**Problem Statement:** Print given number is Armstrong number or not

In this problem we will find a number is Armstrong number or not. Firstly, we find size of given number and calculate remainder power length. If the result and given n umber is same then the given number is Armstrong number.

**Example:** If we take 153, then 1^3 + 5^3 + 3^3=153 As two are same 153 is Armstrong number

|  |  |
| --- | --- |
| Expected Input | Expected Output |
| 153  371  271  56  123q | Armstrong  Armstrong  Not Armstrong  Not Armstrong  Error |

**Pseudo Code**

1. Enter a number ‘n’
2. Set a=n
3. Calculate length of number and assign to len
4. Set sum=0
5. If n! =0
   1. r=n%10
   2. power=r ^ len
   3. sum=sum + power
   4. set n= floor value of (n/10)
6. If sum==a then
   1. Print Armstrong
7. Else print Not Armstrong

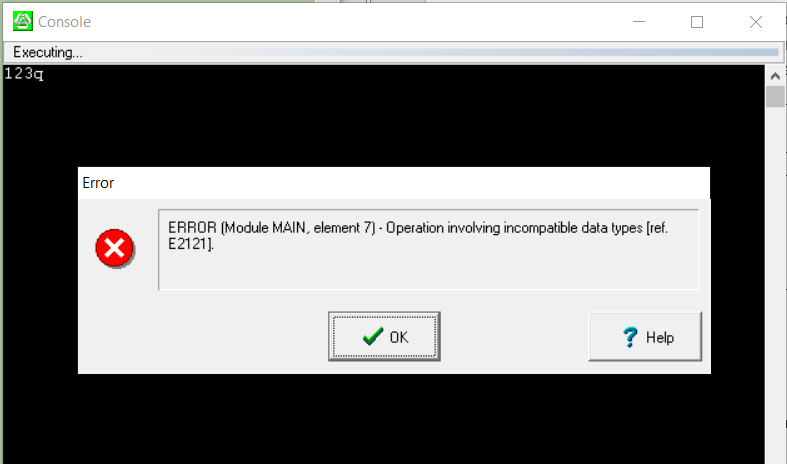
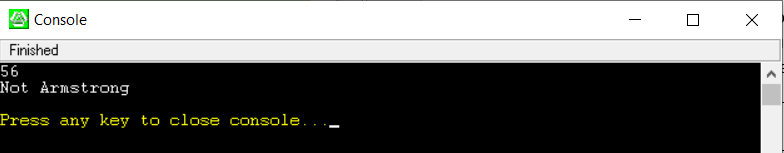
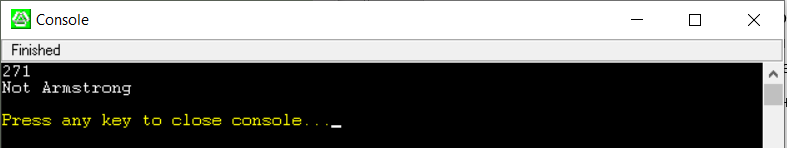
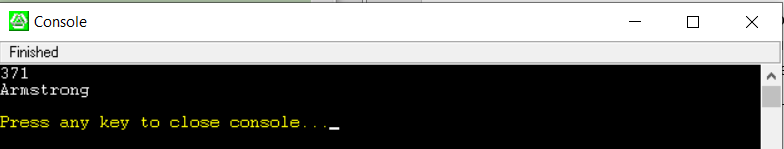
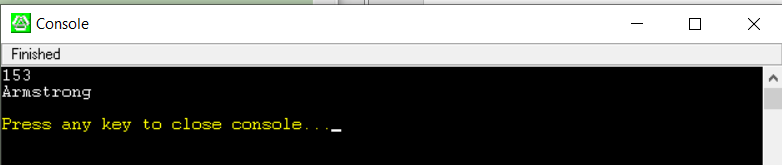
**Trace Table**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| n | a=n | len=strlen(n) | sum=0 | n! = 0 | r=n%10 | power=r ^ len | sum=sum+ power | n=n/10 | sum==a | Output |
| 153 | 153 | 3 | 0 | True | 3 | 27 | 27 | 15 |  |  |
|  |  |  |  | True | 5 | 125 | 152 | 1 |  |  |
|  |  |  |  | True | 1 | 1 | 153 | 0 |  |  |
|  |  |  |  | False |  |  |  |  | True | Armstrong |
| 56 | 56 | 2 | 0 | True | 6 | 36 | 36 | 5 |  |  |
|  |  |  |  | True | 5 | 25 | 61 | 0 |  |  |
|  |  |  |  | False |  |  |  |  | False | Not Armstrong |

|  |  |  |  |
| --- | --- | --- | --- |
| Expected Input | Expected Output | Actual Output | Test Result |
| 153  371  271  56  123q | Armstrong  Armstrong  Not Armstrong  Not Armstrong  Error | Armstrong  Armstrong  Not Armstrong  Not Armstrong  Error |  |

**Final Result**

**Expected Inputs and Outputs**

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