**Experience No:01**

**Experiment name:** Write a C program to print only odd numbers in an array.

**Objective :**We want to run a program using array which will execute odd numbers in codeblocks compiler .

**Algorithm :**

Step 1: Start.

Step 2: Read two integer number.

Step 3: Input a number.

Step 4: Read an array.

Step 5: Initialize for loop.

Step 6: Input array numbers.

Step 7: Initialize another for loop.

Step 8: Check the condition and print the odd numbers.

Step 9: End.

**Program code :**

#include<stdio.h>

int main()

{

int N,i;

printf("Enter the numbers:");

scanf("%d",&N);

int arr[N];

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

{

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

}

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

{

if(arr[i]%2!=0) printf("%d ",arr[i]);

}

return 0;

}

**Input and output :**

Enter the numbers:5

1 2 3 4 5

1 3 5

**Discussion :**We have successfully run a program which have displayed odd numbers from an array.

**Experience No:02**

**Experiment name:** Write a C program to calculate average of numbers in an array.

**Objective :**We want to run a program using array which will execute average number in an array in codeblocks compiler.

**Algorithm :**

Step 1: Start.

Step 2: Read two integer type variables.

Step 3: Print a statement.

Step 4: Input a number.

Step 5: Print a statement.

Step 6: Read a double type variable and a double type array.

Step 7: Initialize a for loop.

Step 8: Input double type numbers in array.

Step 9: Initialize another for loop.

Step 10:Sum all the numbers in array.

Step 11:Print the average.

Step 12 :End.

**Program code:**

#include<stdio.h>

int main()

{

int n,i;

printf("Enter a value :");

scanf("%d",&n);

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

double a[n+1],j=0;

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

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

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

j+=a[i];

printf("The average of %d numbers is %lf\n",n,j/n);

return 0;

}

**Input and output:**

Enter a value :5

Enter 5 numbers :1 2 3 4 5.0

The average of 5 numbers is 3.00

**Discussion :**We have successfully run a program which have displayed the average number using array.

**Experience No:03**

**Experiment name:** Write a C program to find the largest number in an array.

**Objective:**We want run a program which will execute the largest number from an array in codeblocks compiler.

**Algorithm:**

Step 1: Start .

Step 2: Read three numbers and assign j=0.

Step 3: Print a statement.

Step 4: Input a number.

Step 5: Read an array and declare its size.

Step 6: Print another statement.

Step 7: Initialize a for loop.

Step 8: Input numbers in the array.

Step 9: Initialize another for loop.

Step 10:Search for the largest number in the array.

Step 11: Print the largest number.

Step 12: End.

**Program code:**

#include<stdio.h>

int main()

{

int n,i,j=0;

printf("Enter a value : ");

scanf("%d",&n);

int a[n+2];

printf("Enter %d numbers : \n",n);

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

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

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

if(a[i]>j || i==0)

j=a[i];

printf("The largest number is %d.\n",j);

return 0;

}

**Input and output:**

Enter a value : 4

Enter 4 numbers :

1 2 3 4

The largest number is 4.

**Discussion :**We have successfully run a program which have displayed the largest number from 5 different numbers.

**Experience No:04**

**Experiment name:** Write a C program to calculate first 20 Fibonacci numbers.

**Objective:** we want to run a program which will execute frist 20 Fibonacci numbers in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two numbers.

Step 3: Print a statement.

Step 4: Read an array.

Step 5: Declare a[0]=0 and a[0]=1.

Step 6: Initialize a for loop.

Step 7:Assign value in array’s i-th index with the summation of arrays previous two indexes values.

Step 8: Initialize another for loop.

Step 9: Print Fibonacci numbers.

Step 10:End.

**Program code :**

#include<stdio.h>

int main()

{

int n,i;

printf("Fibonacci numbers from 1 to 20 : \n");

int a[20];

a[0]=0;

a[1]=1;

for (i=2; i<20; i++)

{

a[i]=a[i-1]+a[i-2];

}

for (i=0; i<20; i++)

{

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

}

return 0;

}

**Input and output:**

Fibonacci numbers from 1 to 20 :

0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181

**Discussion:** We have successfully run a program which have displayed Fibonacci numbers.

**Experience no:05**

**Experiment name**: Write a C program to show whether a number is negative, positive or zero.

**Objective:** We want to run a program using if else statement which will execute a number is positive,negative or zero in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one integer number.

Step 3:Checking the if conditions.

