CS2318
12/08/16

Reentrant

A Reentrant function does not

Use global variables

=> stored on stack instead

int a; ← Use stack

main
fib( ) { }

We still maintain the convention

e.g., Prepare the Arguments in A_s

" the return Result in V_s

=> Generate a frame

=> Use the stack (store/update) the

frame

2 Final

- Compiling chain compiler / assembler
  Linker / Loader
  Patterson ch 2

- Functions / Function call 6 Britton
  2 Patterson

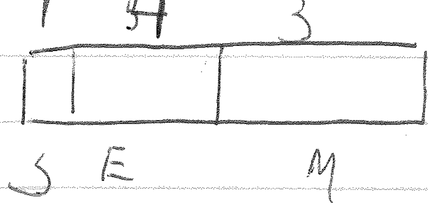
- Reentrant / Recursion ch 7 - 7 Britton

- I/O Memory mapped / polling ch 8

- I/O Interrupts ch 9 in Britton
  Two MIPS specific use my notes

- Number Representation ch - 3 Britton
  Free Booth Tarnoff ch - 3 Patterson
  ⇒ Floating Point HW Appendix Patterson
  Benchmark

3



1.xxx + 1.xxx → implies 4 bits adder

Bias - 7 $\quad 2^{4-1} - 1 \;/\; \left[2^{5-1} - 1 \;\; 2^{5-1} \right]$

different Bias

+	0 1010 110	A
	1 1001 1110	B

C

$+(1.110) \times 2^3$ A

$-(1.111) \times 2^2$ B

Align Exp

-0.111×2^3

Need to do

Human way = 1.110 − 0.111

+ 1110
+ 0111

Use S + M

4

+1.110 → +1110 A

+

−0.111 → −0111 B

01110 in 2's

A in 2's

−7

00111 +7 in 2's in 5 bits

11000 1's

11001 2's . B in 2's

$(A)_{2s}$

$+ (-B)_{2s}$ + A

(−B)

01110

11001 — 2's

10 01111

5

$$\begin{array}{r} 01110 \\ +\ 11001 \\ \hline 00111 \end{array}$$

2's to S+M →

+ 0111 ⇒ FPX

+ 0.111 (2^3)

0	1001	110

1.110×2^2

S+M → 2's

0 | 1100 |

12 − 3 = 5

| 1001 |