

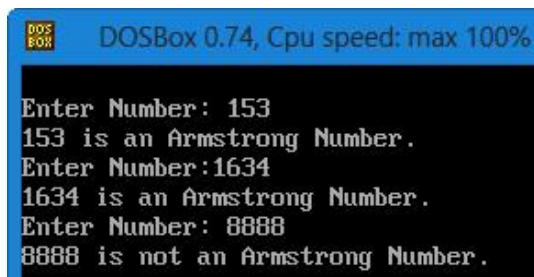
1. WAP to check whether the number is Armstrong Number or not. Examples: 153, 370, 371, 407, 1634, 8208, etc. *Hint:* $1^3+5^3+3^3 = \mathbf{153}$, $1^4+6^4+3^4+4^4=\mathbf{1634}$

Program Code

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main(){
    int n, originalNumber, digitLength = 0, remainder, result = 0;
    clrscr();
    printf("\nEnter Number: ");
    scanf("%d", &n);
    originalNumber = n;
    while(n != 0){
        n /= 10;
        ++digitLength;
    }
    n=originalNumber;
    while (originalNumber != 0){
        remainder = originalNumber% 10;
        result += pow(remainder, digitLength);
        originalNumber /= 10;
    }

    if(result == n){
        printf("%d is an Armstrong Number.",n);
    }else{
        printf("%d is not an Armstrong Number.",n);
    }
    getch();
}
```

Output



Task: WAP to generate series of Armstrong Numbers less than n which is input by user.

2. WAP to check 3-digit Armstrong Number.

Program Code:

```
#include<stdio.h>
#include<conio.h>

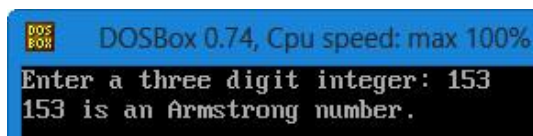
void main(){
    int number, originalNumber, remainder, result = 0;
    clrscr();
    printf("Enter a three digit integer: ");
    scanf("%d", &number);

    originalNumber = number;

    while (originalNumber != 0){
        remainder = originalNumber% 10;
        result += remainder*remainder*remainder;
        originalNumber /= 10;
    }

    if(result == number){
        printf("%d is an Armstrong number.",number);
    }else{
        printf("%d is not an Armstrong number.",number);
    }
    getch();
}
```

Output:

A screenshot of a DOSBox 0.74 terminal window. The title bar reads "DOSBox 0.74, Cpu speed: max 100%". The terminal shows the prompt "Enter a three digit integer: 153" and the output "153 is an Armstrong number.".

Task: WAP to check 5-digit number which is Armstrong Numbers or not.