MIPS Assignment 7

Lowercase

Program

Write a program that converts a global variable string to lowercase, using a while loop.

The Input

This assignment has no user input, but you are to hard-code the following *null-terminated* string into the *.data* section of your program:

```
HELLO, I am cool !
```

The Output

A correct program will output the entire string as lowercase, followed by a newline:

```
hello, i am cool !
```

Assignment Tag

For this assignment, use the following *Assignment tag*: *Mips7Lowercase*

Hints

An uppercase letter can be converted to lowercase simply by adding 32 to its ASCII value (0x20 in hex). Thus, you'll want to loop over each character in your hard-coded string and add 32 to the uppercase letter characters. This is just one recommended method. You can use something more advanced if you like.

However, not all characters in the string are letters, and not all letters are uppercase. You should only modify the appropriate characters. As you loop over the hard-coded characters, you'll need to use comparisons and branching to control when a character actually gets converted.

You should not exit your loop by counting a hard-coded number of characters. Instead, you should branch out of your loop once the **null terminator** (ASCII 0) is encountered.

You should not hard-code the lowercase version, as it would defeat the point of this assignment and earn a zero. Your lowercase output should be dynamically generated by modifying the originally hard-coded string.