1. **Execute a program to display text**

#include<stdio.h>

Void main()

{

Printf(“Hello World \n”);

}

1. **Executed a program to perform Arithmetic operations (+,-,\*,/)**

#include <stdio.h>

int main()

{

int first, second, add, subtract, multiply;

float divide;

Printf(“Enter two integers\n”);

Scanf(“%d %d”, &first, &second);

add = first + second;

subtract = first – second;

multiply = first \* second;

divide = first / (float)second; //typecasting, you can also write: divide = (float)first/second

Printf(“Sum = %d\n”, add);

Printf(“Difference = %d\n”, subtract);

Printf(“Multiplication = %d\n”, multiply);

Printf(“Division = %.2f\n”, divide); // “%.2lf” to print two decimal digits, by default (%lf) we get six

return 0;

}

1. **Execute a program to perform Arithmetic operations using switch case**

#include<stdio.h>

#include<conio.h>

int main()

{

int a,b;

int op;

Printf(“ 1.Addition\n 2.Subtraction\n 3.Multiplication\n 4.Division\n”);

Printf(“Enter the values of a & b: “);

Scanf(“%d %d”,&a,&b);

Printf(“Enter your Choice : “);

Scanf(“%d”,&op);

Switch(op)

{

Case 1 :

Printf(“Sum of %d and %d is : %d”,a,b,a+b);

Break;

Case 2 :

Printf(“Difference of %d and %d is : %d”,a,b,a-b);

Break;

Case 3 :

Printf(“Multiplication of %d and %d is : %d”,a,b,a\*b);

Break;

Case 4 :

Printf(“Division of Two Numbers is %d : “,a/b);

Break;

Default :

Printf(“ Enter Your Correct Choice.”);

Break;

}

return 0;

}

1. **Execute a program to display biggest of two numbers**

#include <stdio.h>

int main()

{

int a, b;

printf("Please Enter Two different values\n");

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

if(a > b)

{

printf("%d is Largest\n", a);

}

else if (b > a)

{

printf("%d is Largest\n", b);

}

else

{

printf("Both are Equal\n");

}

return 0;

}

1. **Execute a program to display given number is odd or even using if..else**

#include <stdio.h>

int main() {

int num;

Printf(“Enter an integer: “);

Scanf(“%d”, &num);

if(num % 2 == 0)

Printf(“%d is even number.”, num);

else

Printf(“%d is odd number.”, num);

return 0;

}

1. **Execute a program to display given year is leap year or not using if..else**

#include <stdio.h>

int main()

{

int year;

Printf(“Enter a year: “);

Scanf(“%d”, &year);

// Divisible by 400

if (year % 400 == 0) {

Printf(“%d is a leap year.”, year);

}

else if (year % 100 == 0) {

Printf(“%d is not a leap year.”, year);

}

else if (year % 4 == 0) {

Printf(“%d is a leap year.”, year);

}

else {

Printf(“%d is not a leap year.”, year);

}

return 0;

}

1. **Execute a program to display days in week using switch case**

#include <stdio.h>

int main()

{

int week;

Printf(“Enter week number(1-7): “);

Scanf(“%d”, &week);

switch(week)

{

case 1:

Printf(“Monday”);

Break;

case 2:

Printf(“Tuesday”);

Break;

case 3:

Printf(“Wednesday”);

Break;

case 4:

Printf(“Thursday”);

Break;

case 5:

Printf(“Friday”);

Break;

case 6:

Printf(“Saturday”);

Break;

case 7:

Printf(“Sunday”);

Break;

default:

Printf(“Invalid input! Please enter week number between 1-7.”);

}

return 0;

}

1. **Execute a program to display natural numbers, even, odd using switch case**

#include <stdio.h>

int main()

{

int number;

Printf(“Enter a positive integer number: “);

Scanf(“%d”,&number);

switch(number%2) //this will return either 0 or 1

{

case 0:

Printf(“%d is an EVEN number.\n”,number);

Break;

case 1:

Printf(“%d is an ODD number.\n”,number);

Break;

}

return 0;

