**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 structure data type**

#include <stdio.h>

struct student {

char firstName[50];

int roll;

float marks;

} s;

int main() {

int i;

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

// storing information

s.roll = 100;

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

printf("Enter first name: ");

scanf("%s", s.firstName);

printf("Enter marks: ");

scanf("%f", s.mark);

}

printf("Displaying Information:n n");

// displaying information

printf("nRoll number: %dn", s.roll);

printf("First name: ");

puts(s.firstName);

printf("Marks: %.1f", s.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;  
}

**Note:Give 3 CSE student’s data and one ECE student data while executing**

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);

}