Module 5 Assignment – MIPS Programming

Introduction

This week we'll finally take what we've learned about MIPS and begin writing our own programs! You're welcome to use the MIPS editor of your choice, but I strongly recommend using MARS (a free Java app). There are MIPS assemblers online that are available right through the browser as well in case you have any issue setting up MARS.

Assignment

For this assignment you will write a MIPS program that does the following:

1. Prints a string to the screen prompting a user for an integer input: "Please enter an integer: "
2. Reads an integer from the user and stores it in memory.
3. Calculates the sum of squares for all numbers between the integer the user types in and 100 (inclusive).
    a. Ex: if the user enters 10, your program will compute 10*10 + 11*11 + … + 100*100
4. Prints the final result to the screen in the form: "The sum of squares between <user's number> and 100 is: <result>
5. Test your program on the following inputs: 1, 10, 25, 63, and 99.

Solutions

To help you check your solutions here are the inputs with their corresponding outputs:

Input	Output
1	338350
10	338065
25	333450
63	256975
99	19801

Deliverables

Please submit your source code in a file named squares.s or squares.asm along with screenshots of your results for each of the 5 inputs given above. Please do not submit your work as a ZIP file.