}

1. **Execute a program to display sum of n natural numbers using Do..While**

#include <stdio.h>

#include <conio.h>

void main()

{

int num, I, sum = 0;

Printf(“Enter a positive number: “);

Scanf(“%d”, &num);

I = 0;

do

{

Sum = sum + I;

I++;

} while (I <= num);

Printf(“ \n Sum of first %d natural number is : %d”, num, sum);

getch();

}

1. **Execute a program to display sum of n natural numbers using While..Do**

#include <stdio.h>

#include <conio.h>

void main()

{

int num, I, sum = 0;

Printf(“Enter a positive number : “);

Scanf(“%d”, &num);

I = 0;

while (I <= num)

{

sum = sum + I;

I++;

}

Printf(“ \n Sum of first %d natural number is : %d”, num, sum);

getch();

}

**11. EXECUTE A GIVEN PROGRAM TO DISPLAY GIVEN ELEMENTS USING 1D ARRAY**

#include<stdio.h>

int main(){

int i=0;

int marks[5]={20,30,40,50,60};

for(i=0;i<5;i++)

{

printf("%d \n",marks[i]);

}

return 0;

}

**12.EXECUTE A C PROGRAM TO DISPLAY A SET OF NUMBERS USING 1D ARRAY**

#include*<stdio.h>*

int main()

{

int arr[5], i;

**for**(i = 0; i < 5; i++)

{

printf("Enter a[%d]: ", i);

scanf("%d", &arr[i]);

}

printf("**\n**Printing elements of the array: **\n\n**");

**for**(i = 0; i < 5; i++)

{

printf("%d ", arr[i]);

}

**return** 0;

}

**13. EXECUTE A C PROGRAM TO DISPLAY A MATRIX USING 2D ARRAY**

#include<stdio.h>

**int** main()

{

**int** i=0,j=0;

**int** arr[4][3]={{1,2,3},{2,3,4},{3,4,5},{4,5,6}};

**for**(i=0;i<4;i++)

{

**for**(j=0;j<3;j++)

{

   printf("arr[%d] [%d] = %d \n",i,j,arr[i][j]);

 }

}

**return** 0;

}

**14. EXECUTE A C PROGRAM TO DISPLAY ADDITON OF MATRICES USIND 2D ARRAY**

#include <stdio.h>

void main()

{

int m,n,c,d,first[10][10],second[10][10],sum[10][10];

printf("enter th number of rows and columns of matrix \n");

scanf("%d%d",&m,&n);

printf("enter the values of first matrix \n");

for(c=0;c<m;c++)

{

for(d=0;d<n;d++)

{

scanf("%d",&first[c][d]);

}

}

printf("enter th values of scond matrix \n");

for(c=0;c<m;c++)

{

for(d=0;d<n;d++)

{

scanf("%d",&second[c][d]);

}

}

printf("sum of the entered matrices \n");

for(c=0;c<m;c++)

{

for(d=0;d<n;d++)

{

sum[c][d]=first[c][d]+second[c][d];

printf("%d \t",sum[c][d]);

}

printf("\n");

}

}

**15. EXECUTE A PROGRAM TO DISPLAY MULTIPICATION OF MATRICES USINGB 2D ARRAY**

#include<stdio.h>

void main()

{

int m,n,p,q,c,d,k,sum=0;

int first[10][10],second[10][10],multiply[10][10];

printf("enter the number of rows and cloumns of first\n");

scanf("%d%d",&m,&n);

printf("enter the elements of first matrix \n");

for(c=0;c<m;c++)

{

for(d=0;d<n;d++)

{

scanf("%d",&first[c][d]);

}

}

printf("enter the number of rows and columns of second matrix\n");

scanf("%d%d",&p,&q);

if(n!=p)

{

printf("matrices can't be multipled with each other\n");

}

else

{

printf("enter the elements of second matrix\n");

for(c=0;c<p;c++)

{

for(d=0;d<q;d++)

{

scanf("%d",&second[c][d]);

}

}

for(c=0;c<m;c++)

{

for(d=0;d<q;d++)

