Week 5 – 2

Nested Loops - while and for, Jumps in Loops

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**Problem 1**: The k-digit number N is an Armstrong number if and only if the k-th power of each digit sums to N.

Given a positive integer N, return true if and only if it is an Armstrong number.

Note: 1 <= N <= 10^8

Hint: 153 is a 3-digit number, and 153 = 1^3 + 5^3 + 3^3.

**Sample Input:**

153

**Sample Output:**

true

**Sample Input:**

123

**Sample Output:**

false

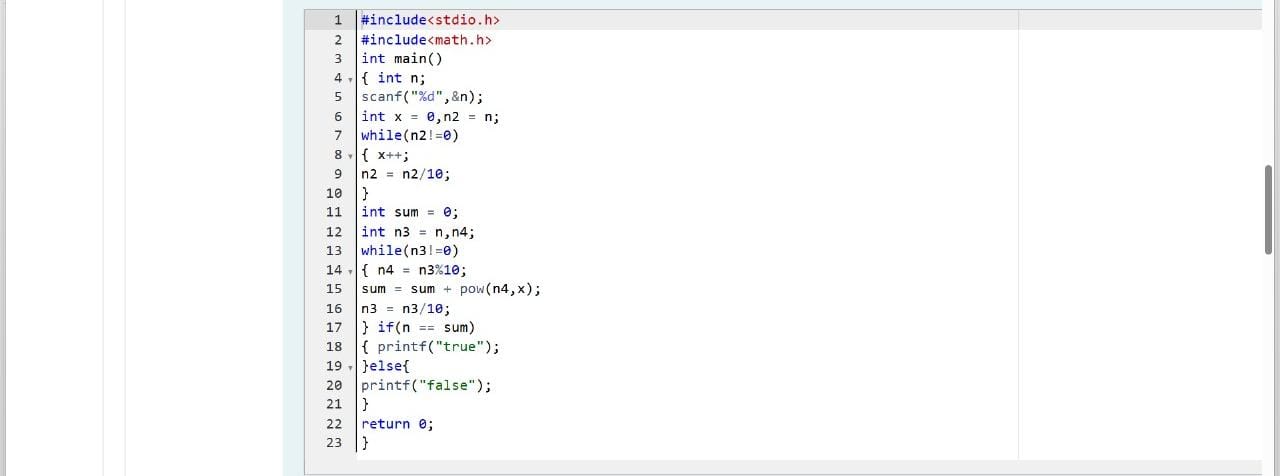
**Sample Input:**

1634

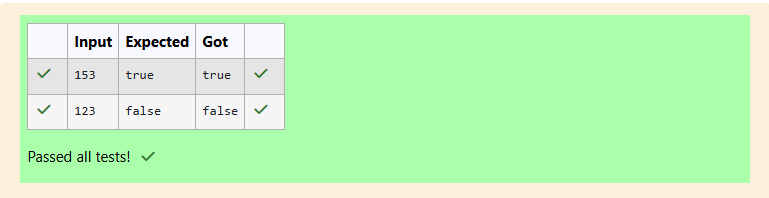
**Sample Output:**

true

**Code:**



**OUTPUT:**

****

**Problem 2:** Take a number, reverse it and add it to the original number until the obtained number is a palindrome.

**Constraints**

1<=num<=99999999

**Sample Input 1**

32

**Sample Output 1**

55

