### Experiment – No-10

|  |  |  |
| --- | --- | --- |
| Objective: Program to check the entered number an Armstrong number or not. | | |
| Scheduled Date | Compiled Date | Submission Date |
| 08-Jan-2021 | 08-Jan-2021 | 09-Jan-2021 |

### Program : Program to check the entered number an Armstrong number or not.

### 

### Algorithm

Step 1: Start

Step 2: Declare variables num, count, org, arm.

Step 3: Read value of num.

Step 4: Given :

org=num.

Step 5: Apply loop.

for(count=0;num!=0;num/=10)

Step 6: Increment variable ‘’count” in this operation.

Step 7: Given :

num=org.

Step 8: Apply loop:

for(arm=0;num!=0;num/=10)

Step 9: Given:

arm = arm+pow((num%10),count)

Step 10: If (arm = org)

Print ”Entered number is Armstrong”.

Else;

Print “Entered number is Armstrong”.

**Program**

//Program to check the entered number an Armstrong number or not.

#include<stdio.h>

#include<math.h>

int main()

{

    int num, count, org, arm;

    printf("Enter a number");

    scanf("%d",&num);

    org=num;

    for(count=0;num!=0;num/=10)

    {

        count++;

    }

    num=org;

    for(arm=0;num!=0;num/=10)

    {

        arm=arm+pow((num%10),count);

    }

    if(arm==org)

    printf("\n %d is an armstrong number",org);

    else

    printf("\n %d is not an armstrong number",org);

    return 0;

}

### Output Screen

PS C:\Users\WIN10\Desktop\clab> gcc armstrong.c

PS C:\Users\WIN10\Desktop\clab> ./a.exe

Enter a number407

407 is an armstrong number

PS C:\Users\WIN10\Desktop\clab> gcc armstrong.c

PS C:\Users\WIN10\Desktop\clab> ./a.exe

Enter a number246

246 is not an armstrong number