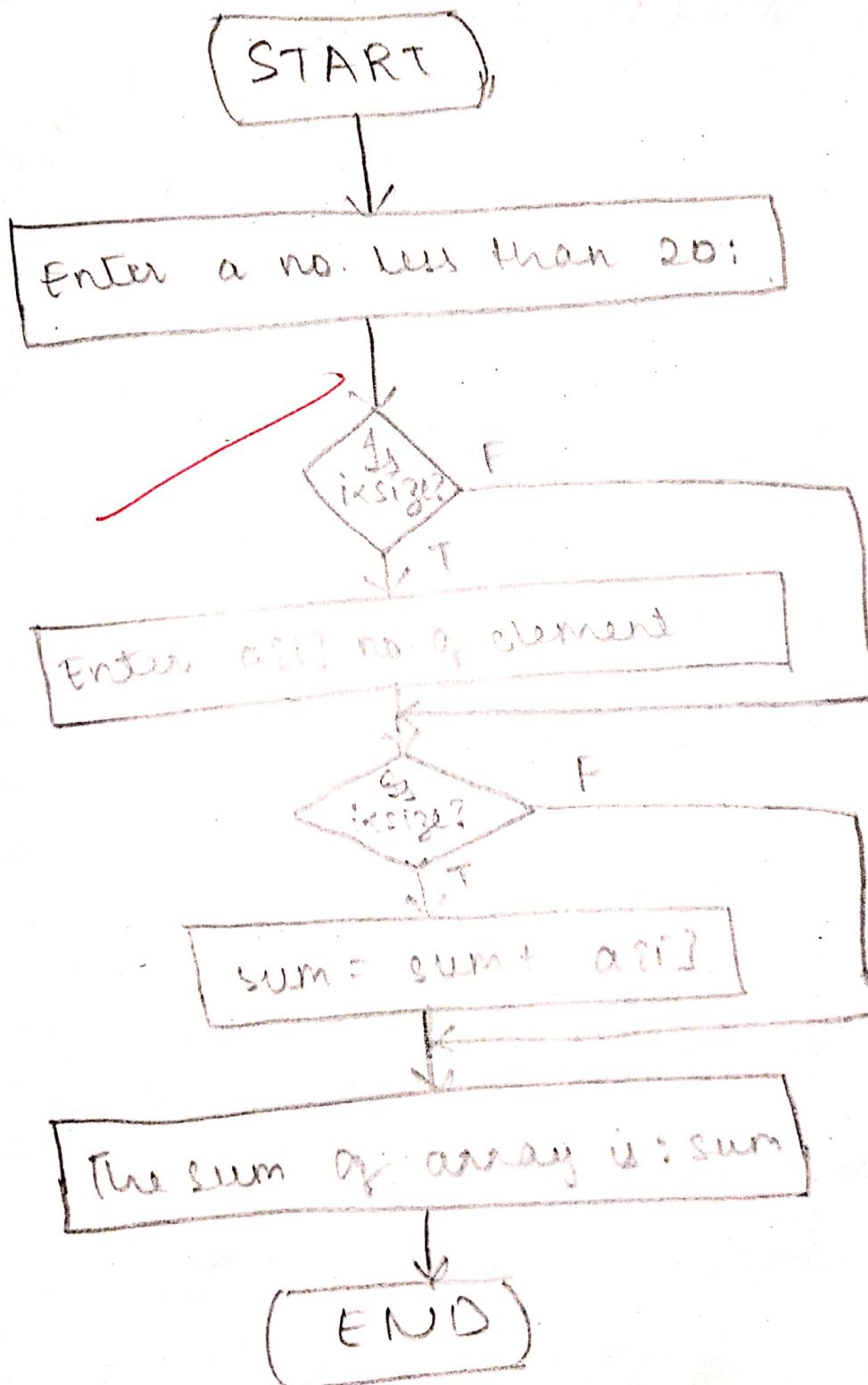
5

The generated fibonacci series is :

0 1 1 2 3

036

## FLOWCHART:-



ANSWER :-

OUTPUT :-

Enter no. less than 20 : 2.

Enter a[1] no. of element : 1

Enter a[2] no. of element : 2

Sum of array is : 3

Step 5:- Now again use the for loop to get the sum of all the elements of the array.

Step 6:- Print the final sum of array. Use the getch method and end the program.

Step 7:- END.

SOURCE CODE:-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a[20], sum = 0, size, i;
    clrscr();
    printf("Enter no. less than 20: ");
    scanf("%d", &size);
    for (i=0; i<size; i++)
    {
        printf("Enter a[%d] no. of element %d: ", i);
        scanf("%d", &a[i]);
    }
    for (i=0; i<size; i++)
    {
        sum = sum + a[i];
    }
    printf("Sum. of array is: %d", sum);
    getch();
}
```

~~14/02/2020~~

PRACTICAL-06

Aim:- To study use of functions.

#1] call by value:-

Source code:-

