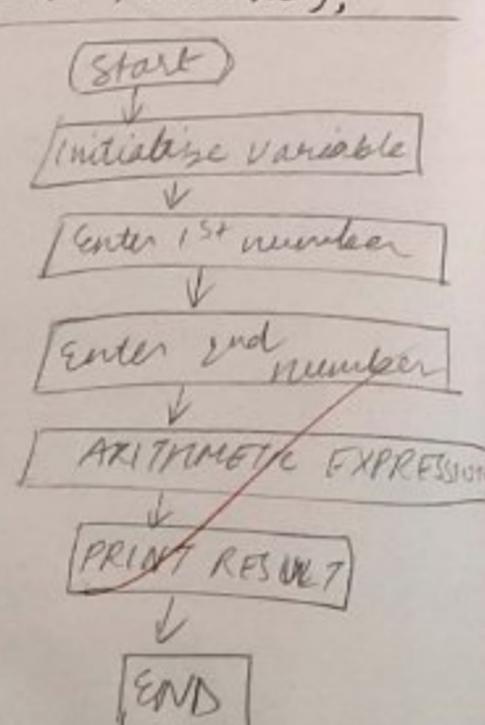


### INPUT:

```
#include <stdio.h>
#include <conio.h>
void main ()
{
    int roll_no;
    char name[20], mobile_no[10];
    float percentage;
    clrscr();
    printf("enter student's roll-no : \n");
    scanf("%d", &roll_no);
    printf("enter student's name : \n");
    scanf("%s", &name);
    printf("enter student's mobile-no : \n");
    scanf("%s", &mobile_no);
    printf("enter student's percentage : \n");
    scanf("%f", &percentage);
    printf ("student's name : %s\n", name);
    printf ("student's mobile-no : %s\n", mobile_no);
    printf ("student's percentage : %.2f\n", percentage);
    printf ("student's roll-no : %d\n", roll_no);
    getch();
}
```

### OUTPUT:

```
Enter student's roll-no : 1896
enter student's name : sakshi
enter student's mobile no: 75544459
enter student's percentage: 88.55
student's name : Sakshi
student's mobile-no: 75544459
student's percentage: 88.55
student's roll-no : 1896
```



### Practical-01

29

Aim: Write a C-Program to understand the basic datatypes and I/O.

#### Algorithm / Theory:

~~g+ work~~

- S1: Declare a variable, name , roll no as integer, also declare name, mobile no. as characters & percentage as float .
- S2: Use printf function to print questions for the user in order to give input .
- S3: Use scanf function to read user's input & store in its allocated memory .
- S4: Again, use printf function to display the output .

CONCLUSION: The given program gives user an idea about how built-in datatypes work in c and also about how user can give input & display output .

*Nassidi*

## PRACTICAL-02

Q1. (a) Write a program on operators of expression.

Algorithm:

- S1: Declare a variable name for 1<sup>st</sup> & 2<sup>nd</sup> integers.
- S2: Use `scanf()` to receive input from user.
- S3: Now to add 2 nos. given by user, use the expression : `num1 + num2`.
- S4: Now to subtract 2 nos. given by user, use expression : `num1 - num2`.
- S5: Again use expression `num1 * num2` if user wishes to multiply 2 inputs.
- S6: Again use expression `num1 / num2` if user wishes to divide the 2 inputs.
- S7: Now use `printf()` to display the output.

(a) Program for DYNAMIC CALCULATOR:-

30

```
include <stdio.h>
include <conio.h>
void main()
{
    int x, y, z;
    clrscr();
    printf("Enter any two numbers\n");
    scanf("%d", "%d", &x, &y);
    z = x + y;
    printf("Sum of two numbers = %d\n", z);
    z = x - y;
    printf("Subtraction of two numbers = %d\n", z);
    z = x / y;
    printf("Division of two numbers = %.1f\n", z);
    z = x % y;
    printf("Modulus of two numbers = %d\n", z);
    z = x * y;
    printf("Multiplication of two numbers = %d\n", z);
}
```

Output:

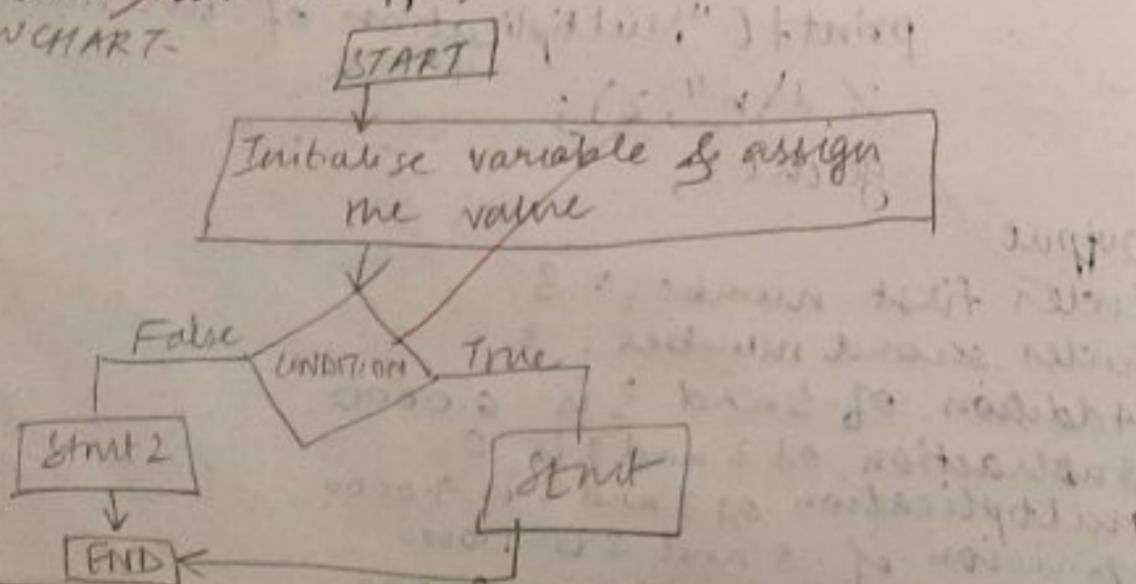
```
Enter first number: 3
Enter second number: 3
Addition of 3 and 3 is 6.0000
Subtraction of 3 and 3 is 0
Multiplication of 3 and 3 is 9.0000
Division of 3 and 3 is 1.0000
Modulus of 3 and 3 is 0.0000
```

Q1  
(a) Program for IF statement —

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i=10;
    clrscr();
    if (i>15)
        printf("10 is less than 15\n");
    else
        printf("I am not in it\n");
    getch();
}
```

Output:

"I am not in if."



PRACTICAL-03

31

Q1 Write a program on decision statements.

Theory:

(a) Write a program in C to explain IF statement.

Algorithm:

- S1: Declare a variable as integer and assign it 20.
- S2: Now, to compare whether 20 is greater than 15, use if statement.
- S3: If the condition is true, print that 20 is less than 15 & if condition is false skip the if statement and print "I am not in it"

(b) Write a program in C to explain if else statement.

Algorithm:

- S1: Declare a variable as integer and assign its value as 20.
- S2: Now to compare the given value if its greater or not, use if else conditional statement.

Q3: If condition is true then print "20 is less than 15" or if condition is false then print "20 is greater than 15".

(C) Write a program in C to explain nested if statement.

#### Algorithm:

S1: Declare a variable as integer and assign value i.e. 20.

S2: Now use nested if logic to compare if given no. is greater or not.

S3: If first condition is true then go to second condition if second condition is also true then print that 20 is greater than 12 & 15.

If one of the conditions are not true then skip the part and print 20 is greater than 12 & 15.

(B) Program for IF ELSE statement :- 32

```
#include <stdio.h>
#include <conio.h>
void main ()
```

```
{ int i=20;
clrscr();
if (i<15)
```

```
{ printf ("i is smaller than 15\n");
}
```

```
else
```

```
printf ("i is greater than 15\n");
}
```

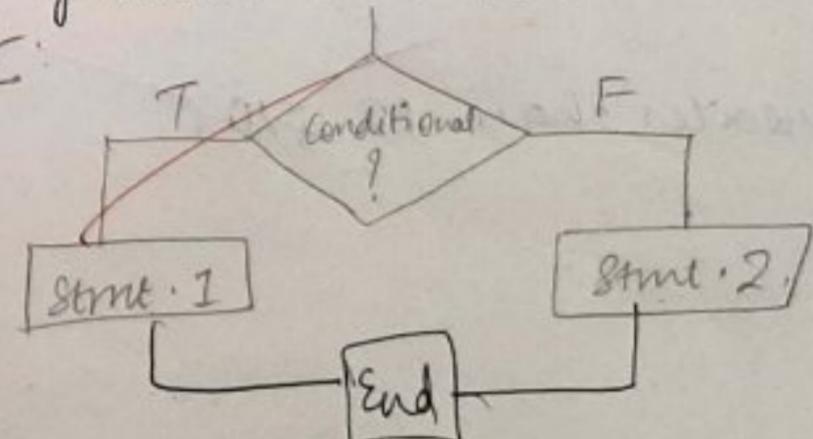
```
getch();
```

3.

Output :

20 is greater than 15.

Flowchart:



36 (C) Program for NESTED IF :-

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i=10;
    clrscr();
    if (i==10)
    {
        if (i<15)
            printf("i is smaller than 15\n");
        if (i<12)
            printf("i is smaller than 15\n");
        else
            printf("i is greater than 15\n");
    }
}
```

getch();

