



CSCI 3753: Operating Systems Spring 2024

Dylan Sain

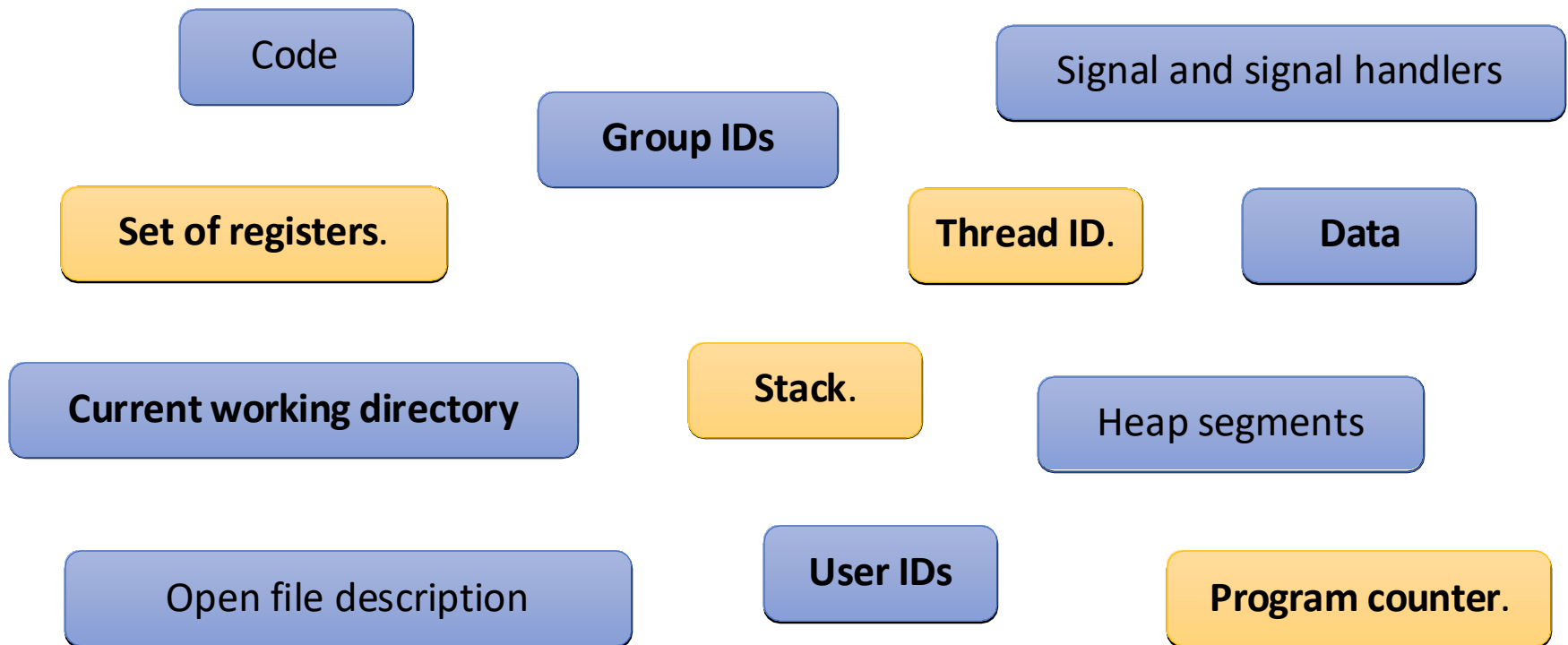
Department of Computer Science

University of Colorado Boulder

Week 5: Synchronization Discussion and PA 2/3 QA

Threads - A basic unit of CPU utilization

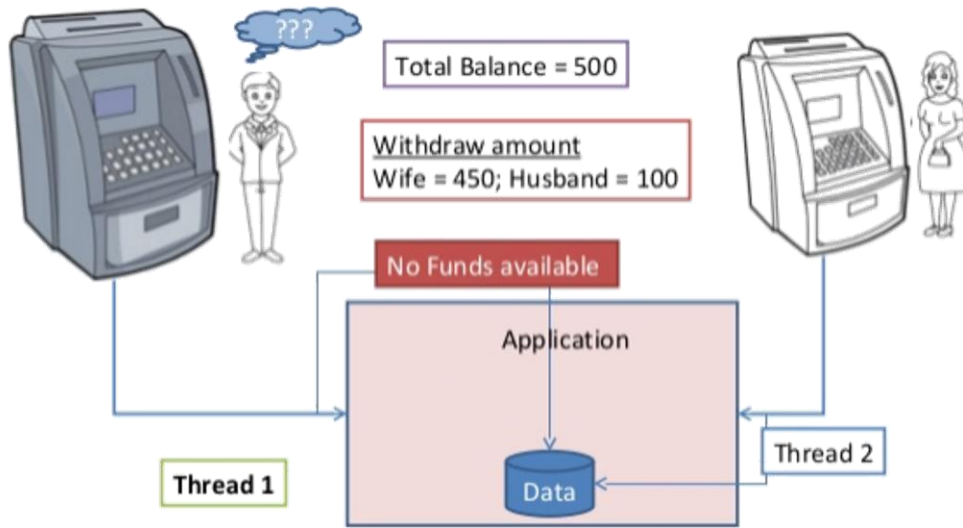
- What do all threads share within a process?
- What do each thread have its unique?



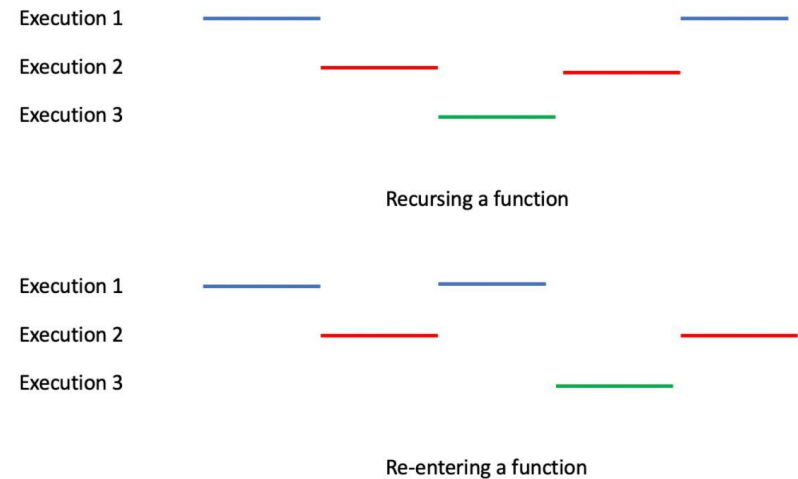
Thread Safety vs Reentrancy

	Thread-safe	Re-entrant
Definition	A function is thread-safe, if multiple threads can execute the same function at the same time safely.	A function is re-entrant if it can be interrupted in the middle of an execution, and it's safe to call the same function again in the same thread .
Environment	Multi -threaded	Single -threaded
Arising conditions	+ Static data or other shared resources (e.g., global variables)	
		+ Call another non-reentrant function + Modify its own code

Thread Safety vs Reentrancy



Thread Safety



Reentrancy

A large teal arrow pointing to the right, with a fine diagonal line pattern, serving as a background for the title text.

Exercise: Test your skills!

Go to Kahoot.it

Use the code

Add your name (please
use your real name)

Choose the correct
answer!

PA 2 and PA 3 Questions?