Step 4:If the number is greater than 0,the number is positive.If the number is less than 0,the number is negative or it is zero.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

int n;

scanf("%d",&n);

if(n > 0 ) printf("%d is a positive number",n);

else if(n < 0 ) printf("%d is a negative number",n);

else printf("%d is zero",n);

getch ();

}

**Input & Output:**

-9

-9 is a negative number

**Discussion:**We have successfully run a program which have displayed the number which we wanted from the given numbers.

**Experience no:06**

**Experiment name**: Write a C program to check whether an integer is odd or even.

**Objective:** We want to run a program using if else statement which will execute a number is odd or even in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one integer number.

Step 3:Checking the if conditions.

Step 4:If the number is divisible by 2,it is even number or it is odd number.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

int n;

scanf("%d",&n);

if(n%2 == 0 ) printf("%d is even number",n);

else printf("%d is odd number",n);

getch ();

}

**Input & Output:**

67

67 is odd number

**Discussion:**We have successfully run a program which have displayed the number which we wanted from the given numbers.

**Experience no:07**

**Experiment name**: Write a C program to find the largest number among three numbers.

**Objective:** We want to run a program using if else statement which will execute a number is odd or even in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one integer number.

Step 3:Checking the if conditions.

Step 4:Print the largest number.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

int a,b,c;

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

if(a>b && a>c ) printf("%d is the largest number",a);

else if(b>a && b>c ) printf("%d is the largest number",b);

else printf("%d is the largest number",c);

getch ();

}

**Input & Output:**

34 -9 0

34 is the largest number

**Discussion:**We have successfully run a program which have displayed the large number which we wanted from the given numbers.

**Experience no:08**

**Experiment name**: Write a C program to check whether a number is divisible by 5 and 11 or not.

**Objective:** We want to run a program using if else statement which will execute a number is divisible or non divisible number in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one integer number.

Step 3:Checking the if conditions.

Step 4:print the divisible or not divisible number.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

int n;

scanf("%d",&n);

if(n%5==0 && n%11==0 ) printf("%d is divisible by both 5 and 11",n);

else printf("%d is not divisible by both 5 and 11",n);

getch ();

}

**Input & Output:**

6

6 is not divisible by both 5 and 11

**Discussion:**We have successfully run a program which have displayed the number is divisible or not which we wanted from the given numbers.

**Experience no:09**

**Experiment name**: Write a C program to check whether a year is leap year or not.

**Objective:** We want to run a program using if else statement which will execute a number is leap year or not in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one integer number.

Step 3:Checking the if conditions.

Step 4:Print the number is leap year or not.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

int n;

scanf("%d",&n);

if(n%4==0 || n%100==0 ) printf("%d is a leap year",n);

else if(n%400==0 ) printf("%d is a leap year",n);

else printf("%d is not a leap year",n);

getch ();

}

**Input & Output:**

2021

2021 is not a leap year

**Discussion:**We have successfully run a program which have displayed the number which we wanted from the given numbers.

**Experience no:10**

**Experiment name**: Write a C program to check whether a character is alphabet or not.

**Objective:** We want to run a program using if else statement which will execute a character is alphabet or not in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one character.

Step 3:Checking the if conditions.

Step 4:Print the character is alphabet or not.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

char i;

scanf("%c",&i);

if((i>=65 && i<=90) ||(i>=97 && i<=122))

printf("%c is an alphabet.\n",i);

else

printf("%c is not an alphabet.\n",i);

getch ();

}

**Input & Output:**

#

# is not an alphabet.

**Discussion:**We have successfully run a program which have displayed the number which we wanted from the given numbers.

**Experience no:11**

**Experiment name**: Write a C program to input any alphabet and check whether it is vowel or consonant.

**Objective:** We want to run a program using if else statement which will execute an alphabet is vowel or consonant in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one alphabet.

Step 3:Checking the conditions.

Step 4:Print the alphabet is vowel or consonant.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

char ch;

scanf("%c",&ch);

ch = tolower(ch);

if (ch == 'a'|| ch == 'e' || ch == 'i'|| ch == 'o' || ch == 'u') printf("it is a vowel");

else printf("it is a consonant");

getch ();

}

**Input & Output:**

o

it is a vowel

**Discussion:**We have successfully run a program which have displayed the number which we wanted from the given numbers.

