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| CS 241 | Lecture Handout #11 |

#1 Thread of Execution

(“return - How traditional… I’d like a language with comefrom”)

int f(int a) {

int b=a+1;

if(b>99) **return** 3;

**return** b;

}

How does return ‘work’? i.e. How does the CPU know what to do next?

#2 Introduction to threads and pthreads

pthread\_create

pthread\_join

pthread\_exit

**#include** **<pthread.h>**

**int** **pthread\_create(pthread\_t** **\***thread**,**

**pthread\_attr\_t** **\***attr**,**

**void** **\*(\***start\_routine**)** **(void** **\*),**

**void** **\***arg**);**

**int** **pthread\_join(pthread\_t** thread**,** **void** **\*\***retval**);**

**void** **pthread\_exit(void** **\***retval**);**

Compile and link with -pthread

#3 My program calls pthread\_create twice. How many stacks does my process have?

#4 What is the difference between a process and a thread?

#5 What does pthread\_cancel do?

and are there alternatives?

#6 Differences between exit() and pthread\_exit()?

...so why would you call pthread\_exit in your main method?

#7 Give four ways that a thread can be terminated

#8 Hello World with pthreads?

#9 What happens if I call pthread\_create 100 times?