```
----Program 1: WAP to print your Bio-Data
#include <stdio.h>

int main()
{
    printf("Abhinav \n");
    printf("23-12-2002 \n");
    printf("I live in ghaziabad U.P.\n");
    printf("Thankyou");
    return 0;
}

Output
Abhinav
23-12-2002
I live in ghaziabad U.P.
Thankyou

Program 2: WAP a Program to print a pattern
#include <stdio.h>

void main()
{
    printf("*\n");
    printf("**\n");
    printf("***\n");
    printf("****\n");
    printf("\n");
    printf("****\n");
    printf("***\n");
    printf("**\n");
    printf("*\n");
    printf("\n");
    printf(" *     *   ***********   ***********    ************     \n");
    printf(" *    *         *             *               *          \n");
    printf(" *   *          *             *               *           \n");
    printf(" *  *           *             *               *            \n");
    printf(" * *            *             *               *             \n");
    printf(" *  *           *             *               *              \n");
    printf(" *   *          *             *               *               \n");
    printf(" *    *         *             *               *                \n");
    printf(" *     *   ***********   ***********          *                 \n");
}
```

```
OUTPUT
*
**
***
****

****
***
**
*

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

```
Program 3: WAP to print the area of the circle
#include <stdio.h>
#include <math.h>
#define pi 3.141
void main()
{
    float radius, area;
    printf("Enter the radius of the circle = ");
    scanf("%f", &radius);
    area = pi * pow(radius, 2);
    printf("The area of the circle is %.3f", area);
}

OUTPUT
Enter the radius of the circle = 2.893
The area of the circle is 26.288
```

Program 4: WAP to print the perimeter of a triangle using three sides.

```c
#include <stdio.h>

void main()
{
    int s1, s2, s3;
    printf("Enter the first side of the triangle = ");
    scanf("%d", &s1);
    printf("Enter the second side of the triangle = ");
    scanf("%d", &s2);
    printf("Enter the first side of the triangle = ");
    scanf("%d", &s3);
    float perimeter;
    perimeter = s1 + s2 + s3 ;
    printf("The area of the triangle is = %.2f", perimeter);
}
```

OUTPUT

```
Enter the first side of the triangle = 13
Enter the second side of the triangle = 5
Enter the first side of the triangle = 12
The area of the triangle is = 30.00
```

Program 5: WAP to print whether a student is from KIIT University of school based on his class.

```c
#include<stdio.h>

int main()
{
    int class;
    printf("Enter the class of the student = ");
    scanf("%d", &class);

    printf("KIIT");
    if(class <= 12)
        printf(" Student");
    else
        printf(" University");
}
```

OUTPUT

```
Enter the class of the student = 8
KIIT Student
```

```
Enter the class of the student = 14
KIIT University

Program 6: WAP to give grace marks to a student based on his/her age.
#include <stdio.h>

int main()
{
    int age, marks;
    printf("Enter the age of student = ");
    scanf("%d", &age);
    printf("Enter the marks of student = ");
    scanf("%d", &marks);
    if (age < 50)
        marks = marks + 60;
    else
        marks = marks + 40;
    printf("The marks of the student is =  %d", marks);
}

OUTPUT
Enter the age of student = 45
Enter the marks of student = 30
The marks of the student is =  90

Enter the age of student = 67
Enter the marks of student = 40
The marks of the student is =  80

Program 7:WAP to print area of an ellipse
#include <stdio.h>
#define pi 3.1415

int main()
{
    int a, b;
    printf("Enter the value major axis = ");
    scanf("%d", &a);
    printf("Enter the value minor axis = ");
    scanf("%d", &b);
    float areae = pi * a * b;
    printf("The area of the ellipse is = %.4f", areae);
```

```
    return 0;
}


OUTPUT
Enter the value major axis = 10
Enter the value minor axis = 8
The area of the ellipse is = 251.3200

Program 8:WAP to find the position , size and nature of an image formed through a concave
mirror.

#include <stdio.h>

int main()
{
    float u, v, focus, radius;
    printf("Enter the focal length of mirror = ");
    scanf("%f", &focus);
    printf("Enter the object distance from  mirror = ");
    scanf("%f", &u);
    radius = 2 * focus;
    v = (u * focus) / (focus - u);
    if (v == focus)-
        printf("The image is formed at the focus , the size is diminished and is real");
    if (radius < u)
        printf("The image is formed between focus and centre of curvature , the size is
diminished and is real");
    if (radius > u && radius < focus)
        printf("The image is formed beyond centre of curvature , the size is same and is
real");
    if (radius == u)
        printf("The image is formed at centre of curvature , the size is Enlarged and is
real");
    if (u == focus)
        printf("The image is formed at focus , the size is Highly Enlarged and is real");
    return 0;
}
OUTPUT:
Enter the focal length of mirror = 12
Enter the object distance from  mirror = 36
The image is formed between focus and centre of curvature , the size is diminished and is
real
```

Program 9 : WAP finds the greatest of the numbers from the 5 numbers.

```c
#include <stdio.h>

    #include <stdio.h>

int main()
{
    int a, b, c, d, e;
    printf("Enter the first number = ");
    scanf("%d", &a);
    printf("Enter the second number = ");
    scanf("%d", &b);
    printf("Enter the third number = ");
    scanf("%d", &c);
    printf("Enter the fourth number = ");
    scanf("%d", &d);
    printf("Enter the fifth number = ");
    scanf("%d", &e);
    int temp = a;
    if (temp < b)
    {
        temp = b;
        if (temp < c)
            temp = c;
        if (temp < d)
            temp = d;
        if (temp < e)
            temp = e;
    }
    printf("The maximum in the above numbers are = %d", temp);
    return 0;
}
```

OUTPUT

```
Enter the first number = 2
Enter the second number = 5
Enter the third number = 6
Enter the fourth number = 7
Enter the fifth number = 9
The maximum in the above numbers are = 9
```

Program 10: WAP to calculate total salary of employee

```c
#include <stdio.h>

int main()
{
    float basic_salary, HRA, DA;
    printf("Enter the Basic Salary of the employee = ");
    scanf("%f", &basic_salary);
    if (basic_salary < 1500)
    {
        HRA = 0.1 * basic_salary;
        DA = 0.4 * basic_salary;
    }
    else
    {
        HRA = 500;
        DA =  0.5 * basic_salary;
    }
    float gs = basic_salary + HRA + DA;
    printf("The Gross Salary of the employee is  = %.3f", gs);

    return 0;
}
```

OUTPUT

```
Enter the Basic Salary of the employee = 1490
The Gross Salary of the employee is  = 2235.000

