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Lab 6: Integer Multiplication and Division

# Objectives:

* Learn the basics of MIPS
* How to code in assembly using MIPs
* Write some input and output programs

# Introduction:

We learned the purpose of the assembly language and how the assembler compile it and convert it to the machine language, the lab started with introducing MIPS and the basics of it like the operators and the instructions, furthermore, we started talking about the 32 registers and how to use it and how some of it reserved, and finally we talked about the directives such as .data and .text.

# Tasks:

Task1 Requirement: reading 3 integers from the user and use it further operations

Approach: firstly initialize 3 labels to ask the user to enter the integers, then for each integer we save it to register and do the needed operations on it and save it in another register, then we do the same thing to the other two integers then subtract it from each other ( two at a time) then print the result

Task2 Requirement: reading the name of the user then add it to the string (welcome to MIPS assembly, <name>)

Approach: firstly print the statement to prompt the user to enter the name (we should firstly reserve a free space for the name using .space) then after reading the name and saving it we print the phrase (welcome to MIPS assembly,) then print the name after it

# Conclusion:

Firstly we learned about the basics of assembly language, then we used mars to assemble it and wrote some simple codes to try the assembly language including some input and output codes, and we went deeper to what is the purpose of each register and how we can change its contents.