5.ARMSTRONG OR NOT

Aim:

To write a c program to check whether a given number is Armstrong or not.

Algorithm:

Step 1:Start the program.

Step 2:Get the number to be checked as Armstrong or not.

Step 3:Check whether the number is Armstrong or not.

Step 4:print whether the number is Armstrong number or not.

Step 5:Stop the program.

Program coding:

```c
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
long int num,result;
long int armstrong(long);
int base;
clrscr();
printf("Enter the given number:\n");
scanf("%ld",&num);
result=armstrong(num);
if(result==num)
printf("\n The given number %ld is an armstrong number",num);
else
printf("\n The given number %ld is not an armstrong number",num);
getch();
}
long int armstrong(long int num)
{
```

```
long int num1=num,res;

double r,count=0;

double sum=0.0;

for(;num1!=0;count++,num1/=10);

num1=num;

while(num!=0)

{r=num1%10;

sum=sum+pow(r,count);

num1=num1/10;}

res=sum;

return res;}
```

Output:


```
    Enter the given number:153

    The given number 153 is an armstrong number
```