Enter the Basic Salary of the employee = 1580
The Gross Salary of the employee is  = 2870.000
```

Program 11: WAP to check orthogonality

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

int main()
{
    int x1, x2, y1, y2;
    printf("Enter the value of first line coordinates (x1 and y1) = ");
    scanf("%d %d", &x1, &y1);
    printf("Enter the value of first line coordinates (x2 and y2) = ");
    scanf("%d %d", &x2, &y2);
    int m1;
    m1 = (y2 - y1) / (x2 - x1);
```

```
    int x3, x4, y3, y4;
    printf("Enter the value of second line coordinates (x3 and y3) = ");
    scanf("%d %d", &x3, &y3);
    printf("Enter the value of second line coordinates (x4 and y4) = ");
    scanf("%d %d", &x4, &y4);
    int  m2;
    m2 = (y4 - y3) / ( x4 - x3);
    // bool t = ((m1 * m2) * - 1 ==  1);
    int t = ((m1 * m2) * - 1 ==  1);
    printf("Printing 1 when true and 0 while false %d", t);
    return 0;
}
OUTPUT
Enter the value of first line coordinates (x1 and y1) = 1
1
Enter the value of first line coordinates (x2 and y2) = 2
2
Enter the value of second line coordinates (x3 and y3) = 1
2
Enter the value of second line coordinates (x4 and y4) = 2
1
Printing 1 when true and 0 while false 1

Program 12: WAP to check parallel lines
#include<stdio.h>
#include<stdbool.h>

int main()
{
    int x1, x2, y1, y2;
    printf("Enter the value of first line coordinates (x1 and y1) = ");
    scanf("%d %d", &x1, &y1);
    printf("Enter the value of first line coordinates (x2 and y2) = ");
    scanf("%d %d", &x2, &y2);
    int m1;
    m1 = (y2 - y1) / (x2 - x1);
    int x3, x4, y3, y4;
    printf("Enter the value of second line coordinates (x3 and y3) = ");
    scanf("%d %d", &x3, &y3);
    printf("Enter the value of second line coordinates (x4 and y4) = ");
    scanf("%d %d", &x4, &y4);
    int  m2;
    m2 = (y4 - y3) / ( x4 - x3);
```

```
    // bool t = ((m1 * m2) * - 1 ==  1);
    int t = (m1 == m2);
    printf("Printing 1 when true and 0 when false %d", t);
    return 0;
}

OUTPUT
Enter the value of first line coordinates (x1 and y1) = 2
2
Enter the value of first line coordinates (x2 and y2) = 1
1
Enter the value of second line coordinates (x3 and y3) = 2
2
Enter the value of second line coordinates (x4 and y4) = 1
1
Printing 1 when true and 0 when false 1

Program 13: WAP to calculate the resistance of three resistance
#include <stdio.h>

int main()
{
    float r1, r2, r3;
    printf("Enter the value of first resistance = ");
    scanf("%f", &r1);
    printf("Ente the value of second resistance = ");
    scanf("%f", &r2);
    printf("Enter the value of third resistance = ");
    scanf("%f", &r3);
    float series, parallel;

    series = r1 + r2 + r3;
    parallel = (r1 * r2 * r3) / ((r2 * r3) + (r1 * r3) + (r1 * r2));
    printf("The series resistance is =  %.3f \n", series);
    printf("The parallel resistance is =  %.3f", parallel);
    return 0;
}
OUTPUT
Enter the value of first resistance = 12
Ente the value of second resistance = 24
Enter the value of third resistance = 36
The series resistance is =  72.000
The parallel resistance is =  6.545
```

Program 14: WAP to check of right angle of a triangle

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

int main()
{
    int a, b, c;
    printf("Enter the value of first side a = ");
    scanf("%d", &a);
    printf("Enter the value of second side b = ");
    scanf("%d", &b);
    printf("Enter the value of third side c = ");
    scanf("%d ", &c);
    int t = (pow(a, 2) == pow(b, 2) + pow(c, 2) || pow(b, 2) == pow(a, 2) + pow(c, 2) ||
pow(c, 2) == pow(b, 2) + pow(a, 2));
    printf("%d", t);
    return 0;
}
```

OUTPUT

```
Enter the value of first side a = 13
Enter the value of second side b = 12
Enter the value of third side c = 5
Printing 1 when true and 0 when false 1
```

Program 15: WAP check whether enter distance are sides of triangle

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

int main()
{
    int a, b, c;
    printf("Enter the first side of the triangle = ");
    scanf("%d",&a);
    printf("Enter the first side of the triangle = ");
    scanf("%d",&b);
    printf("Enter the first side of the triangle = ");
    scanf("%d",&c);
    int t = a + b > c && a + c > b && b + c > a;
    printf("Printing 1 when true and 0 when false %d", t);
}
```

OUTPUT

```
Enter the first side of the triangle = 14
Enter the first side of the triangle = 6
```

```
Enter the first side of the triangle = 22
Printing 1 when true and 0 when false 0
```

Program 16: WAP to calculate the Simple Interest

```c
#include <stdio.h>

int main()
{
    float p, r, t, SI;
    printf("Enter the value of the Principle = ");
    scanf("%f", &p);
    printf("Enter the value of the Rate = ");
    scanf("%f", &r);
    printf("Enter the value of the Time = ");
    scanf("%f", &t);

    SI = (p * r * t) / 100;
    printf("The Simple Interest is = %.2f", SI);
    return 0;
}
```

```
OUTPUT
Enter the value of the Principle = 100
Enter the value of the Rate = 6
Enter the value of the Time = 4
The Simple Interest is = 24.00
```

