

Armstrong Number

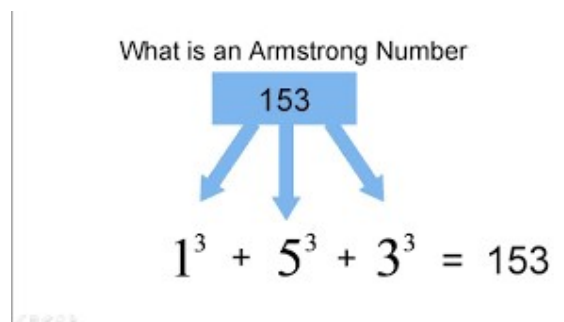
- A number is said to be **Armstrong Number** or narcissistic number if it is equal to the sum of its own digits raised to the power of the number of digits.
- Single digit numbers are trivially Armstrong Numbers.

Armstrong numbers

A n-digit number $a_1a_2a_3\dots a_n$ is Armstrong if $a_1a_2a_3\dots a_n = \sum_{i=1}^n a_i^n$

$153 = 1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153$ (3 digit Armstrong number)

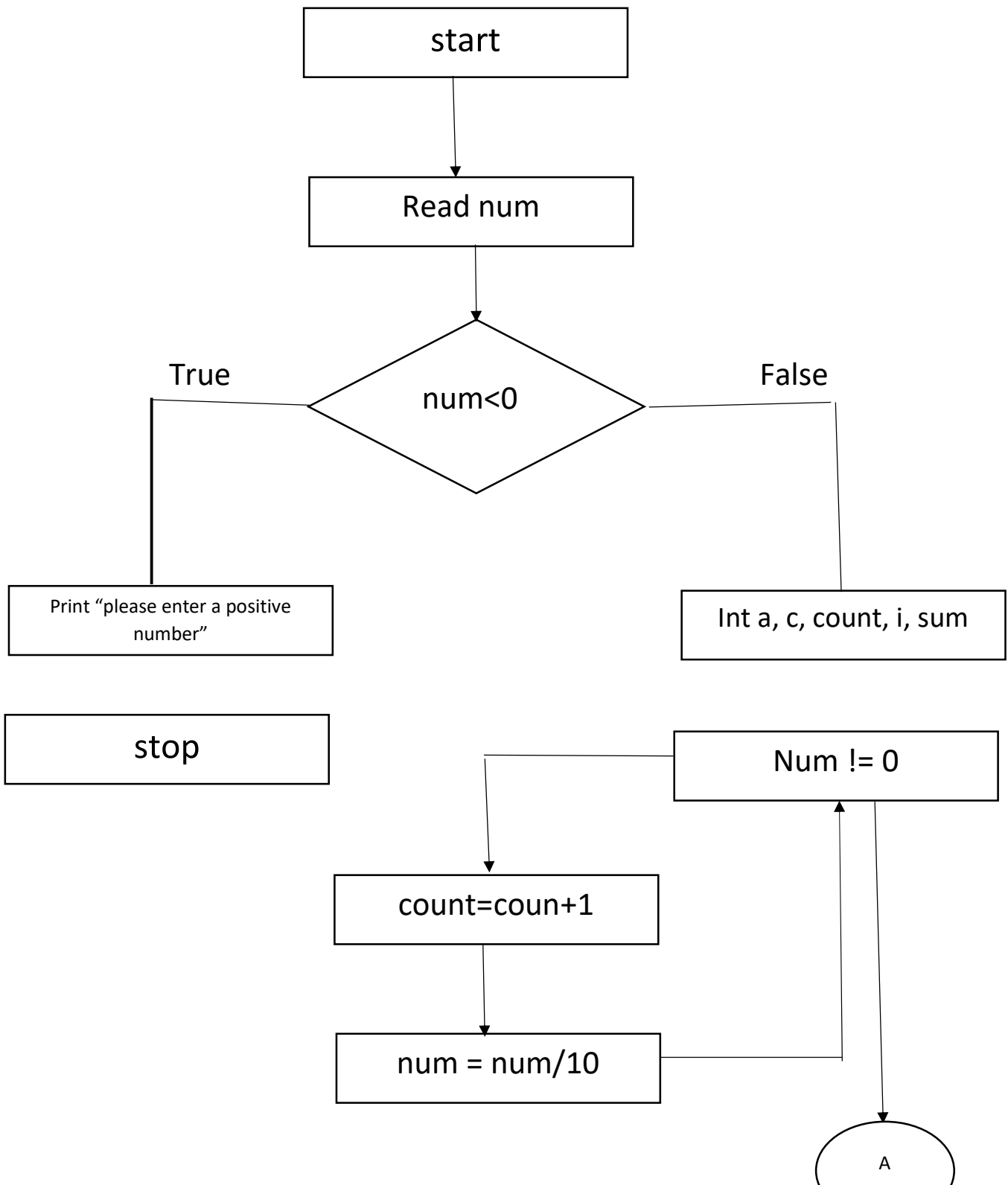
$1634 = 1^4 + 6^4 + 3^4 + 4^4 = 1 + 1296 + 81 + 256 = 1634$ (4 digit Armstrong number)