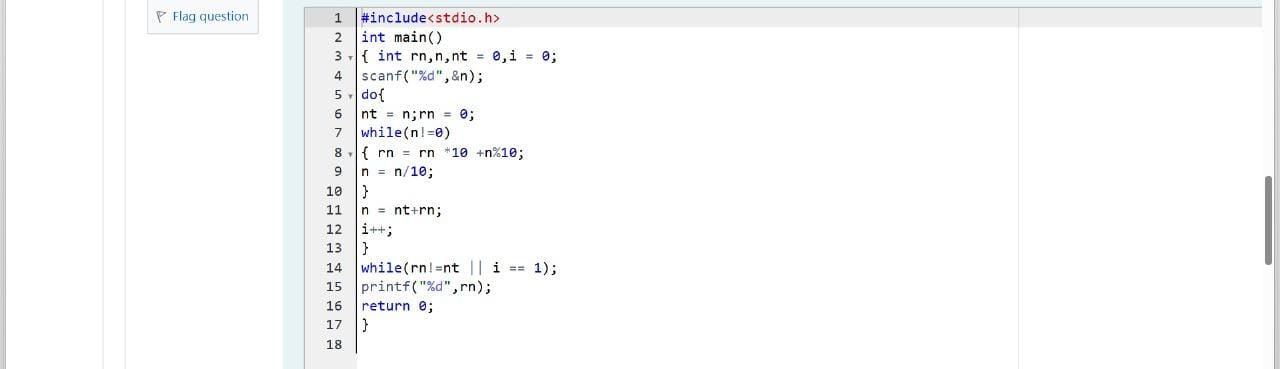
**Sample Input 2**

789

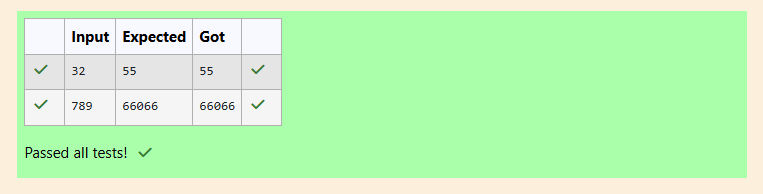
**Sample Output 2**

66066

**Code:**



**OUTPUT:**

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**Problem 3:** A number is considered lucky if it contains either 3 or 4 or 3 and 4 both in it. Write a

program to print the nth lucky number. Example, 1st lucky number is 3, and 2nd lucky

number is 4 and 3rd lucky number is 33 and 4th lucky number is 34 and so on. Note that

13, 40 etc., are not lucky as they have other numbers in it.

The program should accept a number 'n' as input and display the nth lucky number as

output.

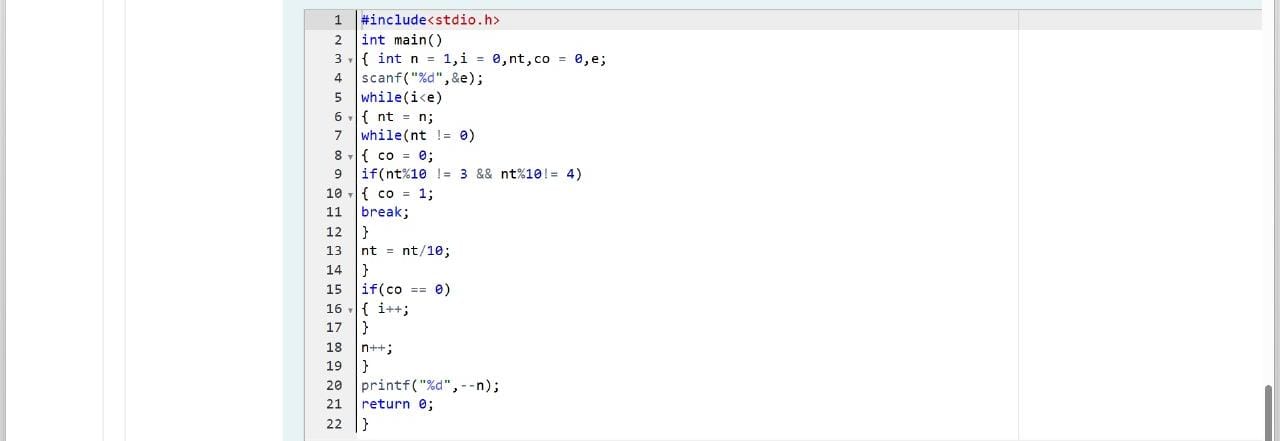
**Sample Input 1:**

3

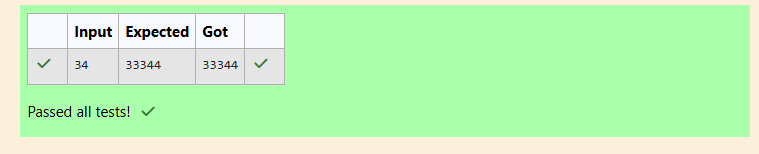
**Sample Output 1:**

33

**Code:**



**OUTPUT:**

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