Program 17: WAP to calculate the slope of line from two points

```c
#include <stdio.h>

int main()
{
    float x1, x2, y1, y2;
    printf("Enter the value of X1 = ");
    scanf("%f", &x1);
    printf("Enter the value of X2 = ");
    scanf("%f", &x2);
    printf("Enter the value of Y1 = ");
    scanf("%f", &y1);
    printf("Enter the value of Y2 = ");
    scanf("%f", &y2);
    float slope;
    slope = (y2 - y1) / (x2 - x1);
```

```
    printf("The value of slope = %.3f", slope);
}
OUTPUT:
Enter the value of X1 = 8
Enter the value of X2 = 4
Enter the value of Y1 = 7
Enter the value of Y2 = 1

Program 18 : WAP to swap two number without using the third variable

#include <stdio.h>

void main()
{
    int a , b;
    printf("Enter the value of first number = ");
    scanf("%d", &a);
    printf("Enter the value of second number = ");
    scanf("%d", &b);
    a = a + b;
    b = a - b;
    a = a - b;
    printf("The swapped value of a and b are = %d, %d", a, b);
}
OUTPUT
Enter the value of first number = 12
Enter the value of second number = 34
The swapped value of a and b are = 34, 12

Program 20: WAp to find the time period of a pendulum
#include <stdio.h>
#include <math.h>
#define pi 3.14
#define g 10

int main()
{
    float T , length;
    printf("Enter the length 1 of the pendulum = ");
    scanf("%f", &length);
    T = 2 * pi * sqrt(length / g);
    printf("The time period of pendulum is = %.3f \n", T);
    T = 0;
```

```
    printf("Enter the length 2 of the pendulum = ");
    scanf("%f", &length);
    T = 2 * pi * sqrt(length / g);
    printf("The time period of pendulum is = %.3f \n", T);
    T = 0;
    printf("Enter the length 3 of the pendulum = ");
    scanf("%f", &length);
    T = 2 * pi * sqrt(length / g);
    printf("The time period of pendulum is = %.3f \n", T);
    T = 0;
    printf("Enter the length 4 of the pendulum = ");
    scanf("%f", &length);
    T = 2 * pi * sqrt(length / g);
    printf("The time period of pendulum is = %.3f \n", T);
    T = 0;
    return 0;
}
OUTPUT
Enter the length 1 of the pendulum = 5
The time period of pendulum is = 4.441
Enter the length 2 of the pendulum = 7
The time period of pendulum is = 5.254
Enter the length 3 of the pendulum = 23
The time period of pendulum is = 9.524
Enter the length 4 of the pendulum = 654
The time period of pendulum is = 50.787

Program 21: WAP to calculate secondary voltage in secondary coil in transformer
#include <stdio.h>

void main()
{
    int n1, n2;
    float E1;
    printf("Enter the value of the N1 = ");
    scanf("%d", &n1);
    printf("Enter the value of the N2 = ");
    scanf("%d", &n2);
    printf("Enter the value of the E1 = ");
    scanf("%f", &E1);
    float E2;
    if (n1 < n2)
    {
```

```
        E2 = E1 * (n2 / n1);
        printf("Enter the value of the E2 = %.3f", E2);
    }
    else
        printf("The value of n2 is smaller than N1");
    return 0;
}
OUTPUT
Enter the value of the N1 = 1
Enter the value of the N2 = 4
Enter the value of the E1 = 5
Enter the value of the E2 = 20.000

Program 22: WAP to check a triangle given its points
#include <stdio.h>

int main()
{
    float x1, x2, x3, y1, y2, y3;
    printf("Enter the coordinates of the X1 and Y1 = ");
    scanf("%f %f", &x1, &y1);
    printf("Enter the coordinates of the X2 and Y2 = ");
    scanf("%f %f", &x2, &y2);
    printf("Enter the coordinates of the X3 and Y3 = ");
    scanf("%f %f", &x3, &y3);
    float m1, m2, m3;
    m1 = (y2 - y1) / (x2 - x1);
    m2 = (y3 - y2) / (x3 - x2);
    m3 = (y1 - y3) / (x1 - x3);
    if (m1 == m2 && m2 == m3 && m3 == m1)
        printf("The points are not a part of triangle ");
    else
        printf("The points are part of a triangle  ");
    return 0;
}
OUTPUT
Enter the coordinates of the X1 and Y1 = 12
4
Enter the coordinates of the X2 and Y2 = 6
10
Enter the coordinates of the X3 and Y3 = 4
8
The points are part of a triangle
```

Program 23: WAP to check and find the value of wheatstone bridge

```c
#include <stdio.h>

int main()
{
    float p, q, r, s;
    printf("Enter the value of the p = ");
    scanf("%f", &p);
    printf("Enter the value of the q = ");
    scanf("%f", &q);
    printf("Enter the value of the r = ");
    scanf("%f", &r);
    printf("Enter the value of the s = ");
    scanf("%f", &s);
    if (p * s != q * r)
    {
        printf("The wheatstone bridge is unbalanced \n");
        s = (q * r) / p;
        printf("As the value of s can be changed thus , actual value of s is = %.3f", s);
    }
    else
        printf("This is a balanced wheatstone bridge");
}
```

OUTPUT

```
Enter the value of the p = 12
Enter the value of the q = 3
Enter the value of the r = 8
Enter the value of the s = 2
This is a balanced wheatstone bridge
```

Program 24: WAP to find what is the acceleration is on a moving car

```c
int main()
{
    float init, final, acc, t;
    printf("Enter the initial velocity = ");
    scanf("%f", &init);
    printf("Enter the final velocity  = ");
    scanf("%f", &final);
    printf("Enter the time  = ");
    scanf("%f", &t);
    acc = (final - init) / t;
    if (acc < 0)
```

```
        printf("The car is retarding");
    if (acc > 0)
        printf("The car is accelerating ");
    if (acc == 0)
        printf("The car is in uniform motion");
    return 0;
}
OUTPUT
Enter the initial velocity = 30
Enter the final velocity  = 10
Enter the time  = 100
The car is retarding

Program 25: WAP to convert Celsius to Farenheit and Kelvin
#include <stdio.h>
#include <stdio.h>

int main()
{
    float temp;
    printf("Enter the temperature in celsius = ");
    scanf("%f", &temp);
    float kelvin , faren;
    kelvin = 273.15 + temp;
    faren = (9 / 5) * temp + 32;
    printf("The temperature in Kelvin is = %.3f K \nn", kelvin);
    printf("The temperature in Fahrenheit is = %.3f F", faren);
    return 0;
}
OUTPUT
Enter the temperature in celsius = 0
The temperature in Kelvin is = 273.150 K
The temperature in Fahrenheit is = 32.000 F

Program 26: WAP to find the final velocity and the distance travelled by the stone thrown
from the eiffel tower
#include<stdio.h>
#include<math.h>
#define g 10

int main()
{
```

```
    float u, time;
    printf("Enter the initial velocity of the stone = ");
    scanf("%f", &u);
    printf("Enter the time period of the motion = ");
    scanf("%f", &time);
    float s = u * time + 0.5 * g * pow(time, 2);
    float v = u + g * time;
    printf("The distance travelled by the stone is = %.3f \n", s);
    printf("The final velocity of stone is = %.3f", v);
    return 0;
}

OUTPUT
Enter the initial velocity of the stone = 10
Enter the time period of the motion = 5
The distance travelled by the stone is = 175.000
The final velocity of stone is = 60.000

Program 26 : WAP to swap two numbers using three variable
#include <stdio.h>

void main()
{
    int a , b;
    printf("Enter first number = ");
    scanf("%d", &a);
    printf("Enter second number = ");
    scanf("%d", &b);
    int temp;
    temp  =  a;
    a = b;
    b = temp ;
    printf("The swapped numbers are as follow = %d  %d", a, b);

}
OUTPUT
Enter first number = 12
Enter second number = 32
The swapped numbers are as follow = 32  12

Program 27: WAP to sum two numbers using printf
#include<stdio.h>
```

```c
int main()
{
    int sum , a = 5, b = 7;
    printf("The sum of the numbers are  = %d", a + b);
    return 0;
}
```

```
OUTPUT
The sum of the numbers are  = 12
```