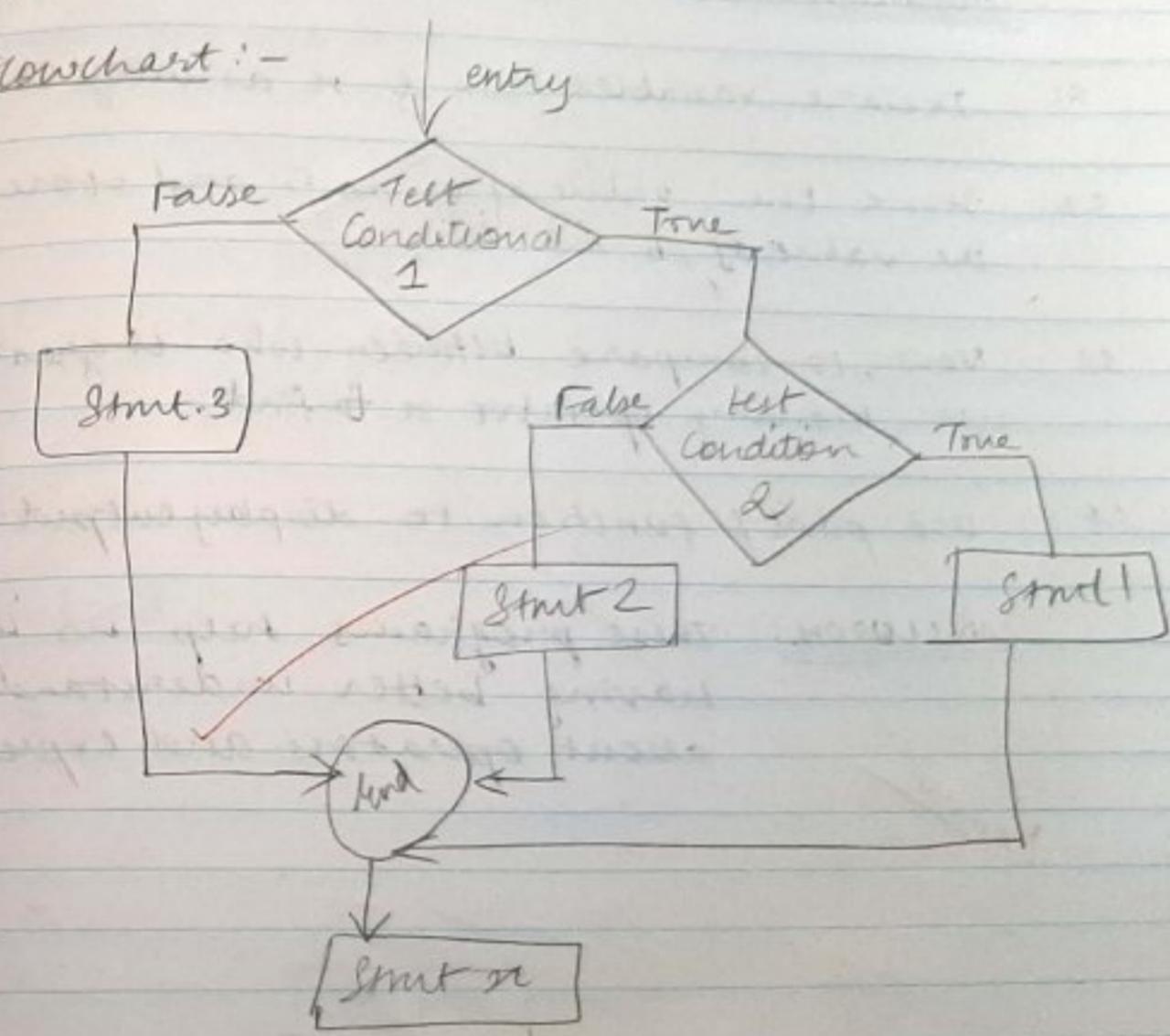
Output:-

10 is greater than 12 & 10.

CONCLUSION: These programs help us to understand the working of if, ifelse & nested if conditional statements.

Xsmall

Flowchart:-



Practical - 02

(B) Write a program in C to explain ternary operator :

Algorithm:

- S1: Declare variables a, b & n as integers.
- S2: Store the value of a as 5 and store the value of b as 15.
- S3: Now, to compare between who is greater use ternary operator or to find.
- S4: Use printf function to display output.

Conclusion: These programs help us in having better understanding about operators and expressions.

*Nimade*

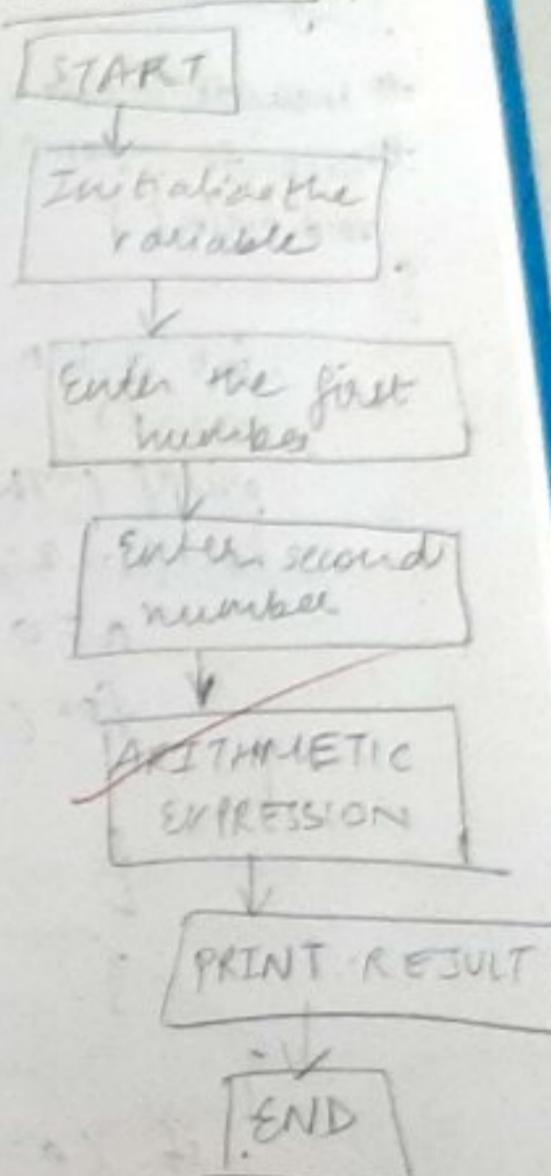
## (B) code for TERNARY OPERATOR :-

31

```
// ternary operator
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, b, n;
    clrscr();
    a = 5;
    b = 15;
    n = (a > b) ? a : b;
    printf("%d", n);
    getch();
}
```

Output:

15.

\* FLOWCHART

Program:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a, i, n;
    clrscr();
    printf ("The prime numbers are: ");
    for (i = 2; i <= 2; i++)
    {
        a = 0;
        for (n = 2; n < (i+1)/2; n++)
        {
            if (i * n == 0)
            {
                a++;
            }
        }
        if (a == 0)
        {
            printf ("%d \n", i);
        }
    }
    getch();
}
```

PRACTICAL-04

aim: To display prime numbers using for loop.

ALGORITHM:

- S1: Initialize three variables out of which two are loop variables and one is count variable.
- S2: Initialize a for loop from 2 - 50. Set the count variable to 0.
- S3: ~~Put initialize loop within the loop in S2 that goes from 2 to first loop variable i/2.~~
- S4: Use the if conditional statement to check whether 1st loop variable  $i$ , 2nd variable  $n == 0$ . If true increment count variable by 1.
- S5: Come out of second loop and check whether the count variable is 0 if ~~not~~ true, print the number.

SC: Terminate the program.

CONCLUSION: Prime numbers were displayed using for loop.

\* OUTPUT: The prime numbers are: 2 36

3

5

7

11

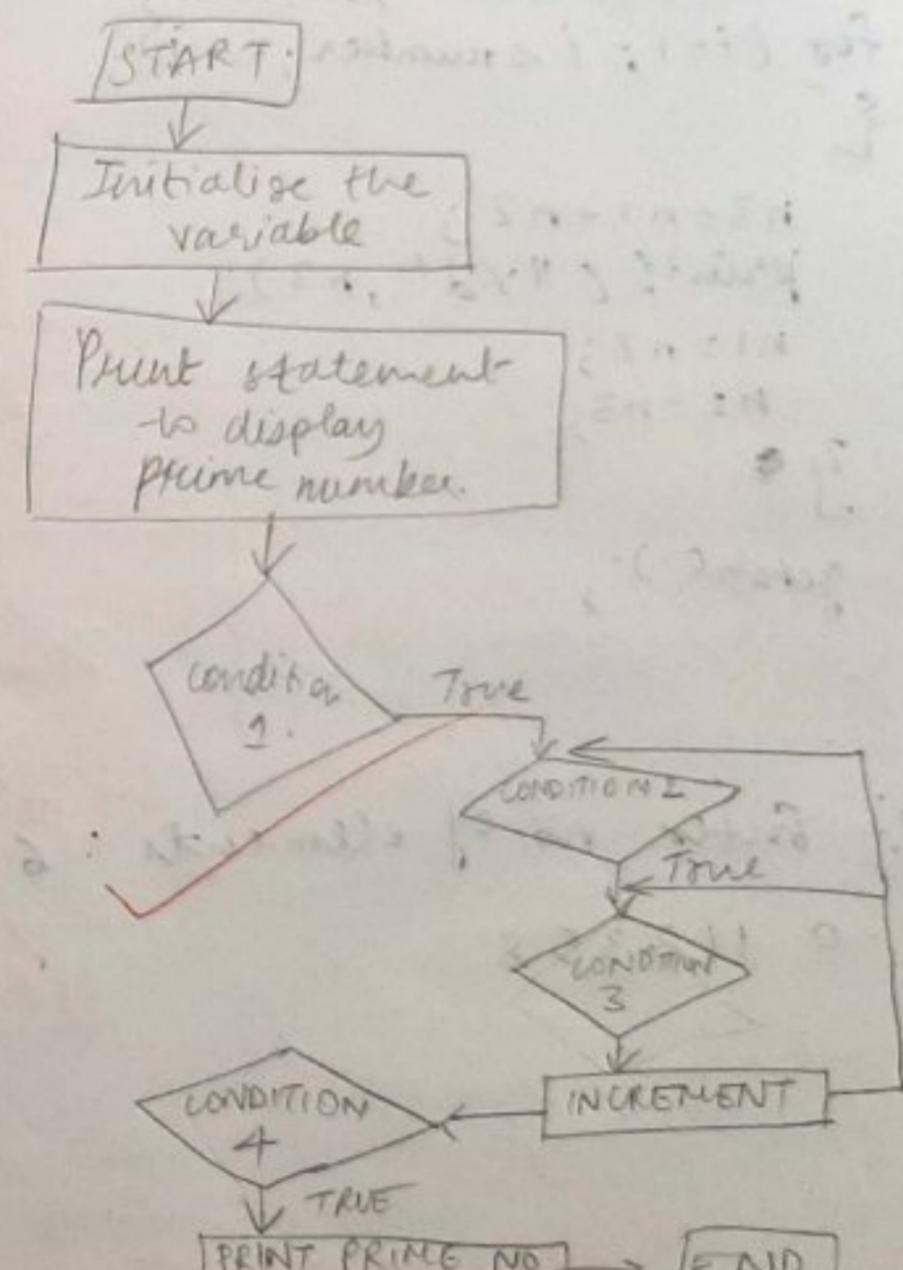
13

15

17

19.

### \* FLOWCHART



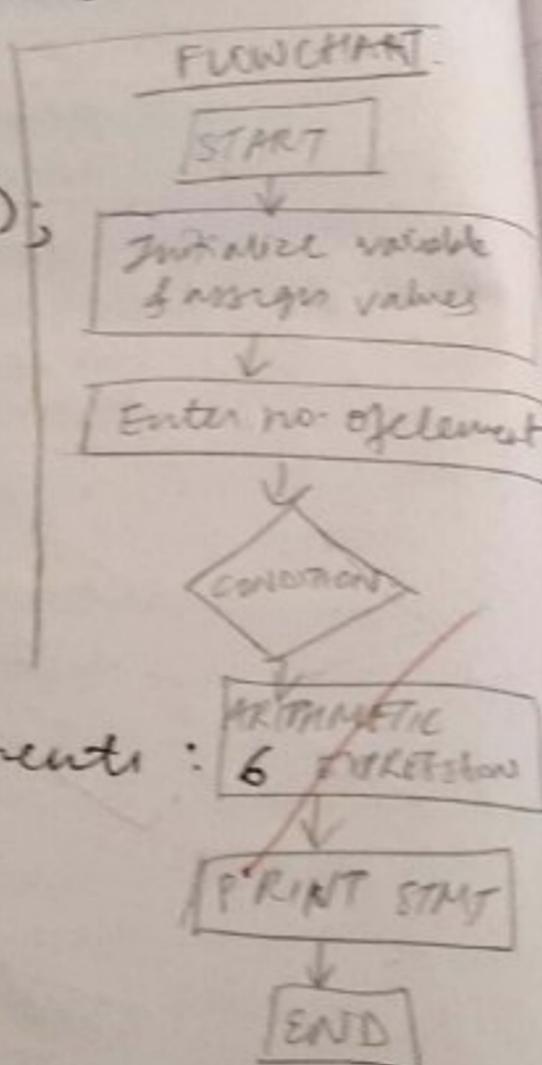
Program:

