1. Armstrong number with recursion

Code:

#include <stdio.h>

#include <math.h>

int countDigits(int num) {

if (num == 0)

return 0;

else

return 1 + countDigits(num / 10);

}

int isArmstrong(int num, int sum, int n) {

if (num == 0)

return sum;

else

return isArmstrong(num / 10, sum + pow(num % 10, n), n);

}

int main() {

int num, sum = 0, digitCount, result;

printf("Enter a number: ");

scanf("%d", &num);

digitCount = countDigits(num);

result = isArmstrong(num, sum, digitCount);

if (result == num)

printf("%d is an Armstrong number.\n", num);

else

printf("%d is not an Armstrong number.\n", num);

return 0;

}

Output:

Enter a number: 56

56 is not an Armstrong number.

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Process exited after 4.186 seconds with return value 0

Press any key to continue . . .