Program 28: WAP to sum two numbers using printf and scanf

```c
#include <stdio.h>

int main()
{
    int a, b;
    printf("Enter the first number = ");
    scanf("%d", &a);
    printf("Enter the second number = ");
    scanf("%d", &b);
    printf("Enter the first number = %d ", a + b);
    return 0;
}
```

```
OUTPUT
Enter the first number = 23
Enter the second number = 12
The sum of numbers is = 35
```

Program 29: WAP to calculate the total number of centuries in a game of cricket

```c
#include <stdio.h>

int main()
{
    int score, sum = 0, i = 0, p = 0;
    repeat:
    printf("Enter the score of the player %d ", i + 1);
    scanf("%d", score);
    i++;
    if (score >= 100)
        p++;
    if(i < 11)
    goto repeat;
```

```
    printf("The number of centuries are as follow = %d", p);
    return 0;
}
OUTPUT
Enter the score of the player 1 24
Enter the score of the player 2 109
Enter the score of the player 3 32
Enter the score of the player 4 65
Enter the score of the player 5 89
Enter the score of the player 6 120
Enter the score of the player 7 34
Enter the score of the player 8 103
Enter the score of the player 9 12
Enter the score of the player 10 4
Enter the score of the player 11 3
The number of centuries are as follow = 3

Program 30 WAP to print numbers from 1 to 10
#include<stdio.h>

int main()
{
    int i = 0;
    while(i < 10)
    {
        printf("%d ", i + 1);
        i++;
    }
}
OUTPUT
1 2 3 4 5 6 7 8 9 10

Program 31:WAP to print numbers from 10 to 1

#include<stdio.h>

int main()
{
    int i =  10;
    while(i > 0)
    {
        printf("%d ", i );
```

```
        i--;
    }
    return 0;
}
```

OUTPUT

```
10 9 8 7 6 5 4 3 2 1
```

Program 32: WAP to print topper's average marks and their roll number

```
#include <stdio.h>

int main()
{
    int i = 0, a, b, c, d, e, roll = 0;
    float max = 0;
    while (i < 8)
    {
        printf("For the student %d \n", i + 1);
        printf("Enter the marks of the first subject ");
        scanf("%d", &a);
        printf("Enter the marks of the second subject ");
        scanf("%d", &b);
        printf("Enter the marks of the third subject ");
        scanf("%d", &c);
        printf("Enter the marks of the fourth subject ");
        scanf("%d", &d);
        printf("Enter the marks of the fifth subject ");
        scanf("%d", &e);
        i++;
        float avg;
        avg = (a + b + c + d + e) / 5;
        if (max < avg)
        {
            max = avg;
            roll = i + 1;
        }
    }
    printf("The highest average marks are = %f for the roll number %d", max, roll);
    return 0;
}
```

OUTPUT

```
For the student 1
```

```
Enter the marks of the first subject 1
Enter the marks of the second subject 1
Enter the marks of the third subject 1
Enter the marks of the fourth subject 1
Enter the marks of the fifth subject 1
For the student 2
Enter the marks of the first subject 2
Enter the marks of the second subject 2
Enter the marks of the third subject 2
Enter the marks of the fourth subject 2
Enter the marks of the fifth subject 2
For the student 3
Enter the marks of the first subject 3
Enter the marks of the second subject 3
Enter the marks of the third subject 3
Enter the marks of the fourth subject 3
Enter the marks of the fifth subject 3
For the student 4
Enter the marks of the first subject 4
Enter the marks of the second subject 4
Enter the marks of the third subject 4
Enter the marks of the fourth subject 4
Enter the marks of the fifth subject 4
For the student 5
Enter the marks of the first subject 5
Enter the marks of the second subject 5
Enter the marks of the third subject 5
Enter the marks of the fourth subject 5
Enter the marks of the fifth subject 5
For the student 6
Enter the marks of the first subject 6
Enter the marks of the second subject 6
Enter the marks of the third subject 6
Enter the marks of the fourth subject 6
Enter the marks of the fifth subject 6
For the student 7
Enter the marks of the first subject 7
Enter the marks of the second subject 7
Enter the marks of the third subject 7
Enter the marks of the fourth subject 7
Enter the marks of the fifth subject 7
For the student 8
```

```
Enter the marks of the first subject 8
Enter the marks of the second subject 8
Enter the marks of the third subject 8
Enter the marks of the fourth subject 8
Enter the marks of the fifth subject 8
The highest average marks are = 8.000 for the roll number 8
```

Program 33. WAP to print whether entered username and password is correct or not

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

int main()
{
    char user;
    int pass;
    printf("Enter the Username  ");
    scanf("%c", &user);
    printf("Enter the Password ");
    scanf("%d", &pass);
    if (user == 'a' && pass == 12345)
        printf("Welcome Back");

    else
        printf("Either Username or Password is incorrect");

    return 0;
}
```

OUTPUT

1.

```
Enter the Username  a
Enter the Password 12345
Welcome Back
```

2.

```
Enter the Username  f
Enter the Password 12133
Either Username or Password is incorrect
```

Program 34 : WAP calculate the division of the student

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

```c
int main()
{
    int a, b, c, d, e;
    printf("Enter the marks of the 5 subjects = ");
    scanf("%d %d %d %d %d", &a, &b, &c, &d, &e);
    int f = (a + b + c + d + e + 4.9) / 5;
    if (f > 59)
        printf("A division");
     if (f > 49 && f <= 59)
        printf("B division");
    if (f > 39 && f <= 49)
        printf("C division");
    else
        printf("fail");
    return 0;
}
```

```
OUTPUT
Enter the marks of the 5 subjects = 34
54
89
97
3
B division
```

Program 35: WAP to print sum and average of score of soccer player

```c
#include <stdio.h>

int main()
{
    int score, sum = 0;
    int i = 0;
repeat:
    printf("Enter the score of the %d th player ", i + 1);
    scanf("%d", &score);
    sum = sum + score;
    i++;
    if (i < 11)
        goto repeat;
    int a = sum / 11;
    printf("The sum of the score is %d \n", sum );
    printf("The average of the score is %d", a);
```