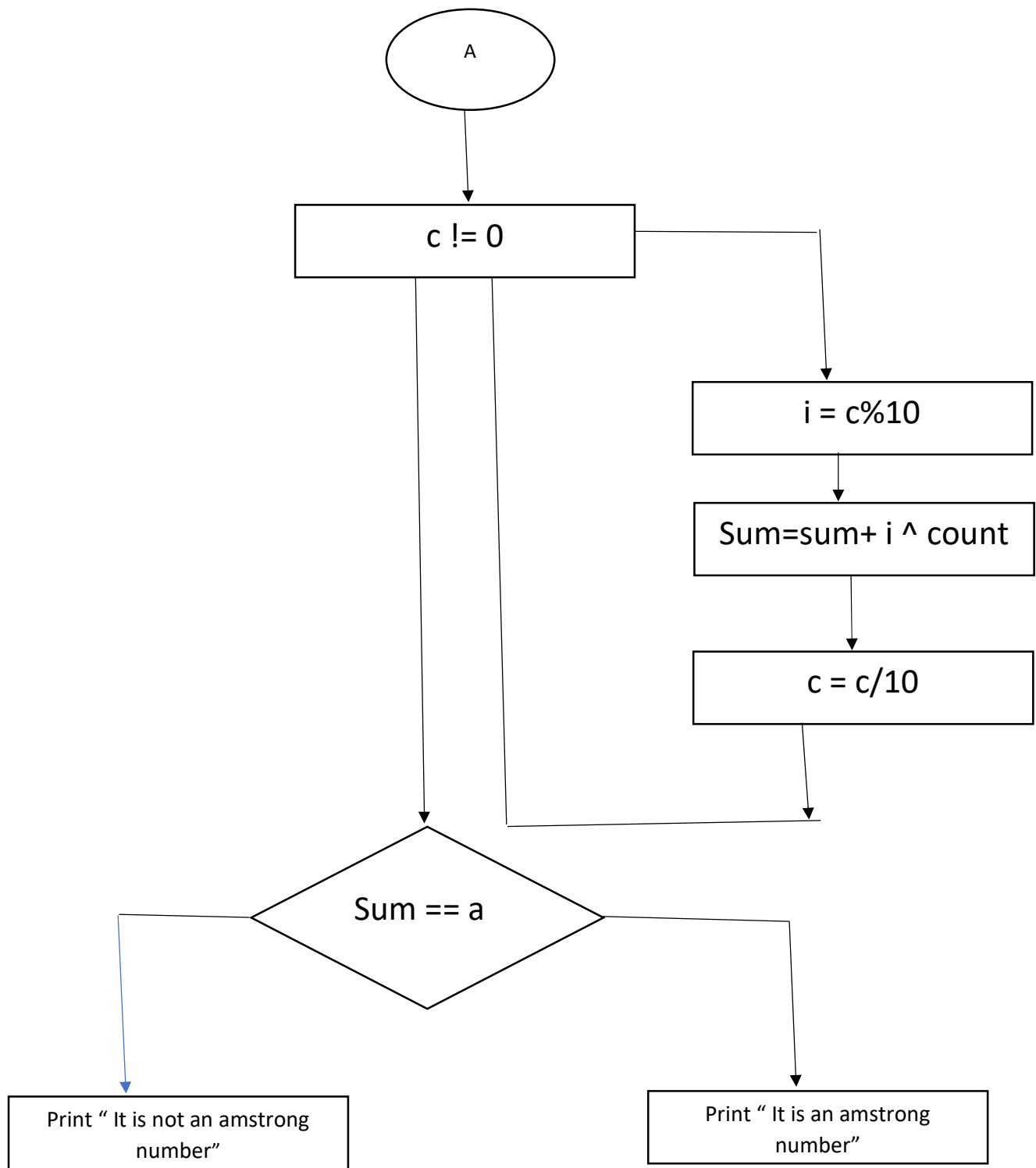


Pseudo code

- Start
- Declare num, sum, i, count, a, c
- Read num
- If num<0
 - Print “Number should be positive”.
 - Else
 - Int a=num, c=num, sum=0, i=0, count=0
 - Repeat until num<>0
 - count=count+1
 - Num=num/10
 - Repeat until c<>0
 - i = c%10
 - sum = sum + i ^ count
 - c = c/10
 - If a = sum
 - Print “is an amstrong number”
 - Else
 - Print “is not an amstrong number”
- Stop.

Flowchart





Flowgorithm