{

for(k=0;k<p;k++)

{

sum=sum+first[c][k]\*second[k][d];

}

multiply[c][d]=sum;

sum=0;

}

}

printf("product of matrices\n");

for(c=0;c<m;c++)

{

for(d=0;d<q;d++)

{

printf("%d\t",multiply[c][d]);

printf("\n");

}

}

}

}

**16. EXECUTE A PROGRAM TO DISPLAY TRANSPOSE OF MATRIX USING 2D ARRAY**

#include<stdio.h>

void main()

{

int m,n,c,d,matrix[10][10],transpose[10][10];

printf("enter the rows and columns of matrix\n");

scanf("%d%d",&m&n);

printf("enter the elements of matrix:\n");

for(c=0;c<m;c++)

{

for(d=0;d<n;d++)

{

scanf("%d",&matrix[c][d]);

}

}

for(c=0;c<m;c++)

print("transpose of matrix\n");

for(c=0;c<n;c++)

{

for(d=0;d<m;d++)

{

printf("%d\t",transpose [c][d];

}

printf("\n");

}

}

**17. EXECUTE A C PROGRAM TO DISPLAY LINEAR SEARCH USING 1D ARRAY**

#include <stdio.h>

int main()

{

int a[10], i, item,n;

printf("\nEnter number of elements of an array:\n");

scanf("%d",&n);

printf("\nEnter elements: \n");

for (i=0; i<n; i++)

scanf("%d", &a[i]);

printf("\nEnter item to search: ");

scanf("%d", &item);

for (i=0; i<=9; i++)

if (item == a[i])

{

printf("\nItem found at location %d", i+1);

break;

}

if (i > 9)

printf("\nItem does not exist.");

return 0;

}

**18 . EXECUTE A C PROGRAM TO DISPLAY BUBBLE SORT USING 1D ARRAY**

#include<stdio.h>

**int** main()

{

**int** array[100], n, i, j, swap;

printf("Enter number of elementsn");

scanf("%d", &n);

printf("Enter %d Numbers:n", n);

**for**(i = 0; i < n; i++)

scanf("%d", &array[i]);

**for**(i = 0 ; i < n - 1; i++)

{

**for**(j = 0 ; j < n-i-1; j++)

{

**if**(array[j] > array[j+1])

{

swap=array[j];

array[j]=array[j+1];

array[j+1]=swap;

}

}

}

printf("Sorted Array:n");

**for**(i = 0; i < n; i++)

printf("%dn", array[i]);

**return** 0;

}

**19.EXECUTE A C PROGRAM TO DISPLAY ARITHMETIC OPERATORS USING FUNCTIONS WITH ARGUMENTS AND WITH RETURN VALUE**

#include<stdio.h>

#include<conio.h>

int add(int n1, int n2);

int subtract(int n1, int n2);

int multiply(int n1, int n2);

int divide(int n1, int n2);

int main()

{

int num1, num2;

printf("Enter two numbers: ");

scanf("%d %d", &num1, &num2);

printf("%d + %d = %d\n", num1, num2, add(num1, num2));

printf("%d - %d = %d\n", num1, num2, subtract(num1, num2));

printf("%d \* %d = %d\n", num1, num2, multiply(num1, num2));

printf("%d / %d = %d\n", num1, num2, divide(num1, num2));

return 0;

}

int add(int n1, int n2)

{

int result;

result = n1 + n2;

return result;

}

int subtract(int n1, int n2)

{

int result;

result = n1 - n2;

return result;

}

int multiply(int n1, int n2)

{

int result;

result = n1 \* n2;

return result;

}

int divide(int n1, int n2)

{

int result;

result = n1 / n2;

return result;

}

**20. EXECUTE A C PROGRAM TO DISPLAY ARITHEMTIC OPERATORS USING FUNCTIONS WITHOUT ARGUMENTS AND WITHOUT RETURN VALUE**

ARITHEMTIC OPERATORS

#include<stdio.h>

#include<conio.h>

void sum();

void sub();

void product();

void division();

void main()

{

sum ();

sub();

product();

division();

getch();

