Assignment: Armstrong number

A three digit number is called an Armstrong number if the sum of the cube of its digits is equal to the number itself. Write a pseudo code for the same.

Example : Consider a three digit number 371. This number is said to be an Armstrong number, if $3^3+ 7^3+1^3 =371$.

Sample Input 1 :

Enter the number
153

Sample Output 1 :

153 is an Armstrong number

Sample Input 2 :

Enter the number
135

Sample Output 2 :

135 is not an Armstrong number

Submission status

Submission status	Submitted for grading
Grading status	Not graded
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Online text

```
BEGIN

DECLARE input_number, original_number, remainder, cube_sum, num_digits

PRINT "Enter the number:"

READ input_number

original_number = input_number

cube_sum = 0

num_digits = 0


# Count the number of digits in the given number

WHILE input_number > 0 DO

   num_digits = num_digits + 1

   input_number = input_number / 10

END WHILE


# Reset the number to its original value

input_number = original_number


# Calculate the sum of cubes of digits
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WHILE input_number > 0 DO
   remainder = input_number % 10
   cube_sum = cube_sum + remainder ^ num_digits
   input_number = input_number / 10
END WHILE

# Check if it's an Armstrong number
IF cube_sum = original_number THEN
   PRINT original_number, "is an Armstrong number"
ELSE
   PRINT original_number, "is not an Armstrong number"
END IF
END
```

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