```
    return 0;
}
```

OUTPUT

```
Enter the score of the 1 th player 1
Enter the score of the 2 th player 2
Enter the score of the 3 th player 5
Enter the score of the 4 th player 1
Enter the score of the 5 th player 0
Enter the score of the 6 th player 0
Enter the score of the 7 th player 2
Enter the score of the 8 th player 5
Enter the score of the 9 th player 0
Enter the score of the 10 th player 1
Enter the score of the 11 th player 2
The sum of the score is 19
The average of the score is 1
```

Program 36: WAP to print the following patterns

a)

```c
#include <stdio.h>

int main()
{
    int n;
    char c = '$';
    scanf("%d", &n);
    int count1 = n - 1, count2 = n - 1, count3 = 3 * n - 2, count 4 = 3 * n - 2;
    for (int i = 0; i < n; i++)
    {
        for (int j = 0; j < 4 * n - 2; j++)
        {
            if ((j >= count1 && j <= count2) || (j >= count3 && j <= count4))
                printf("%c", c);
            else
                printf(" ");
        }
        printf(" \n");
        count1--;
        count2++;
        count3--;
        count4++;
    }

    return 0;
}
```

OUTPUT

```
5
    $         $
   $$$       $$$
  $$$$$     $$$$$
 $$$$$$$   $$$$$$$
$$$$$$$$$$$$$$$$$
```

b)

```c
#include <stdio.h>

int main()
{
    int n;
    char c = 'A';
    scanf("%d", &n);
    for (int i = 0; i < n; i++)
    {
        for (int j = 0; j < n; j++)
        {
            if (i + j < 7)
                printf("%c", c);
            else
                printf(" ");
        }
        for (int j = n; j < 2 * n; j++)
        {
            if (i + j < 14)
                printf("%c", c);
            else
                printf(" ");
        }
        for (int j = 2 * n; j < 3 * n; j++)
        {
            if (i + j < 21)
                printf("%c", c);
            else
                printf(" ");
        }
        printf("\n");
    }
    return 0;
}
```

OUTPUT

```
7
AAAAAAAAAAAAAAAAAAAAA
AAAAAA AAAAAA AAAAAA
AAAAA  AAAAA  AAAAA
AAAA   AAAA   AAAA
AAA    AAA    AAA
AA     AA     AA
A      A      A
```

c)

```c
#include <stdio.h>

int main()
{
    int n;
    scanf("%d", &n);
    for (int i = 0; i < 2 * n - 1; i++)
    {
        for (int j = 0; j < 2 * n - 1; j++)
        {
            if (i <= 4)
            {

                if (j <= 2 * i)
                    printf("$");
                else
                    printf(" ");
            }
            if (i > 4)
            {
                if (j <= ((2 * n - 2) - i) * 2)
                    printf("$");
                else
                    printf(" ");
            }
        }
        for (int j = 2 * n - 1; j < 3 * n + 3; j++)
        {
            if (i <= 4)
            {
                if (j <= (2 * n - 1) + 2 * i)
                    printf("$");
                else
```

```
                    printf(" ");
            }
            if (i > 4)
            {
                if (j <= 3 * n - ((i - n) * 2))
                    printf("$");
                else
                    printf(" ");
            }
        }
        for (int j = 4 * n - 2; j < 5 * n + 2; j++)
        {
            if (i <= 4)
            {
                if (j <= (4 * n - 2) + 2 * i)
                    printf("$");
            }
            if (i > 4)
            {
                if (j <= (5 * n - 1) - ((i - n) * 2))
                    printf("$");
            }
        }
        printf("\n");
    }
    return 0;
}

OUTPUT
5
$         $         $
$$$       $$$       $$$
$$$$$     $$$$$     $$$$$
$$$$$$$   $$$$$$$   $$$$$$$
$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$$$   $$$$$$$   $$$$$$$
$$$$$     $$$$$     $$$$$
$$$       $$$       $$$
$         $         $
```

d)

```c
#include <stdio.h>

int main()
{
    int n;
    scanf("%d", &n);
    for (int i = 0; i < 2 * n - 1; i++)
    {
        for (int j = 0; j < 2 * n - 1; j++)
        {
            if (i <= 4)
            {
                if (j >= (n - 1) - i && j <= (n - 1) + i)

                    printf("%d", i + 1);
                else
                    printf(" ");
            }
            if (i > 4)
            {
                if (j >= i - (n - 1) && j <= i + (n - 1) - 2 * (i - (n - 1)))
                    printf("%d", (n - 1) - (i - n));
                else
                    printf(" ");
            }
        }
        for (int j = 2 * n - 1; j < 4 * n - 2; j++)
        {
            if (i <= 4)
            {
                if (j >= (3 * n - 2) - i && j <= (3 * n - 2) + i)
                    printf("%d", i + 1);
                else
                    printf(" ");
            }
            if (i > 4)
            {
                if (j >= 2 * n + i - n  && j <= 3 * n  + ((n + 1) - i))
                    printf("%d", (n - 1) - (i - n));
                else
                    printf(" ");
```

```
            }
        }
        printf("\n");
    }
    return 0;
}
```

```
OUTPUT
5
    1         1
   222       222
  33333     33333
 4444444   4444444
555555555555555555
 4444444   4444444
  33333     33333
   222       222
    1         1
```

Program 38: WAP to find out the reverse of a number and check whether the number is a palindrome or not.

```
#include <stdio.h>

void palindrome(int n, int check)
{
    int temp = n;
    if (temp == check)
        printf("Palindrome");
    else
        printf("Not Palindrome");
}
int sum = 0;
int reverse(int n)
{
    if (n > 0)
    {
        int rev = n % 10;
        sum = (sum * 10) + rev;
        reverse(n / 10);
    }
    return sum;
}
```

```c
int main()
{
    int n;
    printf("Enter the number to be checked ");
    scanf("%d", &n);
    int a = reverse(n);
    printf("The reverse of the number = %d \n", a);
    palindrome(n, a);
    return 0;
}
```

OUTPUT:

```
Enter the number to be checked 1414
The reverse of the number = 4141
Not Palindrome

Enter the number to be checked 13331
The reverse of the number = 13331
Palindrome
```

Program 39: WAP a function to display "=" on the screen.

```c
#include<stdio.h>

void showequalto()
{
    printf("=");
}
int main()
{
    showequalto();
    return 0;
}
```

OUTPUT:

```
=
```

Program 40: WAP a function to display "=" 10 times on the screen.

