Assignment-9

Problem Statement:

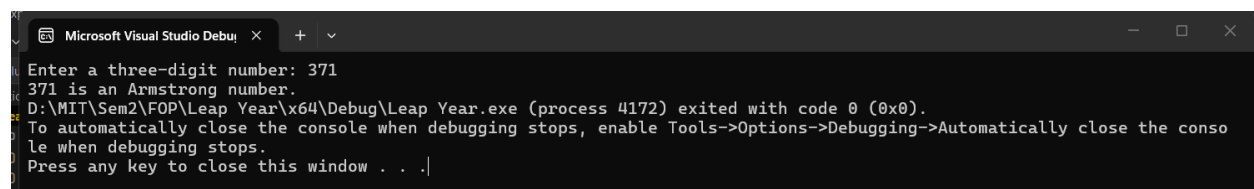Write a program in C to check whether the given number is an Armstrong number or not.
An Armstrong number is an integer with three digits such that the sum of the cubes of its digits
is equal to the number itself.
Example: 371

Code:

```c
#include <stdio.h>

int main()
{
    int num, original, digit;
    int sum = 0;

    printf("Enter a three-digit number: ");
    scanf("%d", &num);

    original = num;

    while (num > 0)
    {
        digit = num % 10;
        sum = sum + (digit * digit * digit);
        num = num / 10;
    }

    if (sum == original)
        printf("%d is an Armstrong number.", original);
    else
        printf("%d is not an Armstrong number.", original);

    return 0;
}
```

Input & Output:

```
Microsoft Visual Studio Debug    ×    +    ∨

Enter a three-digit number: 371
371 is an Armstrong number.
D:\MIT\Sem2\FOP\Leap Year\x64\Debug\Leap Year.exe (process 4172) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
```