**Experience no:12**

**Experiment name**: Write a C program to take mark as input and output grade based on following conditions:

Percentage >= 90% : Grade A

Percentage >= 80% : Grade B

Percentage >= 70% : Grade C

Percentage >= 60% : Grade D

Percentage >= 40% : Grade E

Percentage < 40% : Grade F

**Objective:** We want to run a program using if else statement which will execute a grade to a mark in codeblocks compiler.

**Algorithm:**

Step 1:Start.

Step 2:Read one mark.

Step 3:Checking the conditions.

Step 4:print the grade to a mark.

Step 5:End.

**Program code:**

#include<stdio.h>

#include<conio.h>

int main ()

{

int n;

scanf ("%d",&n);

if (n >= 90 ) printf("Grade A");

else if (n >= 80 ) printf("Grade B");

else if (n >= 70 ) printf("Grade C");

else if (n >= 60 ) printf("Grade D");

else if (n >= 40 ) printf("Grade E");

else printf("Grade F");

getch ();

}**Input & Output:**

88

Grade B

**Discussion:**We have successfully run a program which have displayed the number which we wanted from the given numbers.

**Experiment no :13**

**Experiment name**: Write a C program to find diameter, circumference and area of circle using function.

**Objective:** We want to run a program which will execute diameter, circumference and area of a circle in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read a double variable.

Step 3: Input the radius and store it in r.

Step 4: Call the function find() with the the parameter r.

Step 5: Print the diameter of the circle.

Step 6: Print the circumference of the circle.

Step 7: Print the area of the circle .

Step 8: Come back to the main function.

Step 9: Stop.

**Program code:**

#include <stdio.h>

int find(int r)

{

int dia= r\*2;

double circum=2\*3.1416\*r;

double cir=3.1416\*r\*r;

printf("Diameter = %d\n Circumference = %.2lf\n Circle= %.2lf\n",dia,circum, cir);

}

int main()

{

int r;

printf("Enter one positive integers: ");

scanf("%d",&r);

find(r);

return 0;

}

**Input and output:**

Enter one positive integers: 5

Diameter = 10

Circumference = 31.42

Circle= 78.54

**Discussion:** We have successfully run a program which have displayed circumference, diameter and area of a circle.

**Experiment no:14**

**Experiment name**: Write a C program to find maximum and minimum between two numbers using function.

**Objective:** We want to run a program which will execute maximum and minimum in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer value n,i.

Step 3: Print a statement .

Step 4: Input two integer .

Step 5: Call the function find() with two parameter n,i.

Step 6: In the function check if n is greater than i then print n is maximum and i minimum else print n is minimum and i is maximum.

Step 7: Come back to the main function.

Step 8: End.

**Program code:**

#include<stdio.h>

int find(int x,int y)

{

if(x>y)

printf("The maximum value is %d.\nThe minimum value is %d.\n",x,y);

else

printf("The maximum value is %d.\nThe minimum value is %d.\n",y,x);

}

int main()

{

int x,y;

printf ("Enter two numbers:\n");

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

find(x,y);

}

**Input and output:**

Enter two numbers:

5 -5

The maximum value is 5.

The minimum value is -5.

**Discussion:** We have successfully run a program which have displayed maximum and minimum value between two values.

**Experiment no:15**

**Experiment name**: Write a C program to find all prime numbers between given interval using function.

**Objective:** We want to run a program which will execute all prime numbers in given interval in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: read two integer value.

Step 3: Print a statement.

Step 4: Input two integer variables n1 and n2.

Step 5: Call the function PrimeNumber() with two parameter n1,n2.

Step 6: Print a statement.

Step 7: Initialize two for loops nested and check all the possible number between n1 and n2. If found any prime number then print the number .

Step 8: Come back to the main function.

Step 9: End.

**Program code:**

#include <stdio.h>

int PrimeNumber(int n1,int n2)

{

int i,j, flag;

for (i = n1 + 1; i < n2; i++)

{

flag=1;

for (j = 2; j <= i/2; j++)

{

if (i % j == 0)

{

flag = 0;

break;

}

}

if (flag == 1) printf("%d ",i);

}

}

int main()

{

int n1, n2, i, flag;

printf("Enter two positive integers: ");

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

printf("Prime numbers between %d and %d are: ", n1, n2);

PrimeNumber(n1,n2);

return 0;

}

**Input and output:**

Enter two positive integers: 1 20

Prime numbers between 1 and 20 are: 2 3 5 7 11 13 17 19

**Discussion:** We have successfully run a program which have displayed all the prime numbers between two value.

**Experiment no:16**

**Experiment name**: Write a C program to print all even or odd numbers in given range using function.

**Objective:**We want to run a program which will execute even or odd number between a given range in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer numbers.