```c
#include<stdio.h>

void showequalto()
{
```

```
    for(int i = 0 ; i < 10 ; i++)
    {
        printf("= \n");
    }
}
int main()
{
    showequalto();
    return 0;
}
```

OUTPUT:

= = = = = = = = = =

Program 41: WAP Write a function to display "=" n times on the screen (n is a formal parameter).

```
#include<stdio.h>

void showequalto(int n)
{
    for(int i = 0 ; i < n ; i++)
    {
        printf("= ");
    }
}
int main()
{
    showequalto(10);
    return 0;
}
```

OUTPUT

= = = = = = = = = =

Program 42: WAP Write a function to display a character ch, n times on the screen (n and ch are formal parameters).

```
#include <stdio.h>

void showequalto(char ch, int n)
{
    for (int i = 0; i < n; i++)
    {
```

```
        printf("%c ", ch);
    }
}
int main()
{
    char ch = '*';
    showequalto(ch, 10);
    return 0;
}
```

OUTPUT:

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

Program 43: WAP a function to convert lowercase to uppercase characters.

```
#include <stdio.h>

void lowertoupper(int i)
{
    if (i >= 96 && i <= 122)
        printf("%c", i - 32);
    else
        printf("%c", i);
}
void main()
{
    char c;
    printf("Enter the character to make UPPERCASE = ");
    scanf("%c", &c);
    int i = c;
    lowertoupper(i);

}
```

OUTPUT:

```
Enter the character to make UPPERCASE = a
A
```

Program 44: WAP a function to find out largest between n numbers and another function to count the number of leaders (a number is a leader if all previous numbers are smaller).

Program 45: WAP a function to add 3 numbers (use prototypes).

```c
#include <stdio.h>

void sum(int a, int b, int c)
{
    int d;
    d = a + b + c;
    printf("%d", d);
}
int main()
{
    int n1, n2, n3;
    printf("Enter the first number = ");
    scanf("%d", &n1);
    printf("Enter the second number = ");
    scanf("%d", &n2);
    printf("Enter the third number = ");
    scanf("%d", &n3);
    sum(n1, n2, n3);
    return 0;
}
```

OUTPUT:

```
Enter the first number = 5
Enter the second number = 2
Enter the third number = 6
13
```

Pirogram 46: WAP a function to compute n^k where n and k are supplied by the user (use prototypes).

```c
#include <stdio.h>

int power(int n, int p)
{
    if (p <= 0)
        return 1;
    return n * power(n, p = p - 1);
}
int main()
{
    int n, p;
```

```
    printf("Enter the number = ");
    scanf("%d", &n);
    printf("Enter the power = ");
    scanf("%d", &p);
    printf("%d", power(n, p));
}
```

OUTPUT:

```
Enter the number = 5
Enter the power = 4
625
```

Program 47: WAP a function to determine whether the entered year is leap year or not

```
#include<stdio.h>

void leapyear(int year)
{
    if(year % 4 == 0)
    printf("The year is the leap year");
    else
    printf("The year is not a leap year");
}
int main()
{
    int year;
    scanf("%d", &year);
    leapyear(year);
    return 0;
}
```

OUTPUT:

```
2002
The year is not a leap year
```

Program 48: WAP to enter float and a int from the user and display the product through the main

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

```c
int multiply(int i, float f)
{
    int pro;
    pro = i * f;
    return pro;
}
int main()
{
    int a;
    float b;
    printf("Enter the integer  = ");
    scanf("%d", &a);
    printf("Enter the floating point number = ");
    scanf("%f", &b);
    printf("The product of the number is = %d", multiply(a, b));
    return 0;
}
```

OUTPUT:

```
Enter the integer  = 4
Enter the floating point number = 12.009
The product of the number is = 48
```

WAP 49: WAP a function to enter 5 integers and return sum , average and standard deviation Of these numbers . The OUTPUT must be from the main

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

int sum(int n1, int n2, int n3, int n4, int n5)
{
    int summation = 0;
    summation = n1 + n2 + n3 + n4 + n5;
    return summation;
}
float average(int n1, int n2, int n3, int n4, int n5)
{
    int summation = 0;
    summation = n1 + n2 + n3 + n4 + n5;
    float averagee ;
    averagee =  summation / 5.0;
    return averagee;
}
```

```c
float standarddeviation(int n1, int n2, int n3, int n4, int n5)
{
    int summation = 0;
    summation = n1 + n2 + n3 + n4 + n5;
    float average = summation / 5.0;
    float sd ;
    sd = pow((n1 - average),2) + pow((n2 - average),2) + pow((n3 - average),2) +pow((n4 -
average),2) + pow((n5 - average),2);
    return sqrt(sd);

}
int main()
{
    int n1, n2, n3, n4, n5;
    printf("Enter the first number = ");
    scanf("%d", &n1);
    printf("Enter the second number = ");
    scanf("%d", &n2);
    printf("Enter the third number = ");
    scanf("%d", &n3);
    printf("Enter the fourth number = ");
    scanf("%d", &n4);
    printf("Enter the fifth number = ");
    scanf("%d", &n5);
    printf("The sum of the number = %d \n", sum(n1, n2, n3, n4, n5));
    printf("The average of the number is = %.3f \n", average(n1, n2, n3, n4, n5));
    printf("The standard deviation = %.3f ", standarddeviation(n1, n2, n3, n4, n5));
    return 0;
}
```

OUTPUT:

```
Enter the first number = 3
Enter the second number = 2
Enter the third number = 5
Enter the fourth number = 7
Enter the fifth number = 2
The sum of the number = 19
The average of the number is = 3.800
The standard deviation = 4.336
```

Program 50: WAP a function to receive marks of three students and print the sum and the average of the marks.

```c
#include <stdio.h>

float percentage(int marks1, int marks2, int marks3)
{
    float percentagee = ((marks1 + marks2 + marks3) * 100) / 300;
    return percentagee;
}
float average(int marks1, int marks2, int marks3)
{
    float averagee = (marks1 + marks2 + marks3) / 3;
    return averagee;
}
int main()
{
    int m1, m2, m3;
    printf("Enter the first marks = ");
    scanf("%d", &m1);
    printf("Enter the first marks = ");
    scanf("%d", &m2);
    printf("Enter the first marks = ");
    scanf("%d", &m3);
    printf("The average of these marks are = %.3f \n", average(m1, m2, m3));
    printf("The percentage of these marks are = %.3f", percentage(m1, m2, m3));
    return 0;
}
```

OUTPUT:

```
Enter the first marks = 67
Enter the first marks = 80
Enter the first marks = 79
The average of these marks are = 75.000
The percentage of these marks are = 75.000
```