}

void sum ()

{

int a,b;

printf ("enter the two integers");

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

printf ("the sum of the numbers you entered is %d",a+b);

}

void sub ()

{

int a,b;

printf ("enter the two integers");

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

printf ("the sub of the numbers you entered is %d",a-b);

}

void product ()

{

int a,b;

printf ("enter the two integers");

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

printf ("the product of the numbers you entered is %d",a\*b);

}

void division ()

{

int a,b;

printf ("enter the two integers");

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

printf ("the division of the numbers you entered is %d",a/b);

}

21. Execute a program to display Arithmetic operations using

Function without argument and with return value

#include<stdio.h>

// function declarations

int add();

int subtract();

int multiply();

int divide();

// main function

int main()

{

int a,s,m,d;

a=add();

s=subtract();

m=multiply();

d=divide();

printf("Addition of 2 numbers = %d",a);

printf("substraction of 2 numbers = %d",s);

printf("multiplication of 2 numbers = %d",m);

printf("division of 2 numbers = %d",d);

return 0;

}

// function for addition of two numbers

int add()

{

int n1,n2,result;

printf("Enter numbers: ");

scanf("%d %d",&n1,&n2);

result = n1 + n2;

return result;

}

// function for subtraction of two numbers

int subtract()

{

int n1,n2,result;

printf("Enter numbers: ");

scanf("%d %d",&n1,&n2);

result = n1 - n2;

return result;

}

// function for multiplication of two numbers

int multiply()

{

int n1,n2,result;

printf("Enter numbers: ");

scanf("%d %d",&n1,&n2);

result = n1 \* n2;

return result;

}

// function for division of two numbers

int divide()

{

int n1,n2,result;

printf("Enter numbers: ");

scanf("%d %d",&n1,&n2);

result = n1 / n2;

return result;

}

22.Execute a program to display Arithmetic operations using

Function with argument and without return value

#include<stdio.h>

// function declarations

void add(int n1, int n2);

void subtract(int n1, int n2);

void multiply(int n1, int n2);

void divide(int n1, int n2);

// main function

int main()

{

int n1, n2;

printf("Enter numbers: ");

scanf("%d %d",&n1,&n2);

add(n1, n2);

subtract(n1, n2);

multiply(n1, n2);

divide(n1, n2);

return 0;

}

// function for addition of two numbers

void add(int n1, int n2)

{

int result;

result = n1 + n2;

printf("%d + %d = %d\n", n1, n2, result);}

// function for subtraction of two numbers

void subtract(int n1, int n2)

{

int result;

result = n1 - n2;

printf("%d - %d = %d\n", n1, n2, result);}

// function for multiplication of two numbers

void multiply(int n1, int n2)

{

int result;

result = n1 \* n2;

printf("%d \* %d = %d\n", n1, n2, result);}

// function for division of two numbers

void divide(int n1, int n2)

{

int result;

result = n1 / n2;

printf("%d / %d = %d\n", n1, n2, result);}

Output:-

# Execute program to display factorial of given number using functions

#include<stdio.h> #include<math.h> int main()

{

printf("Enter a Number to Find Factorial: ");

printf("\nFactorial of a Given Number is: %d ",fact());

return 0;

}

int fact()

{

int i,fact=1,n; scanf("%d",&n); for(i=1; i<=n; i++)

{

fact=fact\*i;

}

return fact;

}

1. **Execute program to display Fibonacci series with using recursive**

#include<stdio.h> int Fibonacci(int); int main()

{

intn,i =0,c; scanf("%d",&n);

printf("Fibonacci seriesn");

for(c =1;c <=n ;c++)

{

printf("%d n",Fibonacci(i)); i++;

}

return0;

}

intFibonacci(intn)

{

if(n ==0) return0; elseif(n ==1) return1;

else

return(Fibonacci(n-1)+Fibonacci(n-2));

}

# Execute a program to display Fibonacci series without using Recursive

#include<stdio.h> int main()

{

int n1=0,n2=1,n3,i,number;

printf("Enter the number of elements:");

scanf("%d",&number);

printf("n %d %d",n1,n2);

for(i=2;i<number;++i)