```
#include <stdio.h>
#include <conio.h>
int f1(int, int)
void main()
{
```

```
    int x, y, r;
```

```
    clrscr();
```

```
    printf("In Enter the value of x:");
```

```
    scanf("%d", &x);
```

```
    printf("Enter the value of y:");
```

```
    scanf("%d", &y);
```

```
    r = x + y;
```

```
    printf("Before function call the numbers are");
```

```
    printf("In x=%d It y=%d It R=%d", x, y, r);
```

```
r = f1(x, y); printf("In No.s after function call:");
```

```
printf("In x=%d It y=%d It R=%d", x, y, r);
```

```
getch();
```

y

```
int f1(int a, int b)
```

```
{
```

```
    int res;
```

```
a = 10;
```

```
b = 20;
```

```
res = a + b;
```

OUTPUT:-

038

Enter the value of  $x: 9$

Enter the value of  $y: 7$

Before function call the numbers are:

$x = 9 \quad y = 7 \quad R = 16$ .

Inside the function

~~$x = 16 \quad y = 20 \quad R = 30$~~

After  ~~$x = 16$~~

N.o.s after function call:

$x = 9 \quad y = 7 \quad R = 30$ .

```

printf("In & Inside the function");
printf("In x=%d It y=%d It R=%d", a, b, res);
return res;

```

3.

Algorithm:-

Step1:- START

Step2:- Include the corresponding header files. Declare the function along with its arguments. In the void main function, declare the required variables. Get the values for 2 variables from the user. Add the values of both the variables and assign it to another variable.

Step3:- Now print the values before call. Make the function call now. Print the values of the variables after the variables. Close the main function

Step4:- Now define the body of the declared function. Assign the values to two variables of your choice. Print the values of variables while inside the function. Return the value of the result.

Step5:- END.

880

```
#2) #include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char a[50];
    char b[50];
    clrscr();
    printf("In Enter a string :");
    gets(a);
    printf("In Enter a substring to be find in the string :");
    gets(b);
    if (strstr(a,b)==NULL)
    {
        printf("In STRING NOT FOUND");
    }
    else
    {
        printf("In STRING FOUND");
    }
    getch();
```

OUTPUT:-

Enter a string: Deepak Manya 1724. 040  
Enter a substring to find in the string: Deepak  
STRING FOUND.

Algorithm :-

Step1- START.

Step2- Import the corresponding header files. In the main function, declare two character array of size 50. Ask the user to input a string and a substring.

Step3:- Check whether the substring <sup>is found in</sup> the string. If the substring matches, print string found else ~~for~~ substring not found.

Step4- END.

PRACTICAL-07

Aim:- To study the use of structures.

#1] Algorithm :-

Step1:- START

Step2:- Import the corresponding libraries. In the void main function, declare structure of students of required variables such as name, roll no and percentage. Ask the user to insert the student details.

Step3:- Assign the inputs to the respective variables. Now print the corresponding student details to the user.

Step4:- END

Source code:-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    struct stud
    {
        char name[20];
        int rollno;
        float per;
    };
    struct stud s1;
```

OUTPUT :-

042

Enter the student name: Deepak Maurya.

Enter the student rollno: 1724

Enter the student percentage: 68.77

Roll No

1724

| Name          | Percentage |
|---------------|------------|
| Deepak Maurya | 68.77      |

#2] OUTPUT:-

ROUND

1724

1727

Name  
Deepak Manya  
Abhang Mane

Percentage

68.77

67.70

The details of s1:

1724

Deepak Manya

68.77

The details of s2:

1727

Abhang Mane

67.70

```

    clrscr();
    printf("Enter the student name: ");
    scanf("%s", &st1.name);
    printf("Enter the student rollno: ");
    scanf("%d", &st1.rollno);
    printf("Enter the student percentage: ");
    scanf("%f", &st1.per);
    printf("\nIt rollNo %s Name %s Percentage %f", st1.rollno,
          st1.name, st1.per);
    getch();
}

```

#2) Code :-

```

#include <stdio.h>
#include <conio.h>
void main()
{
    struct std
    {
        int rollno;
        char name[20];
        float per;
    } st1, st2;
    clrscr();
    printf("Enter the rollno: ");
    scanf("%d");
    printf("Enter the rollNo %s Name %s Percentage %f", st1.rollno,
          st1.name, st1.per);
    scanf("%d %s %f", &st2.rollno, st2.name, &st2.per);
    printf("Enter the rollNo %s Name %s Percentage %f", st2.rollno,
          st2.name, st2.per);
}

```

880

```
printf("In the details of s1:");  
printf("In %d %s %f", s1.rollno, s1.name, s1.per);  
printf("In the details of s2:");  
printf("In %d %s %f", s2.rollno, s2.name, s2.per);  
& getch();  
}
```

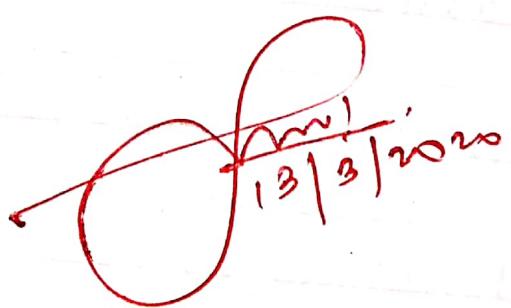
Algorithm :-

Step 1:- START

Step 2:- Import the corresponding library/header files. In the main function, create a structure of two students having common properties of name, rollno and percentage. Assign them as variables.

Step 3:- Accept the details of both the student and print them.

Step 4:- END.

  
13/3/2020