Task 2:

Benchmark Design:

1. Load Operands: Starts by loading two numbers into registers to use as operands for arithmetic operations.
2. Arithmetic Operations: Performs each arithmetic operation: ADD, SUB, MUL, and DIV (addition, subtraction, multiplication, division) on these operands, ensuring each operation's result is used in a subsequent step to influence the program's flow or output.
3. Conditional Branch: Uses a conditional branch (bgt) based on the results of one of the operations to demonstrate the branch instruction's functionality.
4. Immediate Operations: Instructions that use immediate values (e.g., ADDI) to test the handling of immediate operands.
5. Print Results: Prints results of operations to verify the correct execution of arithmetic and load instructions.