Lab 6 · Conditionals and Loops

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1   Objectives

- Simple conditionals
- Loops

See the Chapter 2 slides on Canvas, as well as:

- ARM_Lab_Assembly_Programming_Fundamentals
- ARM_Lab_Examples

2   Conditionals

For the two questions below, you can declare the variables in the `data` segment and initialize them with any value you like.

(1) Convert the following C code to ARM assembly and print out the value of f.

```
1  if (i == 4)
2      f = g + 1;
3  else
4      f = g - 2;
```

(2) Convert the following C code to ARM assembly and print out the value of c.

```
1  if (a + b == 14 )
2      c = 3;
3  else
4      c = -2;
```

3   Loops

(1) Write a program that adds all integers from 1 to 10 and prints the result.

(2) Write a program that adds the digits of your CWID number and prints the result.

4   What to Submit

A zip file containing:

- four files with assembly code,
- a pdf with screenshots showing the outputs of the four programs and your source pasted in the file.