Request name – Print name Report

1. Problem Statement

The assigned task was to design a MIPS assembly language program that request name from the user then displays the name.

1. Approach to Solution

By using MIPS assembly language in a simulator called, MIPS Assembler and Runtime Simulator (MARS). First step was to create the design of how the project is going to be created.

The design was outlined to have, “Please enter your full name:”, and “The name you entered was:”. This helped set the *.data* section of the code to start, and only the length of the string needed to be defined. The *.text* design was simply to have the input statement stored in a register, then to load the value into an argument. The *syscall* command is then used to execute the code.

In order to test this program, the name was entered after first compiling, then followed to the system messages to see if there were any errors generated in the code. Once the code showed no error, the program was run to input then to display the output of the statement entered.

1. Solution

The request name, and print name task was designed, and implemented to show successful results from multiple tests. By using the two statements already provided to us, the program came of ease knowing that the only thing that needed to be displayed was the input.

In this solution:

1. Statement is printed to provide the name.
2. That name is then stored into the register. (Code will be in .text)
3. The *la* command loads the value that was stored in the register, in this case name, into an argument that will get printed.
4. The print statement will have the second text ‘the name you entered was:’
5. The system call command executes the display of the output.
6. Program then exits
7. MARS simulator completing the assemble.

A screenshot of a social media post

Description automatically generated

1. MIPS Keyboard for Input

A screenshot of a social media post

Description automatically generated

1. Name being printed which was inputted in.

A screenshot of a cell phone

Description automatically generated