```
#include < stdio.h>
#include <conio.h>
void main()
{
    int n1=0, n2=1, n3, i, number;
    printf("no. of elements \n");
    scanf("%d", &number);
    printf("y.d\n", n1, n2);
    for (i=1; i<number; ++i)
    {
        n3=n1+n2;
        printf("y.d", n3);
        n1=n2;
        n2=n3;
    }
    getch();
}
```

3

\*Output: Enter no. of elements :

0 1 1 2 3 5 8



(a) Aim: Write a program on Fibonacci series  
Algorithm:

- 51: Start the Turbo C program.
- 52: Declare variables  $n_1, n_2, n_3, i, \text{number}$ .
- 53: Initialize the variable  $n_1=0, n_2=1, \text{number}=0$ .
- 54: Enter the number of terms of fibonacci series to be printed.
- 55: Print first terms of series as  $n_1=0, n_2=1$ .
- 56: Use for loop as per following step.  

$$\begin{aligned} n_3 &= n_1 + n_2 \\ n_1 &= n_2 \\ n_2 &= n_3 \end{aligned}$$
 Increase the value of  $i$  element each time by 1.
- 57: Print value of numbers.
- 58: End.

Conclusion: Thus, we have successfully created fibonacci series on turbo C.

(c) Aim : Write a C program on following expression :

1  
2 3  
4 5 6  
7 8 9 10  
11 12 13 14 15

ALGORITHM :

- S1: Start Turbo C program.
- S2: Declare variable rows, i, j, number = 1.
- S3: Display number rows.
- S4: Enter the for loop as ~~for (i=1; i<=rows; i++)~~.
- S5: Now create nested - for loop as ~~j=1; j<=i; j++~~.
- S6: Display the numbers as per user enters the sequence from i=1.
- S7: Increment the no. from 1.
- S8: Display space.

\*Program :

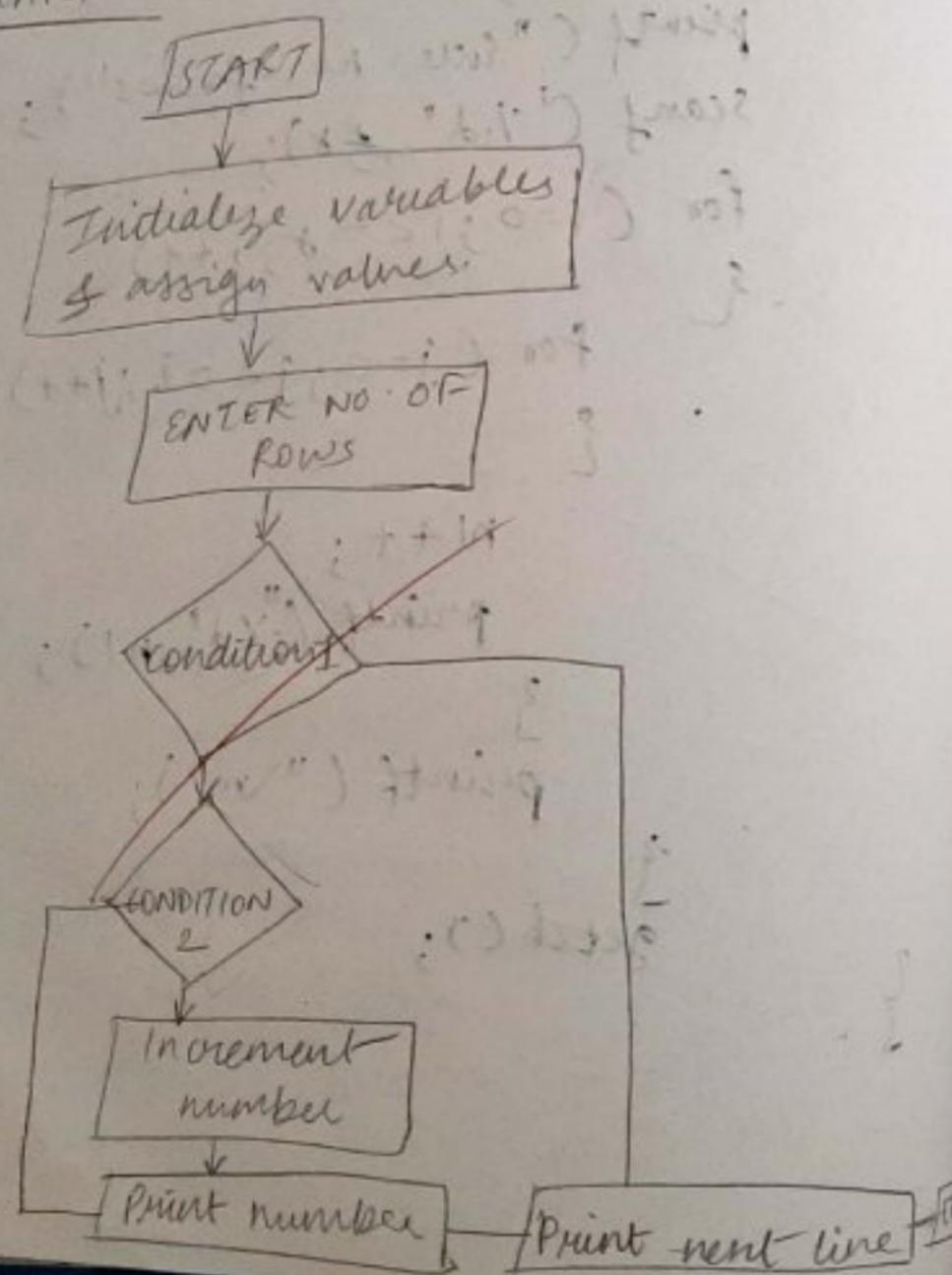
```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n1=0, n2=1, n3, i, number;
    printf ("Enter no. of elements\n");
    scanf ("%d");
    int n1=0, s, i, j;
    clrscr();
    printf ("Enter no. of rows");
    scanf ("%d", &s);
    for (i=0; i<=s; i++)
    {
        for (j=0; j<=i; j++)
        {
            n1++;
            printf ("%d", n1);
        }
        printf ("\n");
    }
    getch();
}
```

\* Output:

Enter the number of rows: 3

1  
2 3  
4 5 6  
7 8 9 10.

\* FLOWCHART



39: End.

Conclusion: Thus, we have successfully executed given expression on Turbo C using for loop.

Netted

Nimodi

### PRACTICAL 08

(Q) Aim: write a program to find largest no. among the array.

#### Algorithm

- S1: Start the program C.
- S2: Declare variable i of int. array a[10].
- S3: Enter for loop at i=0, i<10 and use value of a[i] in i<10. Exit for loop.
- S4: Enter for loop at i=0, i<10, use if condition statement to check if a[0]< a[i] if true, put a[0]=a[i].
- S5: Run the above for loop for i<10, exit the loop.
- S6: Terminate the loop.

Conclusion: Hence, we have successfully learnt to find the largest number among the array.

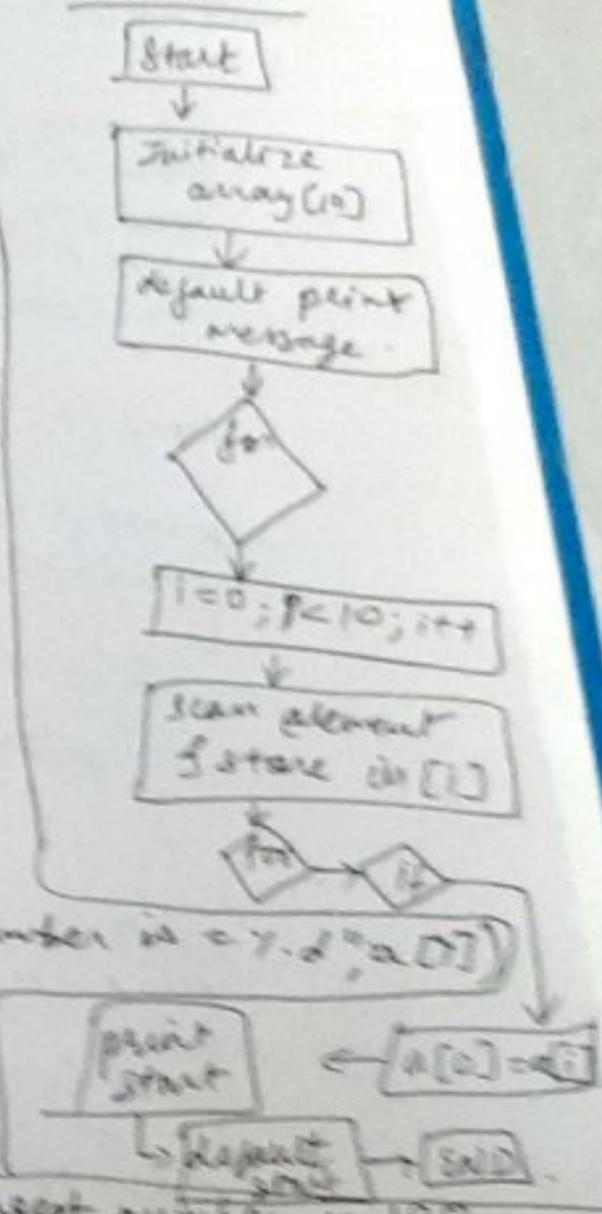
```
#include <stdio.h>
#include <conio.h>
void main()
```

```
{ int a[10], i;
clrscr();
printf("Enter element of arr");
for (i=0; i<10; i++)
{
    scanf("%d", &a[i]);
}
for (i=0; i<10; i++)
{
    if (a[0] < a[i])
    {
        a[0] = a[i];
    }
}
printf ("The largest number is %d", a[0]);
getch();
```

Output: 12 21  
23 12 22  
2 55 100  
3

40

#### Flowchart:



The largest number is 100.

CODE:

```

#include <stdio.h>
#include <conio.h>
void main()
{
    int array[100], i, num;
    printf("Enter the size of array\n");
    scanf("%d", &num);
    printf("Enter the elements in array\n");
    for (i=0; i<num; i++)
    {
        scanf("%d", &array[i]);
    }
    printf("Enter even no. in array");
    for (i=0; i<num; i++)
    {
        if (array[i] % 2 == 0)
        {
            printf("%d", "array[i]");
        }
    }
    printf("Odd no. in the array are");
    for (i=0; i<num; i++)
    {
        if (array[i] % 2 != 0)
        {
            printf("%d", "array[i]");
        }
    }
    getch();
}

```

**Output:**  
 Enter the size of array  
 4  
 Enter the elements of array  
 1 2 3 4  
 Even no. → 2  
 Odd no. → 1 3 5

(2) WAP to print number of odd & even number in the array.

\* Algorithm:

S1: Create an array. Take its size from user & define an element using loop.

S2: Display size of array from the user.

S3: Display element of array entered by user.

S4: Take the initiator in for loop using which all the elements of array are existing.

S5: Display even no. from the array using for loop if  $\text{array}[i] \% 2 == 0$

S6: Display odd no. → for if  $\text{array}[i] \% 2 \neq 0$

S7: Close / Terminate Turbo C.

CONCLUSION: Hence, we have learnt to find the odd or/and even number in the array.

(3) Aim is to find the sum or average of elements in an array.

\* Algorithm:

S1: Start Turbo C application.

S2: Declare int variable n, i. Initialize num[100], sum = 0.0, avg.

S3: Using for loop at i=0; i<n; i++. Give print message and increment by 1.

S4: Declare sum variable and store it by adding num[i]

S5: Average is sum divided by n.

S6: Give print statement for average and sum.

S7: Terminate the program.

Conclusion: Thus, we have executed the program successfully.

Normal

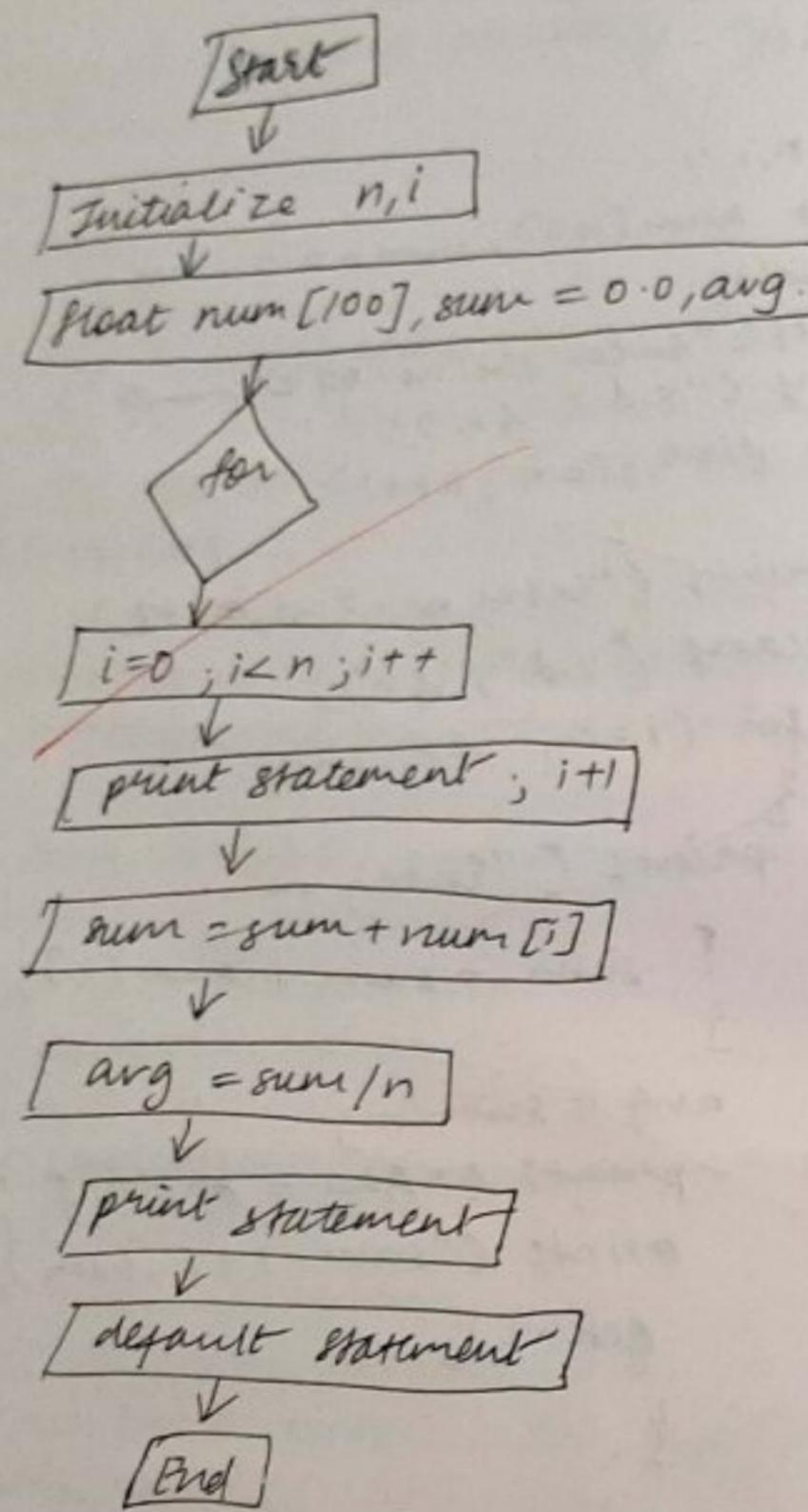
CODE:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, i;
    float num[100], sum = 0.0, avg;
    clrscr();
    printf("Enter the no. of elements");
    scanf("%d", &n);
    for (i=0; i<n; i++)
    {
        printf("Enter no. %.2f", i+1);
        scanf("%f", &num[i]);
    }
    printf("Enter no. ");
    sum = sum + num[i];
}
avg = sum/n;
printf("Avg = %.2f", avg);
printf("sum = %.2f", sum);
getch();
```

Output:

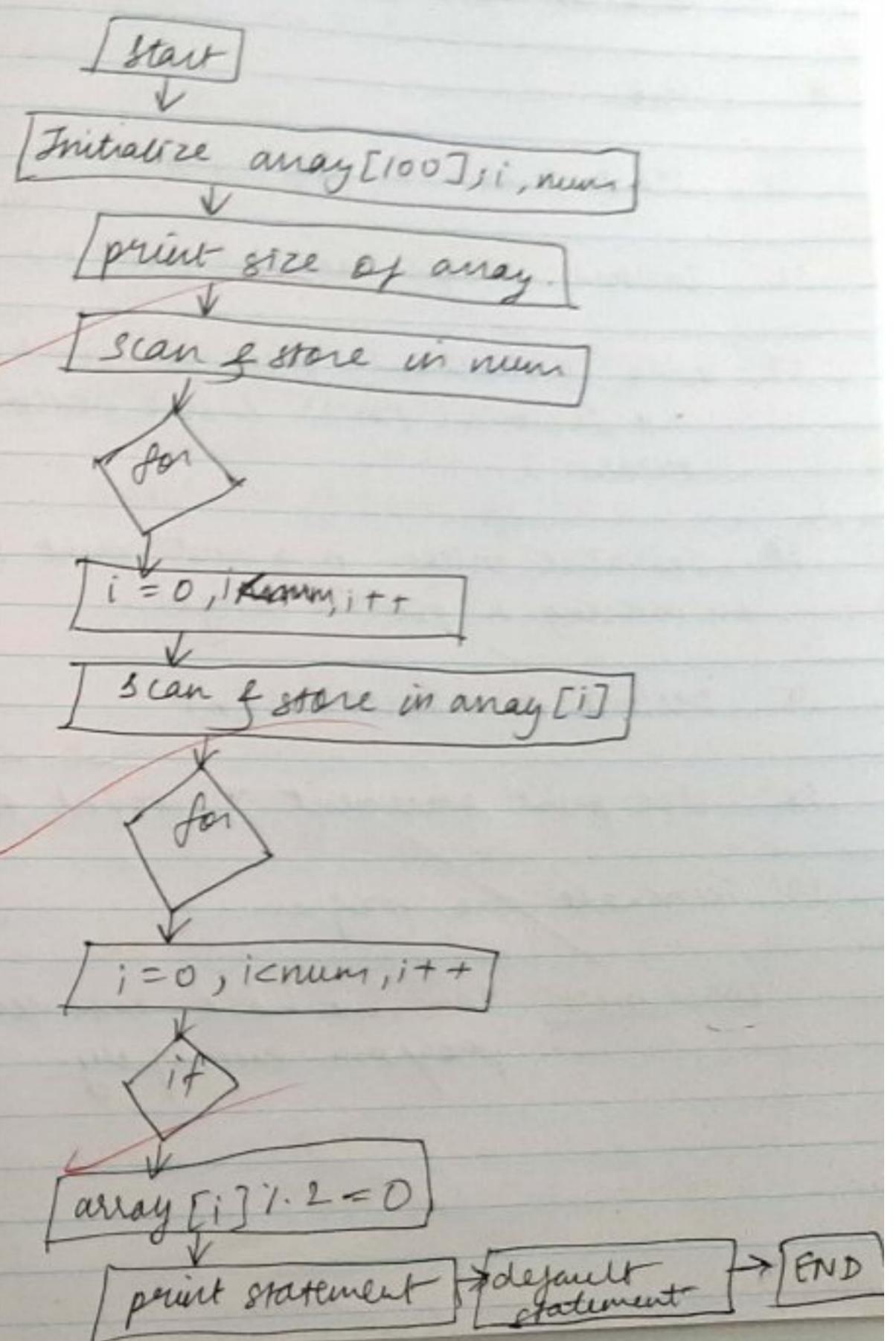
```
Enter the no. of elements: 4
Enter the no. again: 3
1. Enter no.: 4
2. Enter no.: 5
3. Enter no.: 6
Average = 5
sum is 15
```

51 \* Flowchart:



43

\* Flowchart for 5(b):



## PRACTICAL - 06

### Aim:

(i) Factorial of a number using recursion.

### Algo :

S1: Start Turbo C application.

S2: Declare integer factorial (int n).

S3: Using if statement, check if  $n \geq 1$  if return  $n * \text{factorial}(n-1)$  if else statement, return 1.

S4: Initialize integer n, a and print statement by entering a positive integer.

S5: Declare a = factorial (n)

S6: Use print statement "factorial of %d is %d".

S7: Terminate the program.

CONCLUSION: Thus, we have executed the program successfully.

### CODE:

```
#include <stdio.h>
#include <conio.h>
int factorial(int n)
{
    if (n >= 1)
        return n * factorial(n-1);
    else
        return 1;

}

void main()
{
    int n, a;
    clrscr();
    printf("enter a positive integer : ");
    scanf("%d", &n);
    a = factorial(n);
    printf("\n factorial of %d is : %d", n, a);
    getch();
}
```

### output:

enter a positive integer: 6  
Factorial of 6 is 720.

