PG - DAC Sept 2023

Logical Building & Problem Solving

Assignment - 1(Date:08/09/2023)

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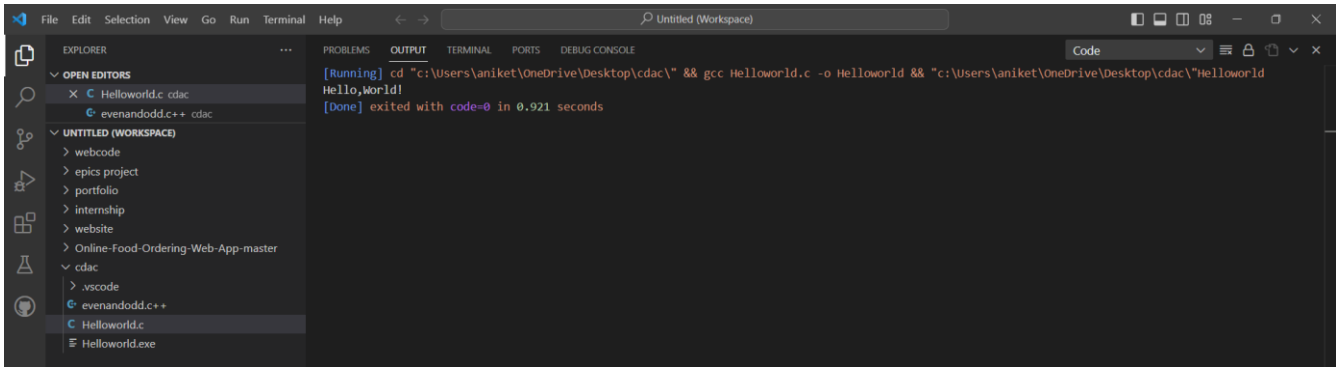
1. Write a program that prints "Hello, World!" to the console.

Code:

```c
#include<stdio.h>

int main()
{
    printf("Hello,World!");
    return 0;
}
```

Output:

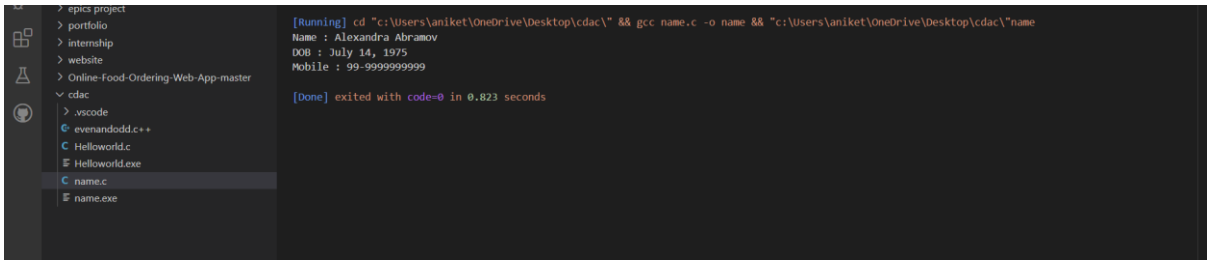


2. Write a C program to print your name, date of birth, and mobile number.
   Expected Output:
   Name : Alexandra Abramov
   DOB : July 14, 1975
   Mobile : 99-999999999

Code:

```c
#include<stdio.h>

int main()
{
    printf("Name : Alexandra Abramov\n");
    printf("DOB : July 14, 1975\n");
    printf("Mobile : 99-9999999999\n");
    return 0;
}
```

Output:

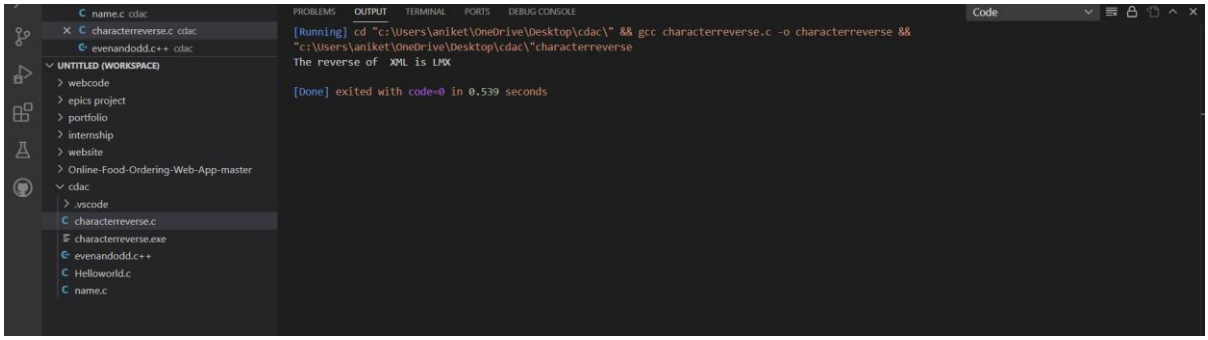


3. Write a C program to print the following characters in reverse. Test Characters: 'X', 'M', 'L' Expected Output: The reverse of XML is LMX.
   Expected Output: The reverse of XML is LMX

Code:

```c
#include<stdio.h>

int main()
{
    char char1='X';
    char char2='M';
    char char3='L';

    printf("The reverse of  %c%c%c is %c%c%c\n",
    char1,char2,char3,
    char3,char2,char1);
    return 0;

}
```

Output:

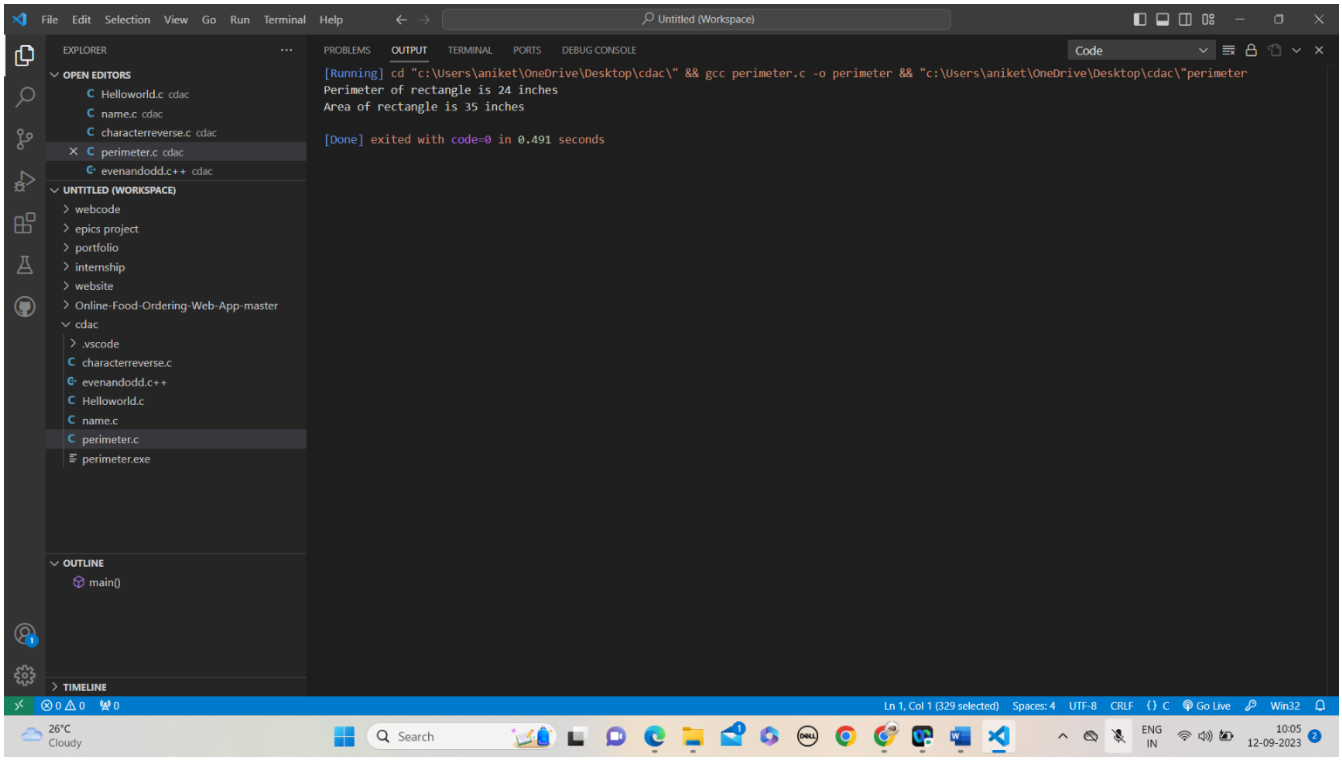


4. Write a C program to compute the perimeter and area of a rectangle with a height of 7 inches and width of 5 inches.
   Expected Output:
   Perimeter of the rectangle = 24 inches
   Area of the rectangle = 35 square inches