{

n3=n1+n2;

printf(" %d",n3);

n1=n2;

n2=n3;

}

return 0;

}

# Execute a program to display Arithmetic operations by using pointers

#include<stdio.h>

int main()

{

int no1,no2;

int \*ptr1,\*ptr2;

        int sum,sub,mult;

        float div;

    printf("Enter number1:\n");

    scanf("%d",&no1);

    printf("Enter number2:\n");

    scanf("%d",&no2);

    ptr1=&no1;//ptr1 stores address of no1

    ptr2=&no2;//ptr2 stores address of no2

    sum=(\*ptr1) + (\*ptr2);

    sub=(\*ptr1) - (\*ptr2);

    mult=(\*ptr1) \* (\*ptr2);

    div=(\*ptr1) / (\*ptr2);

    printf("sum= %d\n",sum);

    printf("subtraction= %d\n",sub);

    printf("Multiplication= %d\n",mult);

    printf("Division= %f\n",div);

    return 0;

}

## **27. Execute a program to display data of one student using**

#include <stdio.h>

struct student {

char firstName[50];

int roll;

float marks;

} s[5];

int main() {

int i;

printf("Enter information of students:n");

// storing information

for (i = 0; i < 5; ++i) {

s[i].roll = i + 1;

printf("\nFor roll number%d,n", s[i].roll);

printf("Enter first name: ");

scanf("%s", s[i].firstName);

printf("Enter marks: ");

scanf("%f", &s[i].marks);

}

printf("Displaying Information:n n");

// displaying information

for (i = 0; i < 5; ++i) {

printf("nRoll number: %dn", i + 1);

printf("First name: ");

puts(s[i].firstName);

printf("Marks: %.1f", s[i].marks);

printf("n");

}

return 0;

}

28. **Execute program to display data of three students using structure data type**

include <stdio.h>

struct student

{ char name[50];

int roll;

float marks;

} s[3];

int main()

{ int i;

printf("Enter information of students:\n");

for(i=0; i<3; ++i)

{

s[i].roll = i+1;

printf("\nFor roll number%d,\n",s[i].roll);

printf("Enter name: ");

scanf("%s",s[i].name);

printf("Enter marks: ");

scanf("%f",&s[i].marks);

printf("\n");

}

printf("Displaying Information:\n\n");

for(i=0; i<3; ++i)

{ printf("\nRoll number: %d\n",i+1);

printf("Name: ");

puts(s[i].name);

printf("Marks: %.1f",s[i].marks);

printf("\n");

}

return 0;

}

29. **Execute a program to display data of three CSE ,one ECE student using structure data type**

//C program for entering details in an array.   
#include <stdio.h>  
struct student {  
    char fName[50];  
    int rollno;  
    float marks;  
} stu[10];  
int main() {  
    int i;  
    printf("Enter information of students:\n");  
    // storing information  
    for (i = 0; i < 5; ++i) {  
        stu[i].rollno = i + 1;  
        printf("\nFor roll number%d,\n", stu[i].rollno);  
        printf("Enter first name: ");  
        scanf("%s", stu[i].fName);  
        printf("Enter marks: ");  
        scanf("%f", &stu[i].marks);  
    }  
    printf("Displaying Information:\n\n");  
    // displaying information  
    for (i = 0; i < 5; ++i) {  
        printf("\nRoll number: %d\n", i + 1);  
        printf("First name: ");  
        puts(stu[i].fName);  
        printf("Marks: %.1f", stu[i].marks);  
        printf("\n");  
    }  
    return 0;  
}

30.Execute program to display data of one student with address using structure with in structure data type

#include<stdio.h>

struct address

{

char city[20];

int pin;

char phone[14];

};

struct student

{

char name[20];

int rollno;

struct address add;

};

void main()

{

struct student std;

printf(“enter student information?\n”);

scanf(“%s%d%s%d%s”);

std.name,std.rollno,std.add.city,std.add.pin,std.add.phone;

printf(“printing student info:\n”);

printf(“name:%s\nrollno:%d\ncity:%s\npincode:%d\nphone:\n”,std.name,std.rollno,std.add.city,std.add.pin,std.add.phone);

