

DOCUMENTATION

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1 Introduction

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2 Print Functions

2.1 Print Integer

This function takes a long integer as input and use the previously defined function to print a string to display the long integer.

We are going to focus here only on positive integers (as negative integers are simple to print once you know how to print positive integers).

So, how do we extract the digits of an integer? It is pretty simple, we are going to divide our number until the result hits zero. I think an example speaks more than pure theory, so let's consider the following number: 928.

To extract the lowest digit, we can check the rest of the division of our number by 10:

$$928 = 92 \times 10 + 8$$

In C, if we divide 928 by 10 it will output the quotient which here is 92. We can therefore extract 8 as $928 - 92 \times 10$. This makes our first digit. To get the second one we repeat the same logic but on the quotient from the previous operation:

$$92 = 9 \times 10 + 2$$

This will give our second digit 2. Finally when we hit a quotient of 0 it means our last digit is the current number:

$$9 = 0 \times 10 + 9$$