Code:

```c
#include<stdio.h>

int main()
{
    int perimeter;
    int area;
    int height;
    int width;
    height=7;
    width=5;

    perimeter=2*(height+width);
    printf("Perimeter of rectangle is %d inches\n",perimeter);

    area= height*width;
    printf("Area of rectangle is %d inches\n",area);

    return 0;
}
```

Output:

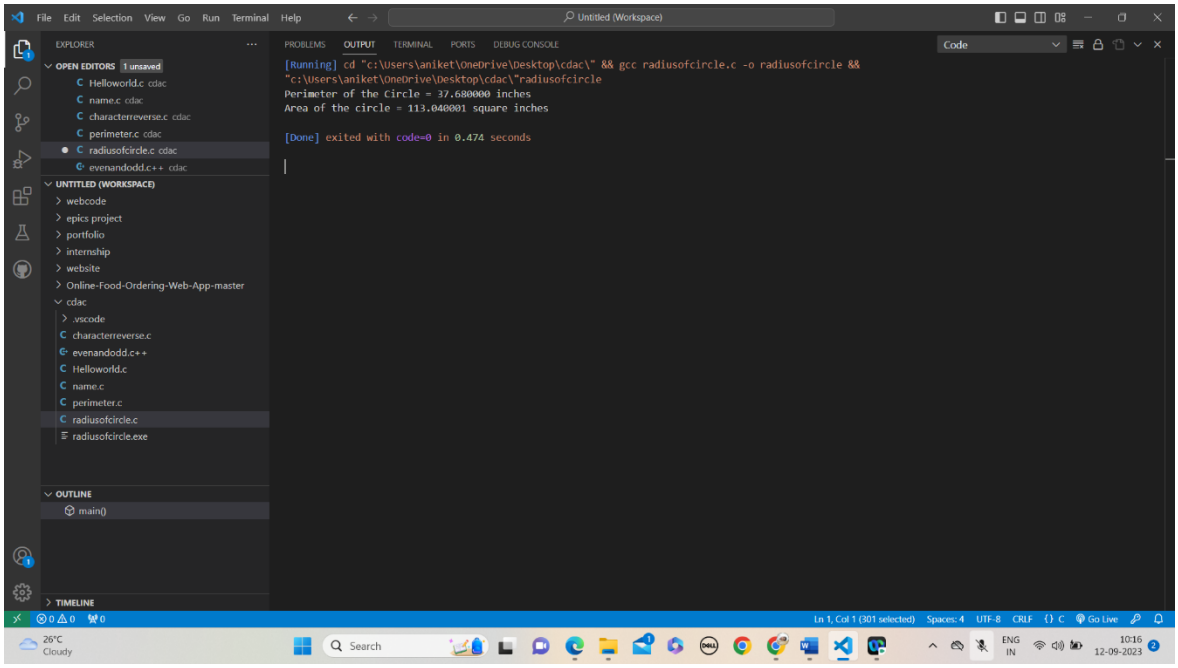


5. Write a C program to compute the perimeter and area of a circle with a given radius.
   Expected Output:
   Perimeter of the Circle = 37.680000 inches
   Area of the Circle = 113.040001 square inch

Code:

```c
#include<stdio.h>

int main()
{
    float area,perimeter;
    int radius;
    radius=6;

    perimeter=2*3.14*radius;
    printf("Perimeter of the Circle = %f inches\n",perimeter);

    area= 3.14*radius*radius;
    printf("Area of the circle = %f square inches\n",area);

    return 0;
}
```

Output:



6. Write a C program to display multiple variables. Sample Variables : a+ c, x + c, dx + x, ((int) dx) + ax, a + x, s + b, ax + b, s + c, ax + c, ax + ux

   Declaration:

   int a = 125, b = 12345;

   long ax = 1234567890;

   short s = 4043;

   float x = 2.13459;

   double dx = 1.1415927;

   char c = 'W';