Program 51: WAP a function to calculate the prime factors.

```c
#include <stdio.h>

int checkprime(int i)
{
    int k = i / 2;
    int flag = 0;
    for (int j = 2; j <= k; j++)
```

```
    {
        if (i % j == 0)
        {
            flag = 1;
            break;
        }
    }
    if (flag == 0)
        printf("Prime Factors are = %d \n", i);
}
int factors(int n)
{
    for (int i = 2; i <= n; i++)
    {
        if (n % i == 0)
        {
            // printf("%d ", i);
            checkprime(i);
        }
    }
}
int main()
{
    int n;
    scanf("%d", &n);
    factors(n);
    checkprime(n);
    return 0;
}
```

OUTPUT:

```
56
Prime Factors are = 2
Prime Factors are = 7
```

Program 52: WAP to make a recursive function to find factorial of a number n.

```
#include <stdio.h>

int factorial(int n)
{
    if (n < 1)
        return 1;
```

```
    return n * factorial(n - 1);
}
int main()
{
    int n;
    scanf("%d", &n);
    printf("%d", factorial(n));
}
```

OUTPUT:

```
10
3628800
```

Program 53: WAP to make a recursive function to find sum of digits in a k digit number n.

```
#include <stdio.h>

int sum = 0;
int sumofdigits(int number)
{
    int  digit;
    if (number <= 0)
    {
        return sum;
    }
    digit = number % 10;
    //printf("%d", digit);
    sum = sum + digit;
    sumofdigits(number / 10);
}
int main()
{
    int n;
    scanf("%d", &n);
    printf("%d", sumofdigits(n));
    return 0;
}
```

OUTPUT:

```
231112
10
```

Program 54: WAP to make a recursive function to find nth Fibonacci number.

```c
#include <stdio.h>

int fibonacci(int a)
{
    if (a == 1 || a == 0)
        return a;
    return fibonacci(a - 1) + fibonacci(a - 2);
}
int main()
{
    int a;
    scanf("%d", &a);
    printf("The fibonacci number is = %d",  fibonacci(a));
    return 0;
}
```

OUTPUT:

```
5
The fibonacci number is = 5

6
The fibonacci number is = 8
```

Program 55: WAP to make a recursive function to find gcd (greatest common divisor) of two numbers.

```c
#include <stdio.h>

int findgdc = 0;
int gcd(int a, int b, int i)
{
    ;
    if (i <= a )
    {
        if (a % i == 0 && b % i == 0)
        {
            //printf("%d", i);
            findgdc = i;
        }
        gcd(a, b, i = i + 1);
```

```
    }
    return findgdc;
}
int main()
{
    int a, b;
    printf("First Number > Second Number \n");
    printf("Enter First number = ");
    scanf("%d", &a);
    printf("Enter Second number = ");
    scanf("%d", &b);
    printf("The G.D.C. is %d ", gcd(a, b, 1));
    return 0;
}
```

OUTPUT:

```
First Number > Second Number
Enter First number = 6
Enter Second number = 2
The G.D.C. is 2

First Number > Second Number
Enter First number = 5
Enter Second number = 4
The G.D.C. is 1
```

Program 56: WAP to make a recursive function to find a^b where a and b are integers.

```
#include <stdio.h>

int findpower = 1;
int power(int a, int n)
{
    if (n > 0)
    {
        findpower = findpower * a;
        // printf("%d", findpower);
        //printf("%d", n);
        power(a, n = n - 1);
    }
    return findpower;
}
```

```c
int main()
{
    int a, n;
    printf("Enter the number and the power to be found ");
    scanf("%d %d", &a, &n);
    printf("%d", power(a, n));
}
```

OUTPUT:

```
Enter the number and the power to be found 4
5
1024
```

Program 57: WAP to make a recursive function to display the factorials of first 8 numbers from 1-8.

```c
#include <stdio.h>

int factorial(int n)
{
    if (n < 1)
        return 1;
    return n * factorial(n - 1);
}
int main()
{
    for(int i = 0 ; i < 9 ; i++)
    {
        printf("The factorial of %d is %d\n",i,factorial(i));
    }
    return 0;
}
```

OUTPUT:

```
The factorial of 0 is 1
The factorial of 1 is 1
The factorial of 2 is 2
The factorial of 3 is 6
The factorial of 4 is 24
The factorial of 5 is 120
The factorial of 6 is 720
The factorial of 7 is 5040
```

```
The factorial of 8 is 40320
```

Program 58: WAP to make a recursive function to find out the GCD of the number.

```c
#include <stdio.h>

int findgdc = 0;
int gcd(int a, int b, int i)
{
    ;
    if (i <= a )
    {
        if (a % i == 0 && b % i == 0)
        {
            //printf("%d", i);
            findgdc = i;
        }
        gcd(a, b, i = i + 1);
    }
    return findgdc;
}
int main()
{
    int a, b;
    printf("First Number > Second Number \n");
    printf("Enter First number = ");
    scanf("%d", &a);
    printf("Enter Second number = ");
    scanf("%d", &b);
    printf("The G.D.C. is %d ", gcd(a, b, 1));
    return 0;
}
```

OUTPUT:

```
First Number > Second Number
Enter First number = 8
Enter Second number = 14
The G.D.C. is 2
```

Program 59: WAP to find average marks obtained by a class of 20 students in a test and count the number of students who scored O grade (90 & above).

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

```c
void enter(int a[100], int n)
{
    for (int i = 0; i < n; i++)
    {
        printf("Enter the %d th student's marks ", i + 1);
        scanf("%d", &a[i]);
    }
}
void average(int a[100], int n)
{
    int sum = 0, count = 0;
    for (int i = 0; i < n; i++)
    {
        sum = sum + a[i];
        if (a[i] >= 90)
            count++;
    }
    float average = sum / 20.0;
    // printf("%d \n", sum);
    printf("The Average of the marks are = %.3f  \n", average);
    printf("The number of students scoring above 90 is = %d", count);
}
int main()
{
    int a[100];
    enter(a, 20);
    average(a, 20);
}
```

```
OUTPUT:
Enter the 1 th student's marks 78
Enter the 2 th student's marks 90
Enter the 3 th student's marks 27
Enter the 4 th student's marks 89
Enter the 5 th student's marks 63
Enter the 6 th student's marks 52
Enter the 7 th student's marks 41
Enter the 8 th student's marks 67
Enter the 9 th student's marks 96
Enter the 10 th student's marks 29
Enter the 11 th student's marks 55
Enter the 12 th student's marks 75
```

```
Enter the 13 th student's marks 38
Enter the 14 th student's marks 40
Enter the 15 th student's marks 6
Enter the 16 th student's marks 32
Enter the 17 th student's marks 45
Enter the 18 th student's marks 58
Enter the 19 th student's marks 25
Enter the 20 th student's marks 68
The Average of the marks are = 53.700
The number of students scoring above 90 is = 2
```