}

32. Execute a program to display data of one student using pointers in structure data type

#include <stdio.h>

struct student

{

char name[30];

int roll;

float perc;

};

int main()

struct student std;

struct student \*ptr;

ptr= &std;

printf("Enter details of student :: \n");

printf("\nEnter Name of student :: ");

scanf("%s",ptr->name);

printf("\nEnter Roll No of student :: ");

scanf("%d",&ptr->roll);

printf("\nEnter Percentage of student :: ");

scanf("%f",&ptr->perc);

printf("\nEntered details of student are :: \n");

printf("\nName : %s \n\nRollNo: %d \n\nPercentage: %.02f\n\n",ptr->name,ptr->roll,ptr->perc);

return 0;

}

**33.Execute a program to display even series using for loop**

#include <stdio.h>

int main()

{

int i, n;

printf("Print all even numbers till: ");

scanf("%d", &n);

printf("Even numbers from 1 to %d are: \n", n);

for(i=1; i<=n; i++)

{

if(i%2 == 0)

{

printf("%d\n", i);

}

}

return 0;

}

**34.Execute a c program to display odd series using for loop**

#include <stdio.h>

int main()

{

int i, n;

printf("Print odd numbers till: ");

scanf("%d", &n);

printf("All odd numbers from 1 to %d are: \n", n);

for(i=1; i<=n; i++)

{

if(i%2!=0)

{

printf("%d\n", i);

}

}

return 0;

}

**35.Execute the program to display even, odd using menu driven choice**

#include <stdio.h>

int main()

{

int number;

printf("Enter a positive integer number: ");

scanf("%d",&number);

switch(number%2) //this will return either 0 or 1

{

case 0:

printf("%d is an EVEN number.\n",number);

break;

case 1:

printf("%d is an ODD number.\n",number);

break;

}

return 0;

}

**36.Execute a program to display prime series using for loop**

#include <stdio.h>

int main() {

int low, high, i, flag;

printf("Enter two numbers(intervals): ");

scanf("%d %d", &low, &high);

printf("Prime numbers between %d and %d are: ", low, high);

while (low < high) {

flag = 0;

if (low <= 1) {

++low;

continue;

}

for (i = 2; i <= low / 2; ++i) {

if (low % i == 0) {

flag = 1;

break;

}

}

if (flag == 0)

printf("%d ", low)

++low;

}

return 0;

}

**37.Execute the program to display composite numbers using for loop**

#include <stdio.h>

int main() {

int num = 12;

int i;

int count = 0;

for(i=1;i<=num;i++)

{

if(num % i == 0)

count++;

}

if(count > 2)

printf("%d is a composite number", num);

else

printf("%d is not a composite number", num);

return 0;

}

**39.Execute a program to display Maximum and Minimum value from the given array of numbers**

#include <stdio.h>

int main()

{

int a[1000],i,n,min,max;

printf("Enter size of the array : ");

scanf("%d",&n);

printf("Enter elements in array : ");

for(i=0; i<n; i++)

{

scanf("%d",&a[i]);

}

min=max=a[0];

for(i=1; i<n; i++)

{

if(min>a[i])

min=a[i];

if(max<a[i])

max=a[i];

}

printf("minimum of array is : %d",min);

printf("\nmaximum of array is : %d",max);

return 0;

}

**40.Execute a program to display Average of user defined numbers using 1D Array**

#include<stdio.h>

float average(float a[100], int n);

int main()

{

float a[100], res;

int i, n;

printf("Enter n:\n");

scanf("%d", &n);

for(i=0;i< n;i++)

{

printf("a[%d]=",i);

scanf("%f", &a[i]);

}

res = average(a,n);

printf("Average = %f", res);

return 0;

}

float average(float a[10], int n)

{

int i;

float sum=0.0;

for(i=0;i< n;i++)

{

sum = sum + a[i];

}

return(sum/n);

}