Step 3: Print a statement.

Step 4: Input two number and store them in a and b.

Step 5:Check if the first value is even.

Step 6: Call the function EVEN\_num() with two parameter a,b.

Step 7: Initialize a for loop and print even numbers.

Step 8: Come back to the main function.

Step 9: End.

**Program code :**

#include<stdio.h>

int EVEN\_num(int a,int b)

{

printf("Even num of the range : \n");

int i,even,temp=0;

if(a>b)

{

temp=a;

a=b;

b=temp;

}

for(i = a; i <= b; i++)

{

if(i%2==0)

{

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

}

}

}

int main()

{

printf("Enter two num : ");

int a,b;

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

EVEN\_num(a,b);

return 0;

}

**Input and output:**

Enter two num : 5 9

Even num of the range :

6

8

**Discussion:** we have successfully run a program which have displayed even numbers in the given range.

**Experiment no:17**

**Experiment name**: Write a C program to find sum of all even or odd numbers in given range using function.

**Objective:** We want run a program which will execute the sum of even numbers in given range in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer.

Step 3: Print a statement .

Step 4: Input two number and store them in a and b.

Step 5:Check the first value is even.

Step 6: Call the function EVEN\_num() with two parameter a,b.

Step 7: Initialize a for loop and print the sum of even numbers.

Step 8: Come back to the main function.

Step 9: End.

**Program code :**

#include<stdio.h>

int EVEN\_num(int a,int b)

{

printf("Even num of the range : ");

int i,even=0,temp=0;

if(a>b)

{

temp=a;

a=b;

b=temp;

}

for(i = a; i <= b; i++)

{

if(i%2==0)

{

even=even+i;

}

}

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

}

int main()

{

printf("Enter two num : ");

int a,b;

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

EVEN\_num(a,b);

return 0;

}

**Input and output:**

Enter two num : 4 9

Even num of the range : 18

**Discussion:** We have successfully run a program which have displayed sum of even numbers in the given range.

**Experiment no:18**

**Experiment name**: Write a C program to find sum of all natural numbers between 1 to n using function.

**Objective:** We want run a program which will execute the sum of all natural numbers in given range in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer.

Step 3: Print a statement .

Step 4: Input two number and store them in a and b.

Step 5: Call the function SUM() with two parameter a,b.

Step 6: Initialize a for loop and print the sum of all natural numbers.

Step 7: Come back to the main function.

Step 8: End.

**Program code :**

#include<stdio.h>

int SUM(int n)

{

int i,sum=0;

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

{

sum = sum +i;

}

printf("the sum value = %d\n",sum);

}

int main()

{

printf("Enter one num : ");

int n;

scanf("%d",&n);

SUM(n);

return 0;

}

**Input and output:**

Enter one num : 5

the sum value = 15

**Discussion:** We have successfully run a program which have displayed the sum of all natural numbers in the given range.

**Experiment no:19**

**Experiment name:** Write a C program to find LCM of two numbers using function.

**Objective:** We want run a program which will execute the lcm of two number in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer.

Step 3: Print a statement .

Step 4: Input two number and store them in a and b.

Step 5: Call the function LCM() with two parameter a,b.

Step 6: Initialize a for loop and print the lcm of two number.

Step 7: Come back to the main function.

Step 8: End.

**Program code :**

#include<stdio.h>

int LCM(int a,int b)

{

    int x,lcm;

    x = (a>b)?a:b;

    while(1)

    {

        if (x%a==0 && x%b==0 )

        {

            lcd = x;

            printf("the LCM value the two num = %d\n",lcd);

            break;

        }

        ++x;

    }

}

int main()

{

    printf("Enter two num : ");

    int a,b;

    scanf("%d%d",&a,&b);

    LCM(a,b);

    return 0;

}

**Input and output:**

Enter two num : 4 6

the LCM value the two num = 12

**Discussion:** We have successfully run a program which have displayed the lcm of two number.

**Experiment no:20**

**Experiment name:** Write a C program to find GCD of two numbers using function.

**Objective:** We want run a program which will execute the GCD of numbers in given range in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer.

Step 3: Print a statement .

Step 4: Input two number and store them in a and b.

Step 5: Call the function GCD() with two parameter a,b.

Step 6: Initialize a for loop and print the gcd of numbers.

Step 7: Come back to the main function.

Step 8: End.

