Week: 11

Lab :

Date :

AREA AND CIRCUMFERENCE OF THE CIRCLE

AIM:

To write a C program to find the area and circumference of the circle

ALGORITHM:

Step 1: Start the program.

Step 2: Input the radius of the Circle.

Step 3: Find the area and circumference of the circle using the formula

Area =3.14*r*r

Circum=2*3.14*r

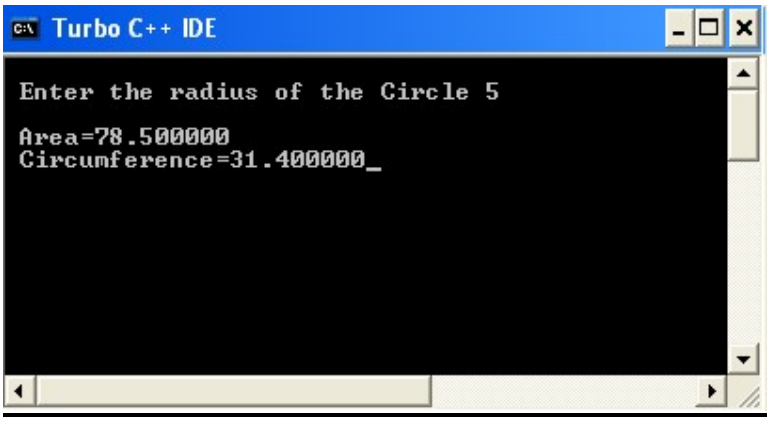
Step 4: Print the area and Circumference

Step 5: Stop the Program

PROGRAM: (AREA AND CIRCUMFERENCE OF THE CIRCLE)

```
#include<stdio.h>
#include<conio.h>
void main()
{ float r,area,circum;
     clrscr();
     printf("\n Enter the radius of the Circle");
     scanf("%f",&r); area=3.14*r*r;
     circum=2*3.14*r; printf("\n Area=%f",area);
     printf("\n Circumference=%f",circum);
     getch();
}
```

INPUT AND OUTPUT:



RESULT:

Thus the C program to find the area and circumference of the circle has been created successfully and verified.

Lab 1:

Date :

TERNARY OPERATOR

AIM:

To write a C program to check the largest number among given two numbers.

ALGORITHM:

Step 1: Start the program

Step 2: Declare the necessary variables.

Step 3: Check if(a > b) **Step 4:** If true Print a.

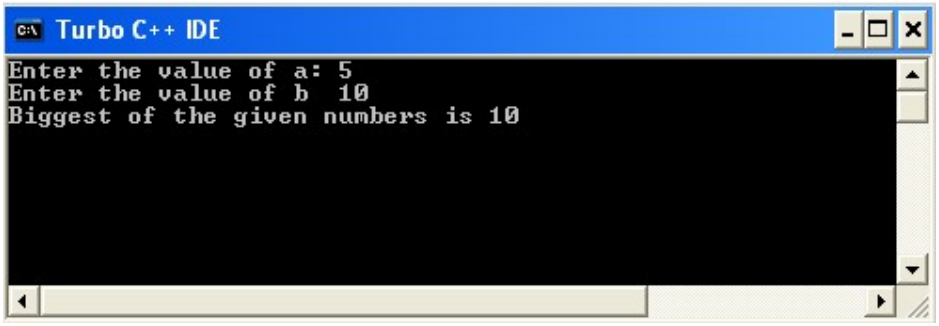
Step 5: Otherwise, Print b

Step 6: Stop the program

PROGRAM: (TERNARY OPERATOR)

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

int a,b,big; clrscr( );
printf("Enter the value of a: ");
scanf("%d",&a);

printf("Enter the value of b");
scanf("%d",&b);  big=(a>b)?a:b;

printf("Biggest of the given numbers is %d",big);
getch();

}
```

INPUT AND OUTPUT:



RESULT:

Thus the program for Conditional Statements has been executed successfully and the output was verified.

Task1:

FINDING THE ROOTS OF QUADRATIC EQUATION

AIM:

To write a C Program to find the roots of a Quadratic equation.

ALGORITHM:

Step 1: Start

Step 2: Read the variable a, b, c.

Step 3: Compute d= b*b - 4*a*c.

Step 4: Test the condition, d is greater than 0 using IF statement.

Calculate: r1= (-b + sqrt(d)) / (2*a).

Calculate: r2= (-b - sqrt(d)) / (2*a).

Print the roots r1 and r2.

Step 5: Else, test the condition, d is equal to 0 using IF statement.

Calculate: r1=r2 = -b / (2*a).

Print the roots r1 and r2.

Step 6: Else, compute real and imaginary as

Calculate: real = -b / (2*a).

Calculate imag = sqrt(-d)/(2*a).

Print the real and imag.

Step 7: Stop

Task 2:

ARMSTRONG NUMBER

AIM:

To write a C Program to check whether the given number is Armstrong or not.

ALGORITHM:

Step 1: Start the program

Step2: Read the variable N

Step 3: Assign N1=N;

Step 4: Create Set a loop using the condition WHILE(N1!=0), if the condition true

REM=N1%10;

NUM=NUM+REM*REM*REM;

N1=N1/10;

Step 5: Else, check the condition IF(NUM=N), if the condition true

Step6: PRINT "Armstrong Number"

Step 7: Else PRINT "Not Armstrong Number"

Step 8: Stop the program

Assignment:

1) Write algorithm and program that generate the following output

10

20

19