**Instructions**

Each of us inherits from our biological parents a set of chemical instructions known as DNA that influence how our bodies are constructed. All known life depends on DNA!

Note: You do not need to understand anything about nucleotides or DNA to complete this exercise.

DNA is a long chain of other chemicals and the most important are the four nucleotides, adenine, cytosine, guanine and thymine. A single DNA chain can contain billions of these four nucleotides and the order in which they occur is important! We call the order of these nucleotides in a bit of DNA a "DNA sequence".

We represent a DNA sequence as an ordered collection of these four nucleotides and a common way to do that is with a string of characters such as "ATTACG" for a DNA sequence of 6 nucleotides. 'A' for adenine, 'C' for cytosine, 'G' for guanine, and 'T' for thymine.

Given a string representing a DNA sequence, count how many of each nucleotide is present. If the string contains characters that aren't A, C, G, or T then it is invalid and you should signal an error.

For example:

"GATTACA" -> 'A': 3, 'C': 1, 'G': 1, 'T': 2

"INVALID" -> error