**Program code :**

#include<stdio.h>

int GCD(int a,int b)

{

int i,gcd;

for(i = 1; i <= a && i <= b; i++)

{

if(a%i==0 && b%i==0 )

{

gcd = i;

}

}

printf("the GCD value the two num = %d\n",gcd);

}

int main()

{

printf("Enter two num : ");

int a,b;

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

GCD(a,b);

return 0;

}

**Input and output:**

Enter two num : 4 6

the GCD value the two num = 2

**Discussion:** We have successfully run a program which have displayed the GCD of numbers in given range.

**Experiment no:21**

**Experiment name:** Write a C program to calculate the power of a number using function.

**Objective:** We want run a program which will execute the power of a number using function in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read one integer.

Step 3: Print a statement .

Step 4: Input one number and store them in n.

Step 5: Call the function power() with parameter n.

Step 6: Initialize a for loop and print the power of the number.

Step 7: Come back to the main function.

Step 8: End.

**Program code :**

#include<stdio.h>

#include<math.h>

int power(int n)

{

int x;

x = pow(n,3);

printf("power value = %d\n",x);

}

int main()

{

printf("Enter a num : ");

int n;

scanf("%d",&n);

power(n);

return 0;

}

**Input and output:**

Enter a num : 5

power value = 125

**Discussion:** we have successfully run a program which have displayed the power of the number using function.

**Experiment no :22**

**Experiment name:** Write a C program to calculate the factorial of a number using function.

**Objective:**We want run a program which will execute the the factorial of a number using function in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read one integer.

Step 3: Print a statement .

Step 4: Input one number and store them in n.

Step 5: Call the function factorial() with parameter n.

Step 6: Initialize a for loop and print the factorial numbers.

Step 7: Come back to the main function.

Step 8: End.

**Program code :**

#include<stdio.h>

int factorial(int n)

{

    int i,fac=1;

    for(i = 1; i <= n; i ++ )

    {

        fac=fac\*i;

    }

    printf("Factorial value = %d\n",fac);

}

int main()

{

    printf("Enter a num : ");

    int n;

    scanf("%d",&n);

    factorial(n);

    return 0;

}

**Input and output:**

Enter a num : 7

Factorial value = 5040

**Discussion:** We have successfully run a program which have displayed the factorial of a number using function.

**Experiment no :23**

**Experiment name:** Write a C Program to Swap Two Numbers using Pointers.

**Objective:** We want run a program which will execute swap value of two number by using pointer in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Read two integer.

Step 3: Print two statement .

Step 5: Call the function swap() with address of the two parameter a,b.

Step 6: Swap the value to each other.

Step 7: Come back to the main function and print two statement.

Step 8: End.

**Program code :**

#include <stdio.h>

void swap(int \*x, int \*y){

int temp;

temp=\*x;

\*x=\*y;

\*y=temp;

}

int main () {

int a = 100;

int b = 200;

printf("Before swap, value of a : %d\n", a );

printf("Before swap, value of b : %d\n", b );

swap(&a, &b);

printf("After swap, value of a : %d\n", a );

printf("After swap, value of b : %d\n", b );

return 0;

}

**Input and output:**

Before swap, value of a : 100

Before swap, value of b : 200

After swap, value of a : 200

After swap, value of b : 100

**Discussion:** We have successfully run a program which have displayed the swap value of two number in given range.

**Experiment no:24**

**Experiment name:**Write a C program for accessing array elements incrementing a Pointer.

**Objective:** We want run a program which will execute all the value of an array that incrementing by pointer in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2:Initialize an array a[5].

Step 3: Initialize a pointer and a variable i.

Step 4: Initialize a for loop and print all the value.

Step 5: End.

**Program code :**

#include<stdio.h>

int main()

{

int a[5]={2,3,4,5,6};

int \*ptr;

int i;

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

ptr = &a[i];

printf("%d ",\*ptr);

}

return 0;

}

**Input and output:**

2 3 4 5 6

**Discussion:** We have successfully run a program which have displayed all the value of the array by using pointer.

**Experiment no :25**

**Experiment name:** Write a C Program to Store Information of a Student Using Structure.

**Objective:** We want run a program which will store information of a student ny using structure in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2:structure declaration with character,integer and float type variable.

Step 3: declare structure variable.

Step 4: input name ,roll,marks.

Step 6: print the statement.

Step 6: End.