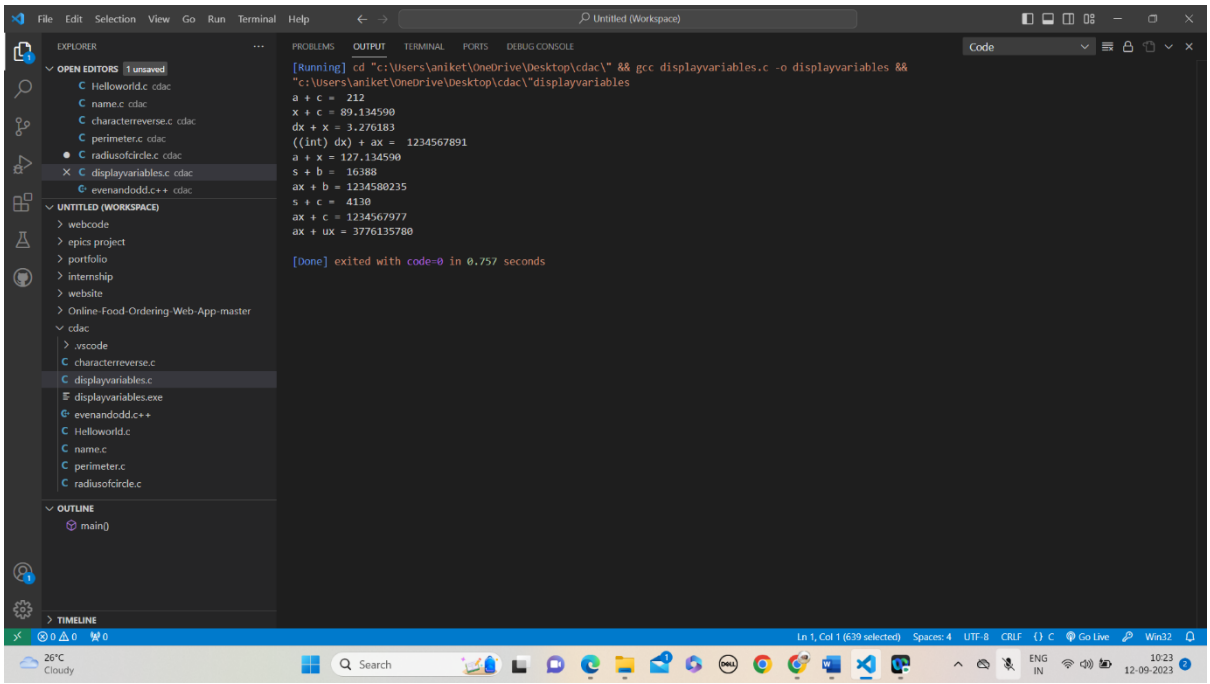
   unsigned long ux = 2541567890;

Code:

```c
#include <stdio.h>
int main()
{
    int a = 125, b = 12345;
    long ax = 1234567890;
    short s = 4043;
    float x = 2.13459;
```

```c
    double dx = 1.1415927;
    char c = 'W';
    unsigned long ux = 2541567890;

    printf("a + c =  %d\n", a + c);
    printf("x + c = %f\n", x + c);
    printf("dx + x = %f\n", dx + x);
    printf("((int) dx) + ax =  %ld\n", ((int) dx) + ax);
    printf("a + x = %f\n", a + x);
    printf("s + b =  %d\n", s + b);
    printf("ax + b = %ld\n", ax + b);
    printf("s + c =  %hd\n", s + c);
    printf("ax + c = %ld\n", ax + c);
    printf("ax + ux = %lu\n", ax + ux);

    return 0;
}
```

Output:

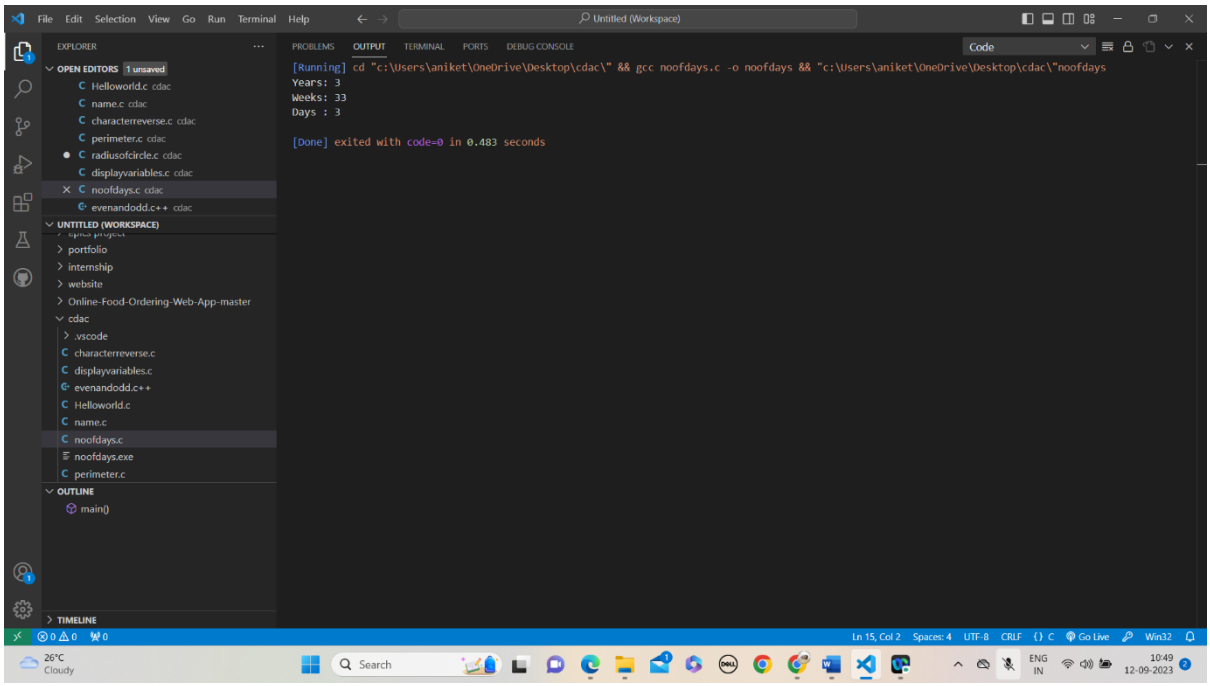


7. Write a C program to convert specified days into years, weeks and days. Note: Ignore leap year.
   Test Data : Number of days : 1329
   Expected Output :
   Years: 3
   Weeks: 33 Days:3

Code:

```c
#include<stdio.h>
int main()
{
    int days,weeks,years;
    days=1329;

    years=days/365;
    weeks=(days % 365)/7;
    days=days-((years*365)+(weeks*7));
    printf("Years: %d\n",years);
    printf("Weeks: %d\n",weeks);
    printf("Days : %d \n",days);
    return 0;

}
```

Output:

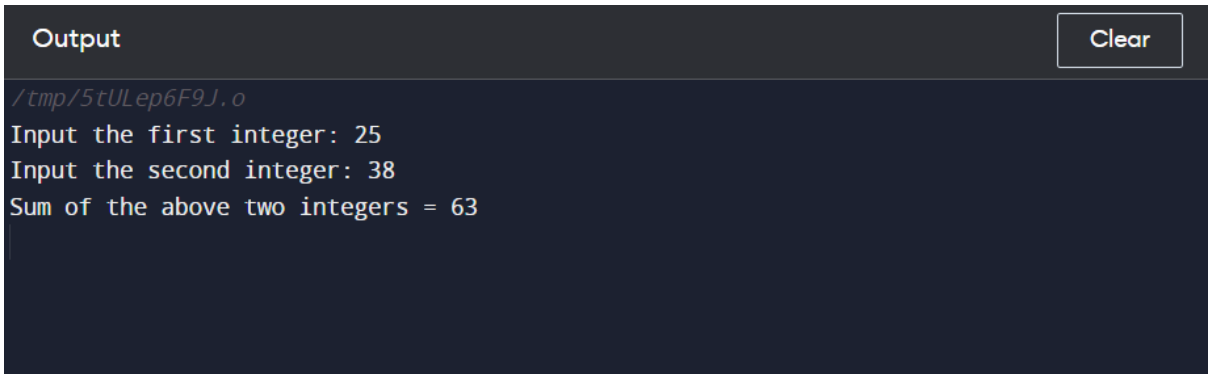


8. Write a C program that accepts two integers from the user and calculates the sum of the two integers.
   Test Data :
   Input the first integer: 25
   Input the second integer: 38
   Expected Output: Sum of the above two integers = 63

