Basic ARM Assembly Guide

Register	Purpose
lr	holds return address
sp	address of stack top
r0-r10	general purpose registers
r0	also used for return value
r0-r4	also used for arguments

Instruction	What it does
str x, Mem	Store x's value into memory at address Mem...
str x, [y]	...where Mem is an address (pointer) stored in register y
str x, [y, #a]	...where Mem is a + the address (pointer) stored in register y
ldr x, Mem	Load memory at address Mem into x
ldr x, [y]	...where Mem is an address (pointer) stored in register y
ldr x, [y, #a]	...where Mem is a + the address (pointer) stored in register y
mov x, y	Copy y's value into x
sub x, y, z	$x = y - z$
add x, y, z	$x = y + z$
cmp x, y	compare x to y, set conditions
b LABEL	go to LABEL (unconditionally)
bl LABEL	call procedure at LABEL
bx lr	return
blt LABEL	go to LABEL if condition says $x < y$
ble LABEL	go to LABEL if condition says $x \leq y$
bgt LABEL	go to LABEL if condition says $x > y$
bge LABEL	go to LABEL if condition says $x \geq y$