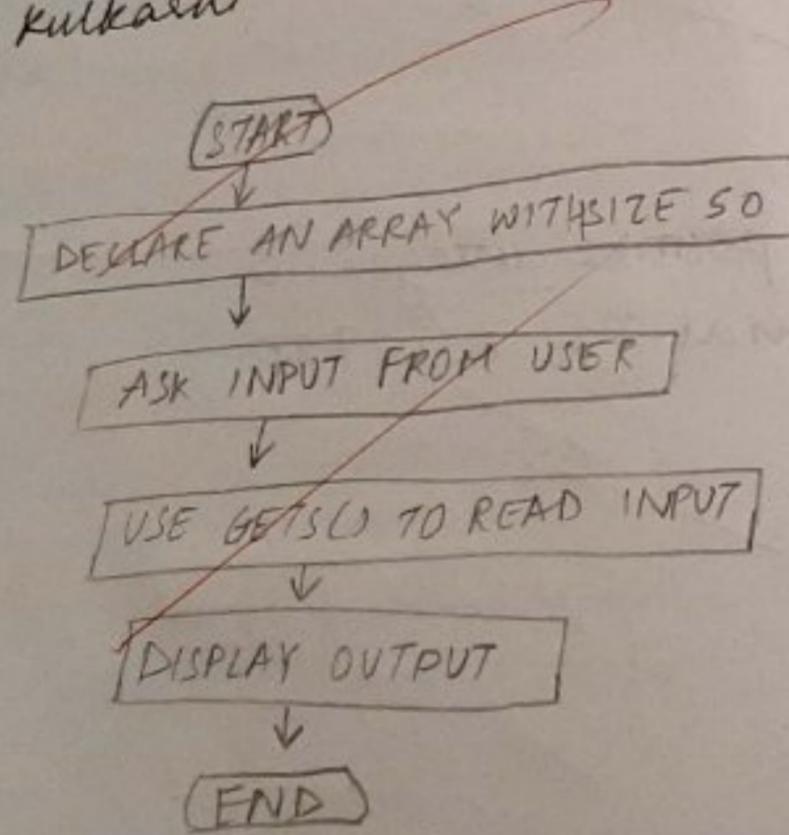
→ last page

20  
CODE:

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
void main()
{
    char name[50];
    printf ("\n please enter your name:");
    gets (name);
    printf ("%s", name);
    getch();
}
```

Output:  
 please enter your name: SakshiKulkarni  
 Sakshi . Kulkarni

+ Flowchart:



21  
AIM: WAP to which shows the use of gets() function  
ALGO:

- s1: Open Turbo C application.
- s2: Initialize character name [50].
- s3: Use print statement to display your name.
- s4: Use gets (name) to display your name.
- s5: Use print statement to finally display entered name on output screen.
- s6: Terminate the program.

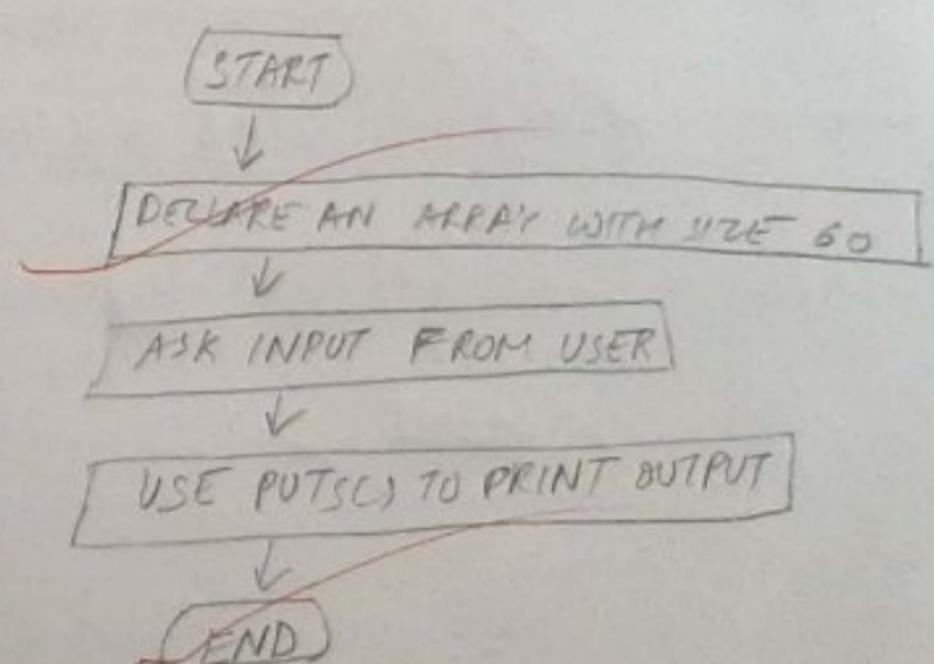
CONCLUSION: Thus, we have executed the program successfully.

CODE:

```
#include < string.h >
#include < stdio.h >
#include < conio.h >
void main()
{
    char name [60];
    clrscr();
    printf ("Enter your name : ");
    gets(name);
    printf ("Your name is %s", name);
    getch();
}
```

Output:

Enter your name : Sakshi  
Sakshi

\*Flowchart:Aim:

- (3) NAP 10 which shows the use of puts() function.

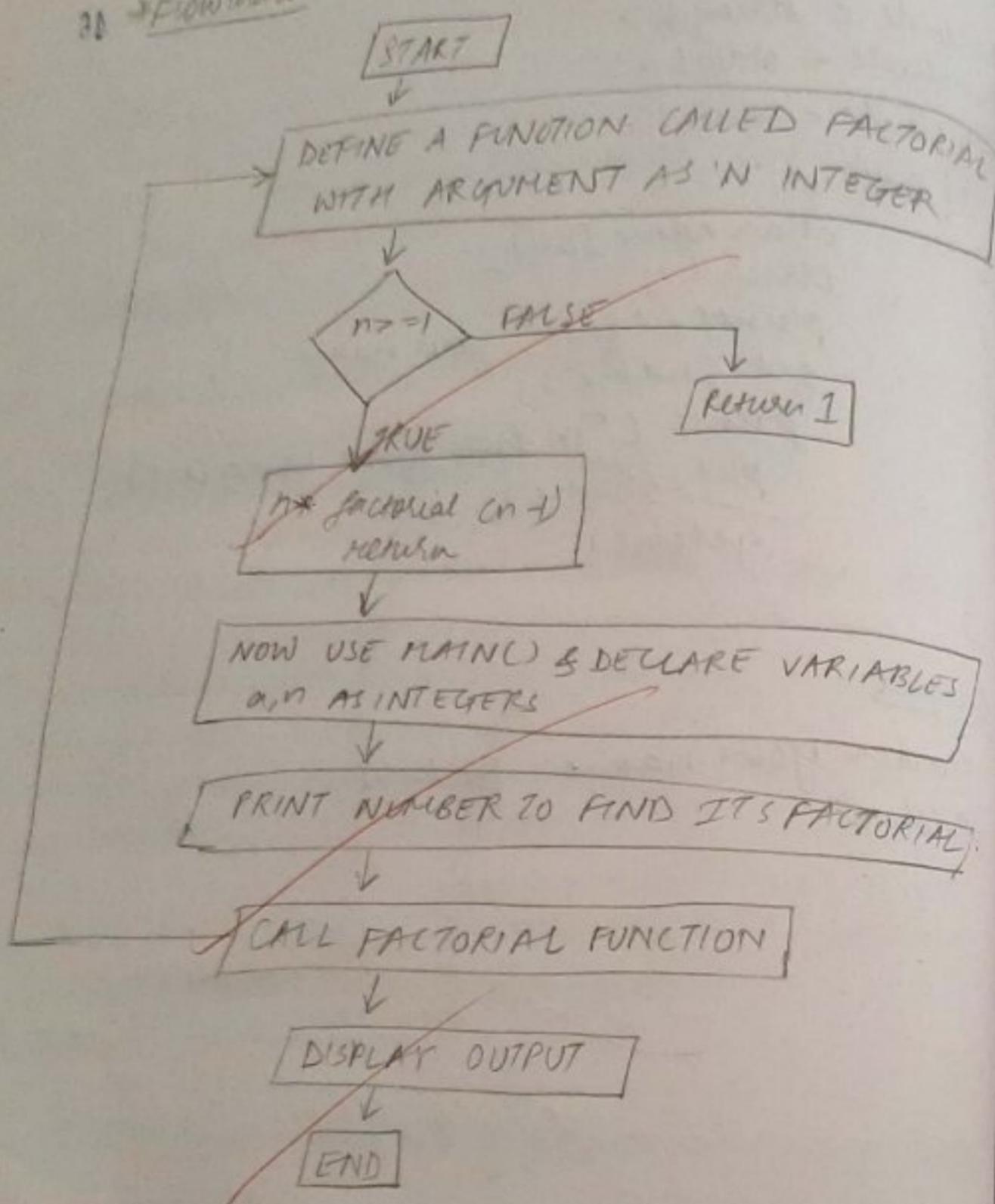
Algorithm:

- s1: Open turbo c application.
- s2: Initialize character name [60].
- s3: Use print statement to enter your name.
- s4: Declare gets (name).
- s5: Use print statement to print the entered name.
- s6: Use puts(name) to finally print centered name onto the output screen.

Conclusion: Thus, we have successfully executed the program.

Thmadi

20 Flowchart



PRACTICAL-07

17

(A)

Aim: Start turbo C swapping of array.

Algorithm:

- S1: Start Turbo C program.
- S2: Declare a function prototype with 2 integer pointers as argument before entering main().
- S3: Declare 2 variables and accept the value from user. Print repetitive value using printf().
- S4: For the address of the application as argument for the function.
- S5: Print the respective value of variable.
- S6: Use basic algorithm in the function definition but instead of normal variable user.

Output:

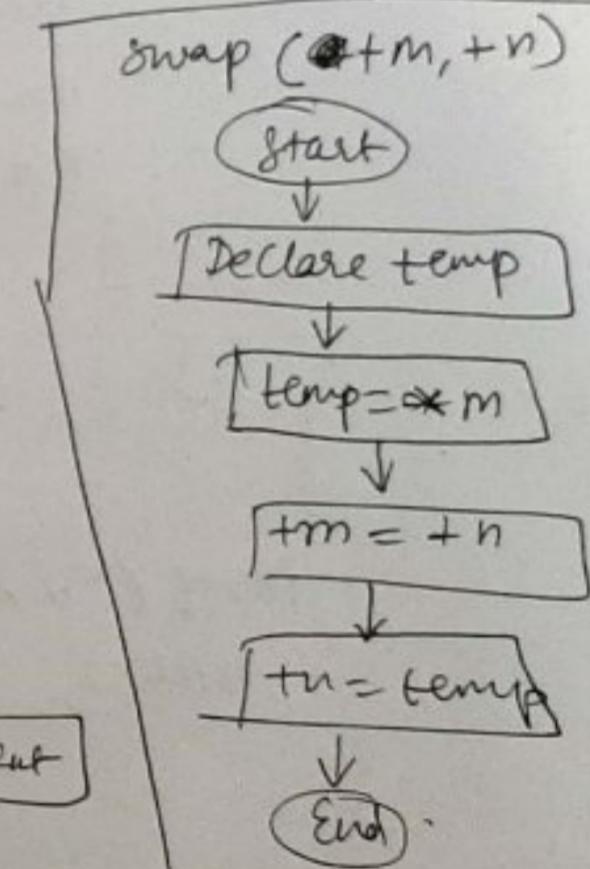
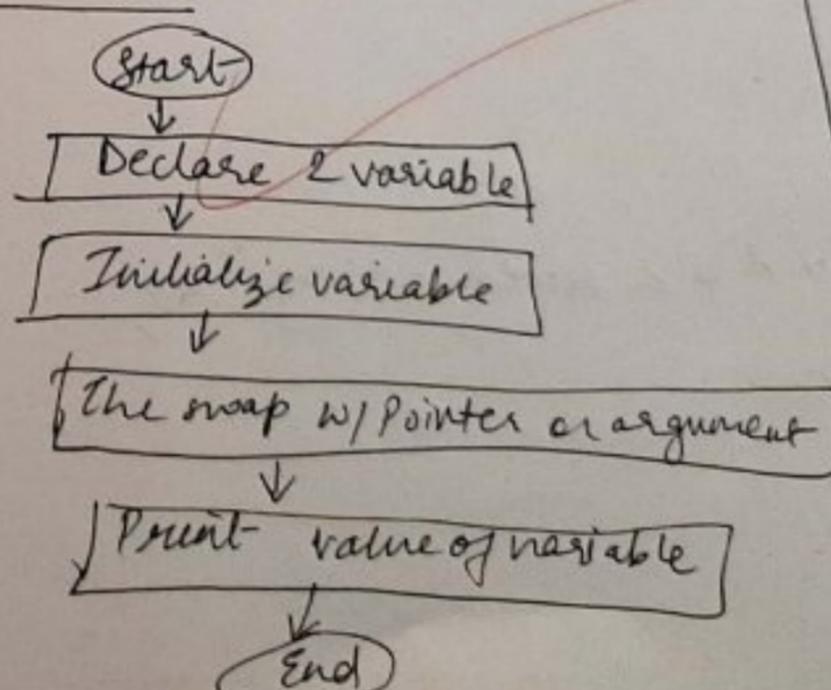
Enter 2 nos. to be swapped : 29 99

The no. before swapping are 29 and 99.  
The no. after swapping are 99 and 29.

Conclusion: we have successfully executed  
the program

#include <stdio.h>  
#include <conio.h>  
void swap (int \*m, int \*n);  
void main ()  
{  
 int m, n;  
 clrscr();  
 printf ("Enter 2 nos. to be swapped.");  
 printf ("Value of before swapping are %d and  
 %d respectively.", m, n);  
 getch();  
}  
void swap (int \*m, int \*n)  
{  
 int temp;  
 temp = \*m;  
 \*m = \*n;  
 \*n = temp;  
}

Flowchart:



CODE:

```
void sort (int n, int *p)
#include <stdio.h>
#include <conio.h>
void main()
{
    int a [10], i, temp;
    clrscr();
    for (i=0; i<10; i++)
    {
        for (j=0; j<10; j++)
        {
            if (*a > *a+1)
            {
                temp = *a+1;
                *a+1 = *a;
                *a = temp;
            }
        }
    }
    printf ("d is a sorted array ", a);
    getch();
}
```

49

(B)

Aim: Sorting of array using pointer.

Algorithm:

- S1: Initialize an integer array and temp variable.
- S2: Run nested loop or  $i = 0$  len(a) and  $\text{OR } i = 0$  to  $\text{len}(a) - 1$ .
- S3: If  $*a > *a + 1$ , swap two values using basic swapping logic.
- S4: Print the swapped array.
- S5: Terminate the program.

Output:

Insert element into array:

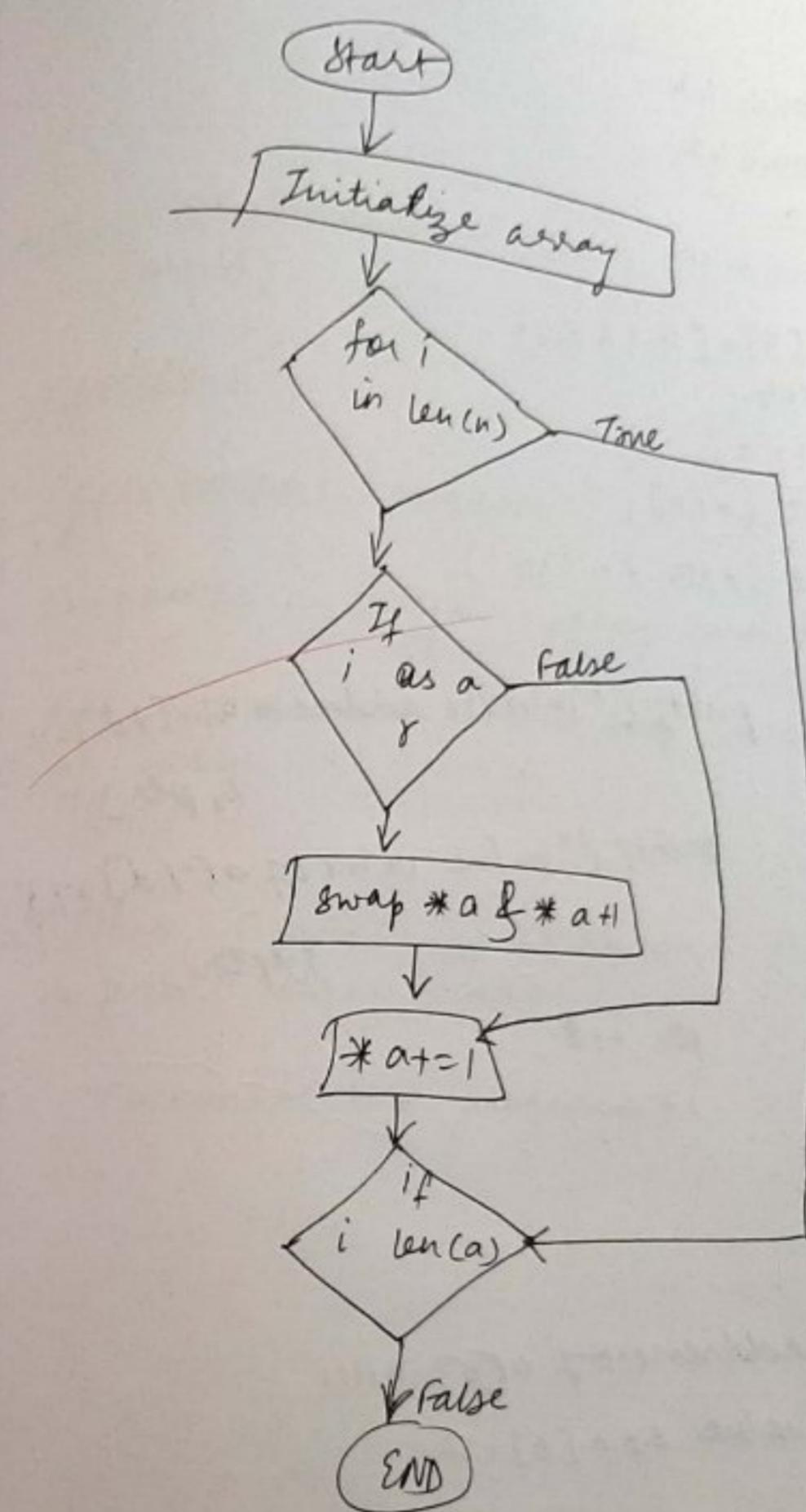
1  
4  
5  
8  
2  
3  
6

{1, 2, 3, 5, 6, 8, 9, 11}  
is the sorted array.

\* Conclusion: we have successfully executed program.

# Flowchart:

50



Q2 Code:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int a[5] = {7, 9, 4, 8, 2};
    int *ptr;
    int i = 0;
    ptr = &a[0];
    while (*ptr != '\0')
    {
        printf("\n\nThe address of a[%d] = %u", i, ptr);
        printf("\n\nThe value of a[%d] = %u", i, *ptr);
        ptr++;
        i++;
    }
}
```

Output - The address of a[0] = 1111

The value of a[0] = 7

51

D

Aim: One-Dimensional array representation using pointer.

Algorithm:

S1: Open Turbo C program.

S2: Initialize an integer array and a variable.

S3: Run a ~~variable~~ while loop with i=0 to length of array.

S4: Print the data of array and then use pointer to print array location.

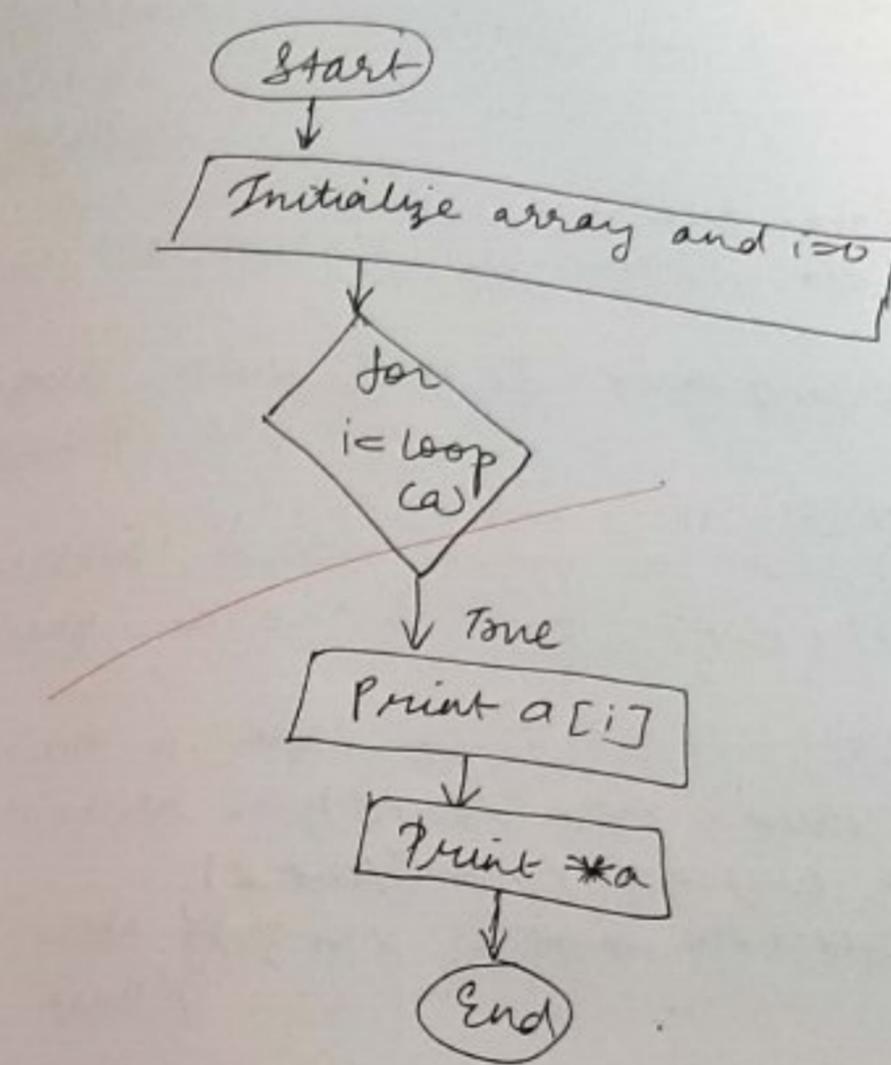
S5: Terminate the program.

