

# CIS 351 Sample AL3 Problem Solutions

Fri 26<sup>th</sup> Sept, 2025

## AL3: Loops

Convert the following Java code to assembly:

```
t1 = 0;
for (int t0 = a0; t0 >= 0; t0-- a1) {
    t1 += t0;
}
return t1;
```

There are many correct answers. Here is one:

```
li $t1, 0
move $t0, $a0
top: slt $t2, $t0, $zero
bne $t2, $zero, done
add $t1, $t1, $t0
sub $t0, $t0, $a1
j top
done: move $v0, $t1
```