

## Multiplication example

Assume the following initial conditions.

Mem[0] = A  
Mem[1] = B  
Mem[2] = 0

A simple multiplication algorithm is as follows.

	Instruction	Meaning
	LWI r1, (0)	$r1 \leftarrow \text{Mem}[0]$ ( $r1 = A$ )
	LWI r2, (1)	$r2 \leftarrow \text{Mem}[1]$ ( $r2 = B$ )
	LWI r3, (2)	$r3 \leftarrow \text{Mem}[2]$ ( $r3 = 0$ )
addition:	ADD r3, r3, r1	$r3 \leftarrow r3 + r1$
	SUBI r2, r2, r1	$r2 \leftarrow r2 - 1$
	BNE r2, r0, addition	$B == 0?$
	SWI r3, (2)	$\text{Mem}[2] \leftarrow r3$
end:	J end	Finish program