Project03 updates

- Lab06
  - sum_array_rec
  - strcat
  - substr

  ] Lab section ldrb, strb

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push/pop and other instructions

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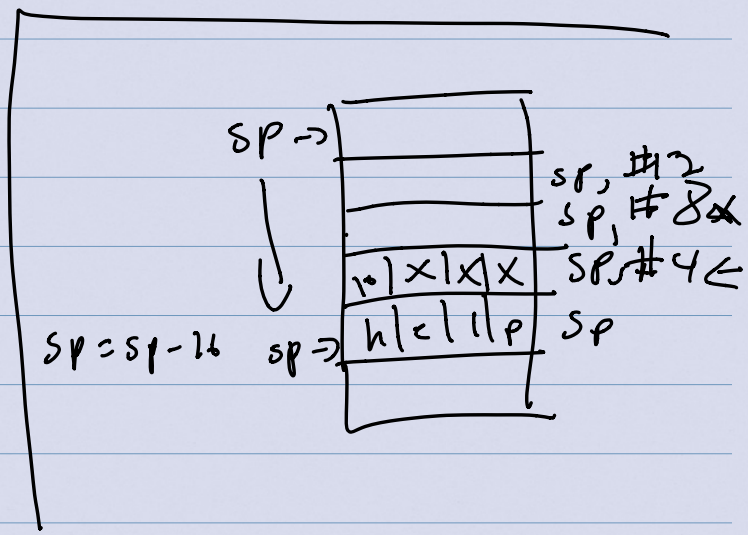
labels

```
.global foo
  foo:        <- entry point into a function
    add
    ↓
->loop:       <- if/then/else for/while
    mov
    bx lr
.global bar
  bar:
```

~~loop:~~

foo_loop:

bar_loop:



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ldr, str ldrb, strb

base register
base address

```
ldr r0, [r1]          addr = r1        r0 = *r1
ldr r0, [r1, #4]      addr = r1 + 4
ldr r0, [r1, r2]      addr = r1 + r2
ldr r0, [r1, r2, LSL #2]
```

addr = r1 + (r2 << 2)

r1 + (r2 * 4)

array + (i * 4)

```
lsl r0, r1, #2    r0 = r1 << 2
lsr r0, r1, #     r0 = r1 >> 2
```

mult by 4

div by 4

Preserving Registers

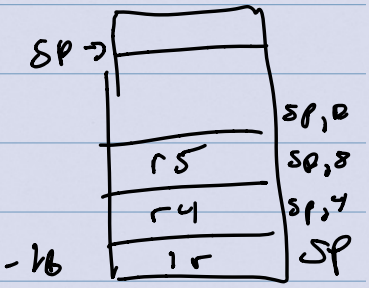
multiple of 8

```
Foo:
    sub sp, sp, #16
    str lr, [sp]
    str r4, [sp, #4]
    str r5, [sp, #8]
    ...
    bl bar
```

r0, r1, r2

callee saved

caller saved




```
ldr r5, [sp, #8]
ldr r4, [sp, #4]
ldr lr, [sp]
add. sp, sp, #16
```

may additional space for variables