**Program code :**

#include <stdio.h>

struct student {

char name[50];

int roll;

float marks;

} s;

int main() {

printf("Enter information:\n");

printf("Enter name: ");

fgets(s.name, sizeof(s.name), stdin);

printf("Enter roll number: ");

scanf("%d", &s.roll);

printf("Enter marks: ");

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

printf("Displaying Information:\n");

printf("Name: ");

printf("%s", s.name);

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

printf("Marks: %.1f\n", s.marks);

return 0;

}

**Input and output:**

Enter information:

Enter name: Sharmin

Enter roll number: 0011

Enter marks: 99

Displaying Information:

Name: Sharmin

Roll number: 11

Marks: 99.0

**Discussion:** We have successfully run a program which store the information of a student and display his information by using structure.

**Experiment no :26**

**Experiment name:** Write a C Program to Add Two Distances (in inch-feet system) using Structures.

**Objective:** We want run a program which will add two distance by using structure in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2:structure declaration with integer and float type variable.

Step 3: declare structure variable.

Step 4: input feet, inch.

Step 5: sum.feet = dist1.feet + dist2.feet;

sum.inch = dist1.inch + dist2.inch;

Step 6: initialize while loop and increament sum.feet and sum.inch = sum.inch – 12.

Step 6: print the statement.

Step 6: End.

**Program code :**

#include <stdio.h>

struct Distance

{

int feet;

float inch;

} dist1, dist2, sum;

int main()

{

printf("1st distance\n");

printf("Enter feet: ");

scanf("%d", &dist1.feet);

printf("Enter inch: ");

scanf("%f", &dist1.inch);

printf("2nd distance\n");

printf("Enter feet: ");

scanf("%d", &dist2.feet);

printf("Enter inch: ");

scanf("%f", &dist2.inch);

sum.feet = dist1.feet + dist2.feet;

sum.inch = dist1.inch + dist2.inch;

while (sum.inch >= 12)

{

++sum.feet;

sum.inch = sum.inch - 12;

}

printf("Sum of distances = %d\'-%.1f\"", sum.feet, sum.inch);

return 0;

}

**Input and output:**

1st distance

Enter feet: 10

Enter inch: 12

2nd distance

Enter feet: 13

Enter inch: 14

Sum of distances = 25'-2.0"

**Discussion:** We have successfully run a program which input two value off feet and two value of inch and display this information by using structure.

**Experiment no :27**

**Experiment name:** Write a C Program to create a File and write Data in it.

Objective: We want run a program which create a file and write data in it in codeblocks compiler.

Algorithm:

Step 1: Start.

Step 2:Read a varrible num.

Step 3: File declaration.

Step 4: Open the file .

Step 5: Check the condition and print the statement and close the file.

Step 6:Input a number.

Step 7:Print the number.

Step 8: Close the file.

Step 9: End.

**Program code :**

#include <stdio.h>

#include <stdlib.h>

int main()

{

int num;

FILE \*fptr;

fptr = fopen("C:\\program.txt","w");

if(fptr == NULL)

{

printf("Error!");

exit(1);

}

printf("Enter num: ");

scanf("%d",&num);

fprintf(fptr,"%d",num);

fclose(fptr);

return 0;

}

**Input and output:**

Error!

**Discussion:** We have successfully run a program which create a file and writing in that file.

**Experiment no:28**

**Experiment name:** Write a C Program to copy content of one File into another File.

**Objective:** We want run a program which copy a content from one to another file in codeblocks compiler.

**Algorithm:**

Step 1: Start.

Step 2: Input file path of source and destination file.

Step 3: Open source file in r (read) and destination file in w (write) mode.

Step 4: Read character from source file and write it to destination file using fputc().

Step 5: Repeat step 4 till source file has reached end.

Step 6: Close both source and destination file.

Step 7:End.

**Program code :**

#include "stdio.h"

main( )

{

FILE \*fs, \*ft ;

char ch ;

fs = fopen ( "pr1.c", "r" ) ;

if ( fs == NULL )

{

puts ( "Cannot open source file" ) ;

exit( 1) ;

}

ft = fopen ( "pr2.c", "w" ) ;

if ( ft == NULL )

{

puts ( "Cannot open target file" ) ;

fclose ( fs ) ;

exit( 1) ;

}

while ( 1 )

{

ch = fgetc ( fs ) ;

if ( ch == EOF )

break ;

else

fputc ( ch, ft ) ;

}

fclose ( fs ) ;

fclose ( ft ) ;

}

**Input and output:**

Cannot open source file

**Discussion:** We have successfully run a program which copy a content from one to another file.