

COMP1521 Week 4

Welcome!!!

Please sit down we shall start at 4:05

Overview

- Assignment 1 (Remember header comment)
- 2D_arrays
- functions
- structs

2D_arrays

```
# calculate &flag[row][col]
```

```
mul    $t2, $t0, 12
```

```
add    $t3, $t2, $t1
```

```
lb     $a0, flag($t3)
```

```
li     $v0, 11
```

```
syscall
```

Functions

\$a - used to pass arguments into a function

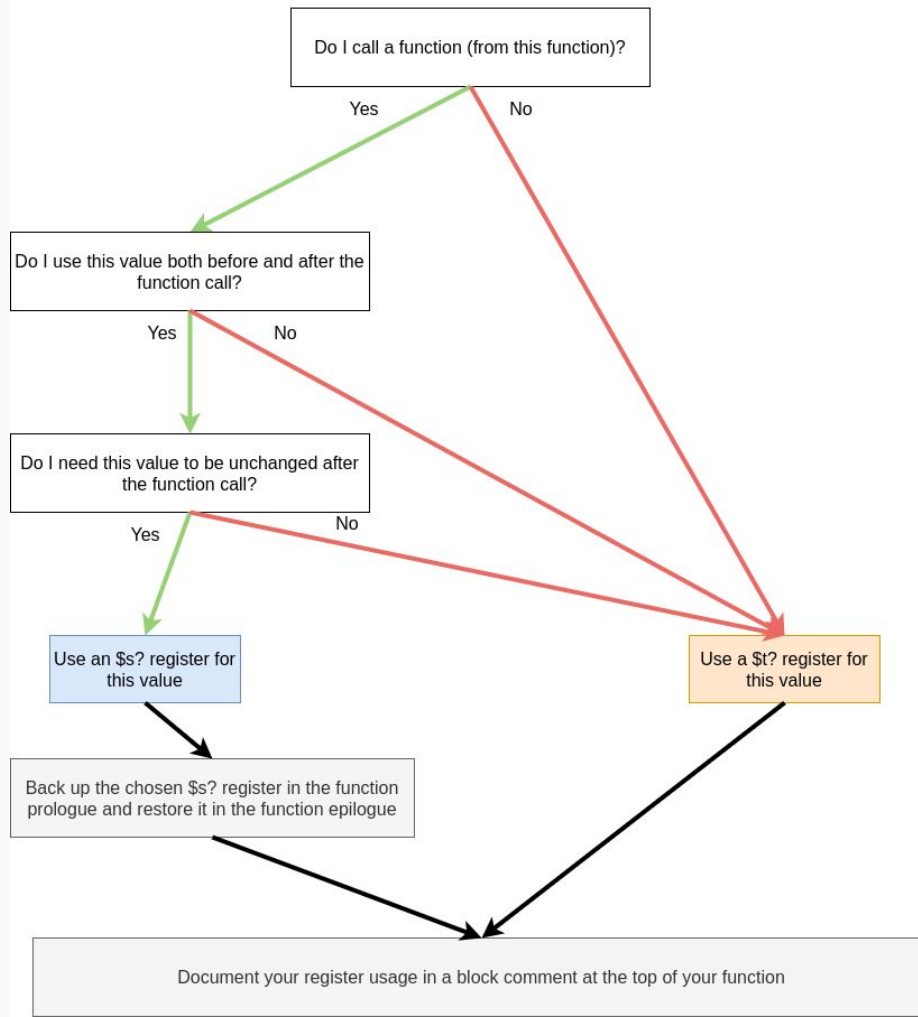
\$v0 - used to return a value from functions

jal - used to call a function (jump to a function label and store the return address in \$ra)

Process

1. List registers I am using
2. Complete the inside of the function
3. Complete prologue and epilogue
4. Comments!

Function Call Protocol: Do I use a \$t? or an \$s? register for this value?



Prologue and Epilogue

Prologue (push things onto stack)

Things to push

- Return address (if another function in called within the current function) \$ra
- Any \$s0 registers used

Epilogue (pop things off stack and return)

Things to pop (in the same order you pushed them)

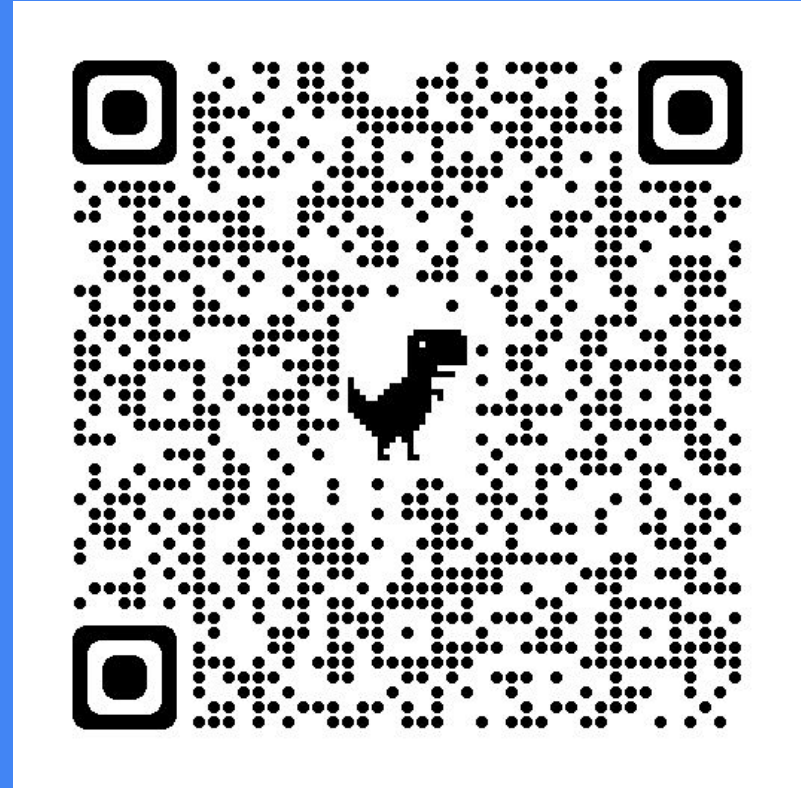
- Return address (if another function in called within the current function)
- Any \$s0 registers used

note: remember to begin and end your stack frames for each function

Code from tut



Feedback form



<https://github.com/abbylxt/23T2-COMP1521-Tut/tree/main/W4>

Code: Week4