Program 60: Write a function to search whether an item is present in the array or not. If present, display the position. Array should be the local variable to the function. Function should consider only one parameter consisting of the number to be searched. Search from right to left.

```c
#include <stdio.h>

void enter(int a[100], int n)
{
    for (int i = 0; i < n; i++)
    {
        printf("Enter the %d number ", i + 1);
        scanf("%d", &a[i]);
    }
}
void search(int a[100], int n, int number)
{
    for (int i = 0; i < n; i++)
    {
        if (a[i] == number)
            printf("The number foundout at position %d", i + 1);
    }

}
int main()
{
    int a[100], n, finnum;
    printf("Enter the limit of the array = ");
    scanf("%d", &n);
    enter(a, n);
    printf("Enter the number to be found = ");
    scanf("%d", &finnum);
```

```
    search(a, n, finnum);
    return 0;
}
```

OUTPUT:

```
Enter the limit of the array = 6
Enter the 1 number 2
Enter the 2 number 6
Enter the 3 number 3
Enter the 4 number 88
Enter the 5 number 23
Enter the 6 number 1
Enter the number to be found = 88
The number foundout at position 4
```

Program 61: WAP smallest and largest element in an array

```
#include <stdio.h>

void enter(int a[100], int n)
{
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
    }
}
void smallandlarge(int a[100], int n)
{
    int min = a[0], max = a[0];
    for (int i = 0; i < n; i++)
    {
        if (min > a[i])
            min = a[i];
        if (max < a[i])
            max = a[i];
    }
    printf("The minimum and the maximum number are = %d %d", min, max);
}
int main()
{
    int a[100], n;
    printf("Enter the limit of the array = ");
```

```
    scanf("%d", &n);
    enter(a, n);
    smallandlarge(a, n);
    return 0;
}
```

OUTPUT:

```
Enter the limit of the array = 6
3
2
9
10
2
3
The minimum and the maximum number are = 2 10
```

Program 62: WAP to calculate the sum of elements of the array

```
#include <stdio.h>

void enter(int a[100], int n)
{
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
    }
}
void sum(int a[100], int n)
{
    int sum = 0;
    for (int i = 0; i < n; i++)
    {
        sum = sum + a[i];
    }
    printf("The sum of elements of the array is = %d ", sum);
}
int main()
{
    int a[100], n;
    printf("Enter the limit of the array = ");
    scanf("%d", &n);
    enter(a, n);
    sum(a, n);
```

```
    return 0;
}
```

OUTPUT:

```
Enter the limit of the array = 5
1
56
3
2
75
The sum of elements of the array is = 137
```

Program 63: WAP to check if two array are same or not

```
#include <stdio.h>

void enter1(int a1[100], int n1)
{
    for (int i = 0; i < n1; i++)
    {
        scanf("%d", &a1[i]);
    }
}
void enter2(int a2[100], int n2)
{
    for (int i = 0; i < n2; i++)
    {
        scanf("%d", &a2[i]);
    }
}
void checkarrays(int a1[100], int a2[100], int n1, int n2)
{
    int flag = 0;

    for (int i = 0; i < n1; i++)
    {
        if (a1[i] == a2[i])
        {
            flag = 0;
        }
        else
            flag = 1;
```

```
    }
    if (flag == 0)
        printf("The arrays are same");
    else
        printf("The arrays are not same");
}
int main()
{
    int a1[100], a2[100], n1, n2;
    printf("Enter the limits of the array = ");
    scanf("%d %d", &n1, &n2);
    if (n1 != n2)
    {
        printf("The arrays are not same");
        return 0;
    }
    printf("Running the first array \n");
    enter1(a1, n1);
    printf("Running the second array \n");
    enter2(a2, n2);
    checkarrays(a1, a2, n1, n2);
    return 0;
}
OUTPUT:

Enter the limits of the array = 4
2
The arrays are not same

Enter the limits of the array = 5
5
Running the first array
1
2
3
4
5
Running the second array
1
2
3
4
5
```

```
The arrays are same
Enter the limits of the array = 5
5
Running the first array
1
2
3
4
5
Running the second array
1
2
3
4
6
The arrays are not same
```

Program 65: WAP to sort array

```c
#include <stdio.h>

void enter(int a[100], int n)
{
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
    }
}
void sorting(int a[100], int n)
{
    int temp;
    for (int i = 0; i < n; i++)
    {
        for (int j = 0; j < n; j++)
        {
            temp = a[j];
            if (a[j + 1] < temp)
            {
                temp = a[j];
                a[j] = a[j + 1];
                a[j + 1] = temp;
            }
        }
```

```
    }
    for (int i = 0; i < n; i++)
    {
        printf("%d ", a[i]);
    }
}
int main()
{
    int a[100], n;
    printf("Enter the limit of the array = ");
    scanf("%d", &n);
    enter(a, n);
    sorting(a, n);
    return 0;
}
```

OUTPUT:

```
Enter the limit of the array = 5
1
5
2
3
7
1 2 3 5 7
```

Program 66: WAP to reverse a array

```
#include <stdio.h>

void enter(int a[100], int n)
{
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &a[i]);
    }
}
void arrayrev(int a[100], int n)
{
    int last = n - 1;
    if (n % 2 == 0)
    {
        for (int i = 0; i < n / 2; i++)
```

```
        {
            for (int j = 0; j <= n / 2, last >= n / 2; j++, last--)
            {
                int temp = a[j];
                a[j] = a[last];
                a[last] = temp;
            }
        }
        for (int i = 0; i < n; i++)
        {
            printf("%d ", a[i]);
        }
    }
    if (n % 2 != 0)
    {
        for (int i = 0; i < n / 2; i++)
        {
            for (int j = 0; j <= n / 2, last >= n / 2; j++, last--)
            {
                int temp = a[j];
                a[j] = a[last];
                a[last] = temp;
            }
        }
        for (int i = 0; i < n; i++)
        {
            printf("%d ", a[i]);
        }
    }
}
int main()
{
    int a[100], n;
    printf("Enter the limit of the array = ");
    scanf("%d", &n);
    enter(a, n);
    arrayrev(a, n);
    return 0;
}

OUTPUT:

Enter the limit of the array = 5
```

```
21
5
3
6
7
7 6 3 5 21

Enter the limit of the array = 6
2
5
3
67
2
3
3 2 67 3 5 2

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```