

IS 139 Assignment

Instructions

- Assignment should be done by a group of maximum 4 people
- For each of the following questions write the MARIE program, assemble it and test it using the provided MARIE simulator.
- Submit a zip file containing the MARIE assembly file(s) for each question

Questions

1. Write a MARIE program using a loop that multiplies two positive numbers by using repeated addition. For example, to multiply 3×5 , the program would add 3 five times, or $3 + 3 + 3 + 3 + 3$

2. Write a MARIE assembly program to accomplish the following task

if $x < y$ then

$y = y - x$;

else

$x = x - y$;

where x & y can be any value. e.g. $x = 15$ & $y = 20$ (In your answer indicate the values you have chosen for x & y)

3. Write a MARIE assembly program that adds the first ten numbers from 1 to 10
i.e. $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10$

4. Write a MARIE assembly program that subtracts two numbers given as input from the keyboard and displays the result as output.