

IS 139

Assignment 2

Instructions

- Assignment should be done by a group of maximum 2 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 x 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
    x = x * 2;
else
    y = y - x;
```

where x & y can be any value. e.g. x = 15 & y = 20

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**.