\* CONCLUSION:

*Thmself*  
we have successfully executed the program.

52

\* Flowchart:



SCODE:

```
#include <stdio.h>
#define MAX_SIZE 100
int main()
{
    char str1[MAX_SIZE];
    char str2[MAX_SIZE];
    int i;
    printf("Enter any string : ");
    gets(str2);
    for(i=0; str1[i]!='\0'; i++)
    {
        str2[i] = str1[i];
    }
    str2[i] = '\0';
    printf("First string = %s\n", str1);
    printf("First string copy = %s\n", str2);
    printf("Total characters copied = %d\n", i);
    return 0;
}
```

Output:

Enter any string : There are 7 days in a week.  
 First string: There are 7 days in a week.  
 String copy : There are 7 days in a week  
 Total characters copied: 26

PRACTICAL-09

53

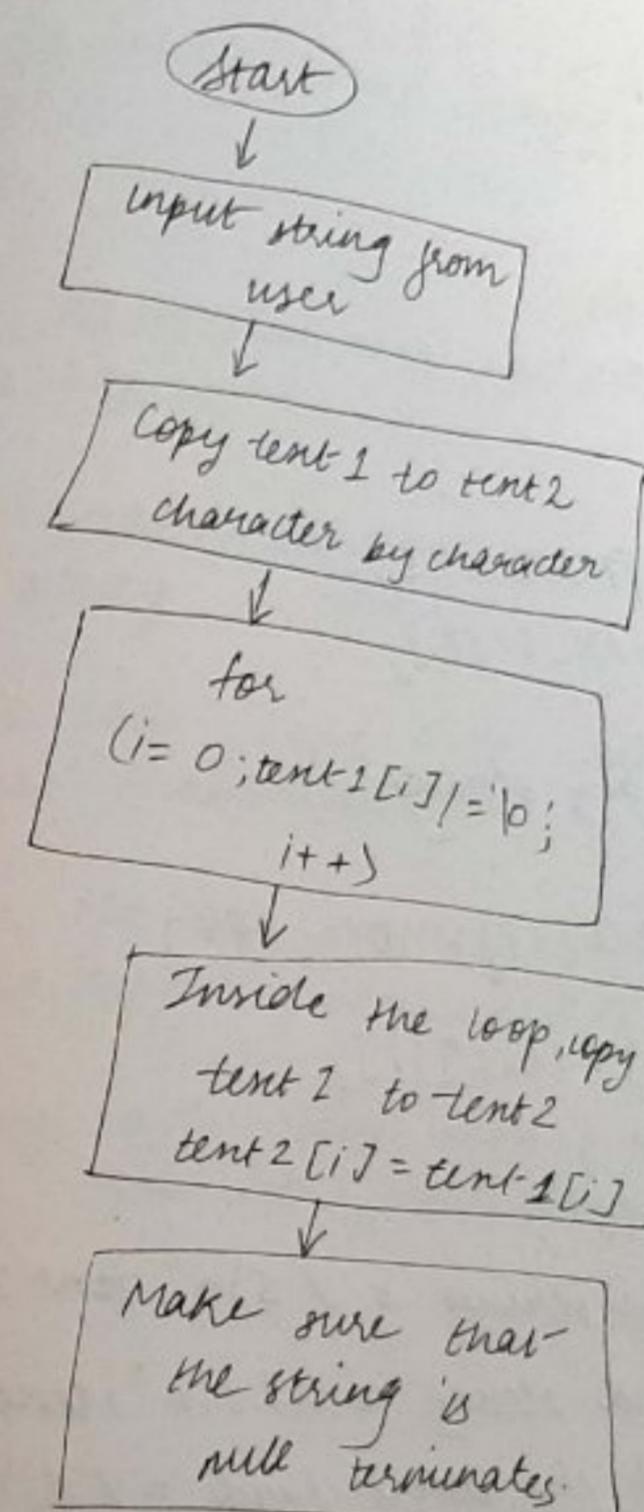
- (A) Program using string library functions for copying string.
- Algorithm:
1. Open the Turbo C applications.
  2. Input string from user and store it to some variable say str1.
  3. Declare another variable to store copy of first string in str2.
  4. Run a loop from 0 to end of string. The loop structure should be like: for(i=0; str1[i]!='\0'; i++)
  5. Inside the loop for each character in str1 copy to str2 - say str2[i] = str1[i]
  6. Finally after loop make sure the copied string end with NULL characters ie; str2[i] = '\0'.

CONCLUSION:

Hence, we have successfully performed string copy program.

\* Flowchart:-

54



- (B) WAP to show string library functions, say strcpy().
- Algorithm:
- S1: Input string from user and store it to some variable say text1.
  - S2: Declare another variable to store copy of first string in text2.
  - S3: Run a loop from 0 to end of string. The loop structure should be like : `for (i=0; text1[i]!='\0'; i++)`
  - S4: Inside the loop for each character in text1 copy to text2 ; say `text2[i] = text1[i];`
  - S5: Finally after loop make sure the copied string end with NULL character, i.e. `text2[i] = '\0'`

28 CODE :

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
#define MAX_SIZE 100

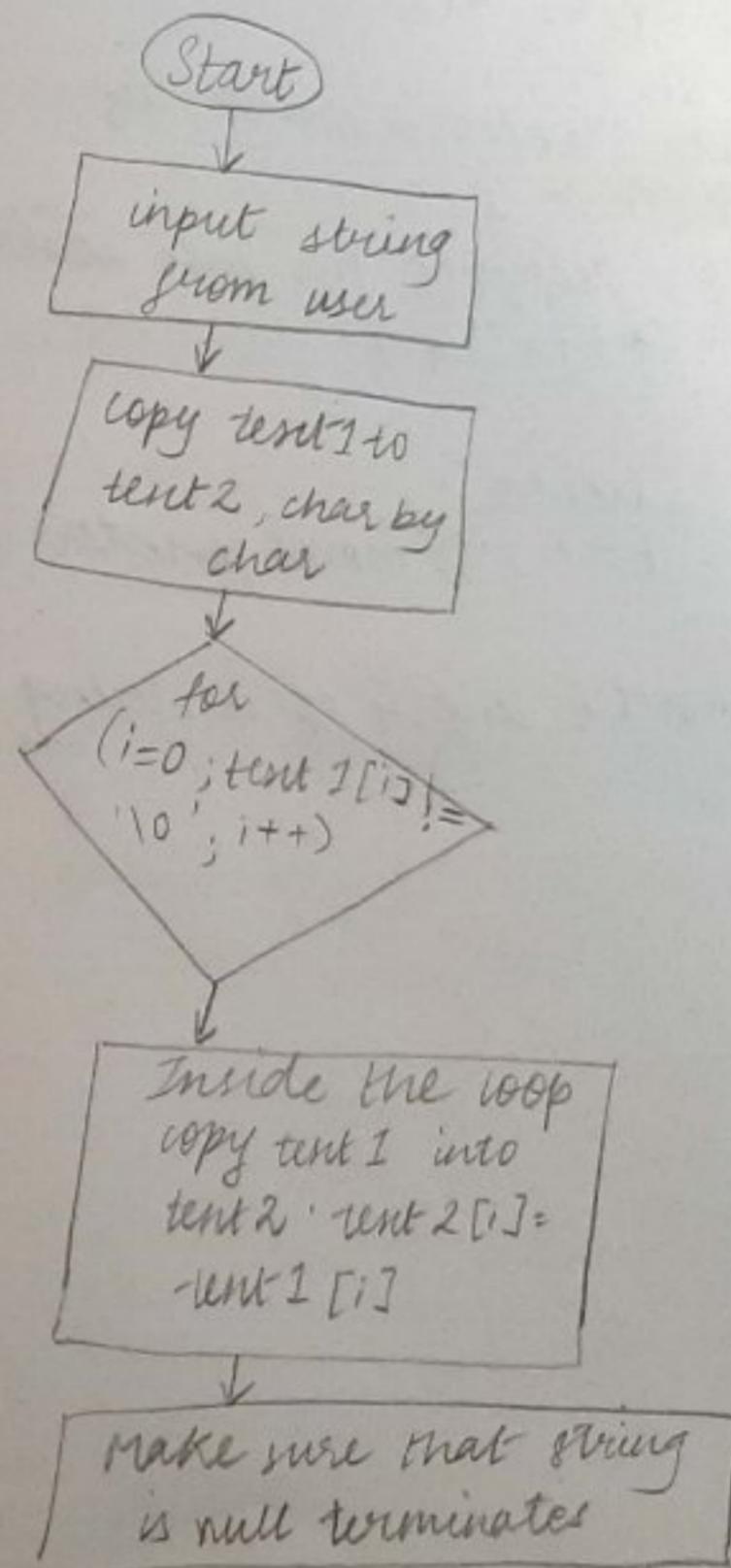
int main()
{
    char text1[MAX_SIZE];
    char text2[MAX_SIZE];
    int i;
    printf("Enter any string:");
    gets(text1);
    for (i=0; text2[i] != '\0'; i++)
    {
        text2[i] = text1[i];
    }
    text2[i] = '\0';
    printf("First string = %s\n", text1);
    printf("Copied string is = %s\n", text2);
    printf("Total characters copied = %d\n", i);
    return 0;
}
```

CONCLUSION: Hence, we have successfully  
executed the program.

Output:

enter any string : C.S. is an interesting subject.  
copied string is : C.S. is an interesting subject.  
Total characters copied : 31.

Flowchart:



38

CODE:

```
#include <stdio.h>
#include <conio.h>
void main()
{
    char s[25], *t;
    int len = 0;
    printf ("Enter a string: ");
    scanf ("%s", s);
    t = s; // copying the base address of string
    while (*t != '\0')
    {
        len++;
        t++; // moves pointer variable
    }
    printf ("length of a string is : %d", len);
}
```

57

(Q) WAP to show the length of a string without using string functions.

Algorithm:

- s1: # Input string from user say s and input another string say \*t from user.
- s2: Assign length of initial string = 0.
- s3: Use print statement to enter a string.
- s4: Show t=s to copy the base address of the string.
- s5: Use while loop to check condition \*t != '\0'; if true, increment string and length.
- s6: If false, print length of string.

+ CONCLUSION: Hence, we have successfully  
executed the program.

### CODE:

```

#include <stdio.h>
#include <conio.h>
struct student
{
    int id, CGPA;
    char name[25];
}
void main()
{
    struct student s[2];
    int i;
    clrscr();
    for (i=0; i<2; i++)
    {
        printf("Enter details of student %d", i+1);
        scanf("%d", &s[i].id);
        scanf("%d", &s[i].CGPA);
        scanf("%s", &s[i].name);
    }
    for (i=0; i<2; i++)
    {
        printf("\n Entered details of students %d", i+1);
        printf("\n ID: %d \n CGPA: %d", s[i].id, s[i].CGPA);
        printf("\n Name: %s", s[i].name);
    }
    print("\n");
}

```

### PRACTICAL-08

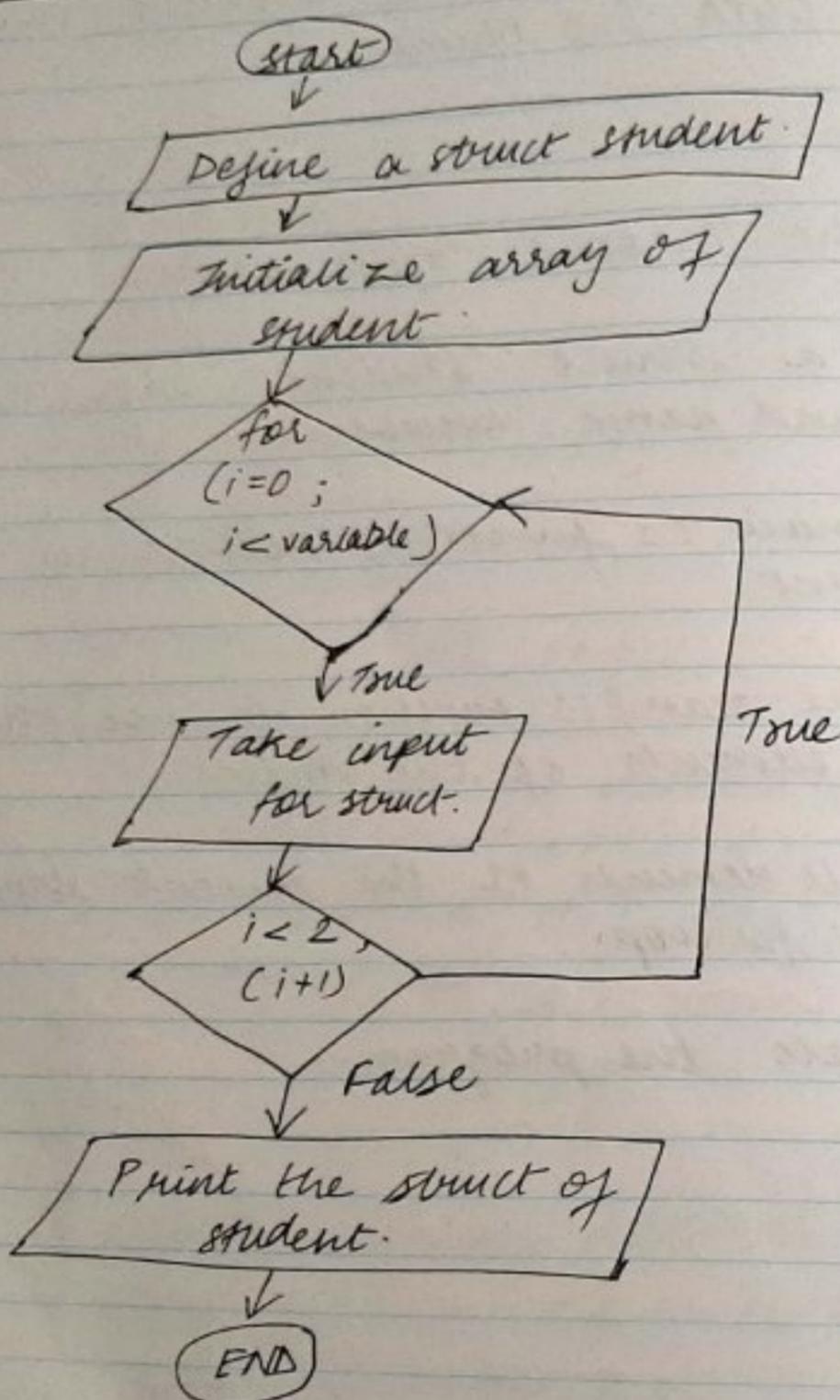
59

(A) Create a simple structure named student that holds the following variables:  
 (i) ID, (ii) CGPA, (iii) Name

### Algorithm:

- S1: Open the Turbo C application.
- S2: Define a struct 'student' with id, CGPA and name variables.
- S3: In the main () function, declare an array of student
- S4: Use the scanf() function to use the various structs elements of the student.
- S5: Print all elements of the student structure using a for loop.
- S6: Terminate the program.

Flowchart:



CONCLUSION: Hence, we have successfully executed the program.

getch();

3  
OUTPUT:

Enter details of student 1:  
1896

5  
Sakshi

Enter details of student 2:  
1543

2  
Nandini

Details of student 1:  
ID : 1896  
CGPA : 5

Name : Sakshi

Details of student 2:

ID : 1543

CGPA : 2

Name : Nandini

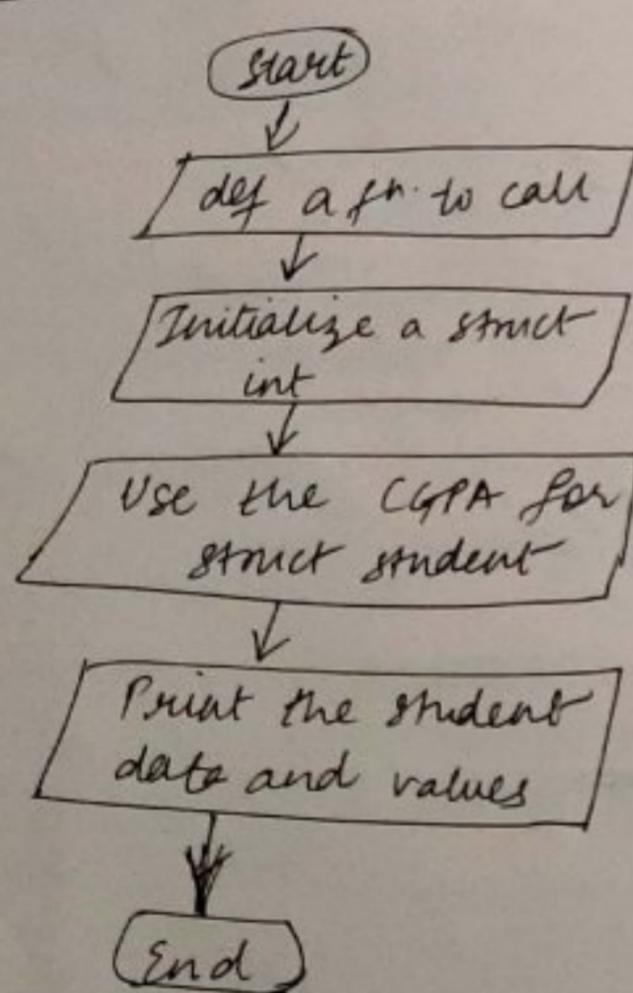
Q2. CODE:

```
def calc(int n)
{
    return 60 * n
}
```

3 printf ("Total marks obtained %d : calc (%d)",

· output:  
Total marks obtained : 600  
Total marks obtained : 540

Flowchart:



(B) USE OF STRUCT WITH FUNCTION ASSOCIATION  
Algorithm:

61

51: open Turbo C application.

52: define a struct and take the input as done previously.

53: Now, define a function to calculate total marks obtained out of 600 using CGPA.

54: Print the along with the student data.

55: terminate the program.

· CONCLUSION: Hence, we have successfully executed this program.

## 18 (c) UNION :

### Algorithm:

- s1: Start Turbo C application.
- s2: Use the union keyword to declare the union of various datatypes.
- s3: In the main body of the program, we use “.” operator to take input.
- s4: Now, print all the data of the union.
- s5: Terminate the program.

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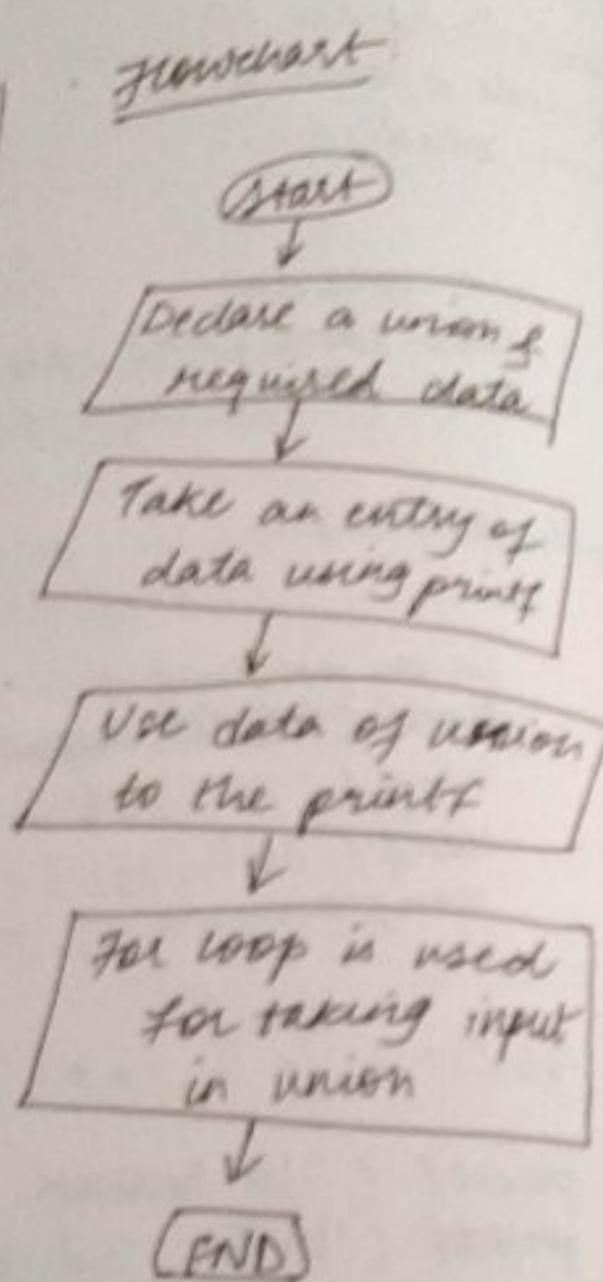
### CODE :

```
#include <stdio.h>
#include <conio.h>
union student
{
    int roll_no;
    char name[25], div, co[10];
    float per;
};

void main()
{
    union student s;
    printf("Enter details of students : ");
    scanf("%d", &s.id);
    scanf("%f", &s.CGPA);
    scanf("%s", &s.name);

    for(i=0; i<2; i++)
    {
        printf("\n Entered details of student %d : ", i+1);
        printf("ID : %d CGPA : %d Name : %s",
               s.id, s.CGPA, s.name);
    }
    getch();
}
```

53. Output  
enter details of student 1:  
1896  
10  
Sakshi  
enter details of student 2:  
1544  
9.5  
Tanisha  
Details of student 1:  
ID: 1896  
CGPA: 10  
Name: Sakshi  
Details of student 2:  
ID: 1544  
CGPA: 9.5  
Name: Tanisha



CONCLUSION: Hence, we have successfully executed the program using Union.