Code:

```c
#include <stdio.h>
int main()
   {
    int x, y, sum;
    printf("\nInput the first integer: ");
    scanf("%d", &x);
    printf("\nInput the second integer: ");
    scanf("%d", &y);
    sum = x + y;
    printf("\nSum of the above two integers = %d\n", sum);
    return 0;
}
```

Output:



9. Write a C program that accepts two integers from the user and calculates the product of the two integers.

   Test Data :

   Input the first integer: 25

   Input the second integer: 15

Code:

```c
#include <stdio.h>

int main()

{
    int x, y, result;
    printf("Input the first integer: ");
    scanf("%d", &x);
    printf("\nInput the second integer: ");
    scanf("%d", &y);
    result = x * y;
```

```
    printf("Product of the above two integers = %d\n", result);
}
```

Output:

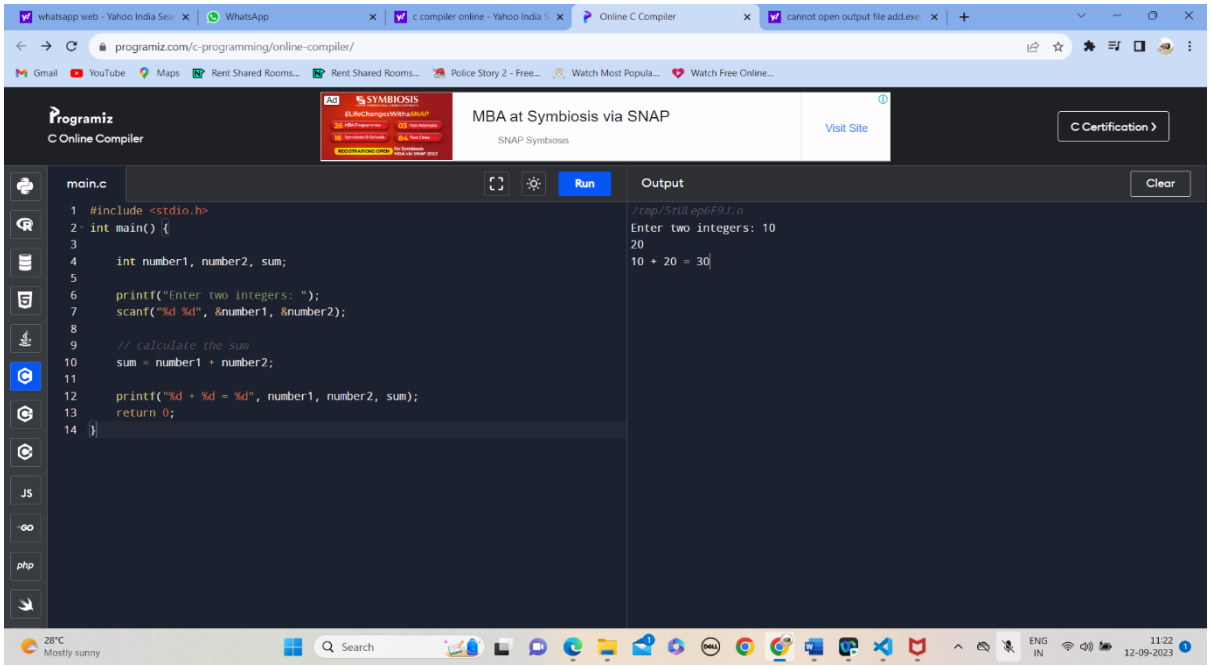
```
Output

/tmp/5tULep6F9J.o
Input the first integer: 25
Input the second integer: 15
Product of the above two integers = 375
```

10. Write a program that prompts the user to enter two numbers, adds them together, and prints the result to the console.

Code:

```c
#include <stdio.h>
int main() {

    int number1, number2, sum;

    printf("Enter two integers: ");
    scanf("%d %d", &number1, &number2);

    // calculate the sum
    sum = number1 + number2;

    printf("%d + %d = %d", number1, number2, sum);
    return 0;
}
```

Output:


Programiz
C Online Compiler
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SNAP Symbiosis
Visit Site
C Certification
main.c
Run
Output
Clear
#include <stdio.h>
int main() {
int number1, number2, sum;
printf("Enter two integers: ");
scanf("%d %d", &number1, &number2);
// calculate the sum
sum = number1 + number2;
printf("%d + %d = %d", number1, number2, sum);
return 0;
}
/tmp/StULep6F9J.o
Enter two integers: 10
20
10 + 20 = 30