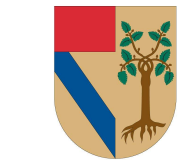
FreeRTOS Architecture Part 1

Name

Universidad Panamericana

Presentation July 14, 2024



UNIVERSIDAD
PANAMERICANA

Contents

Memory Managment

Memory Hierarchy: A Light-Hearted Tour

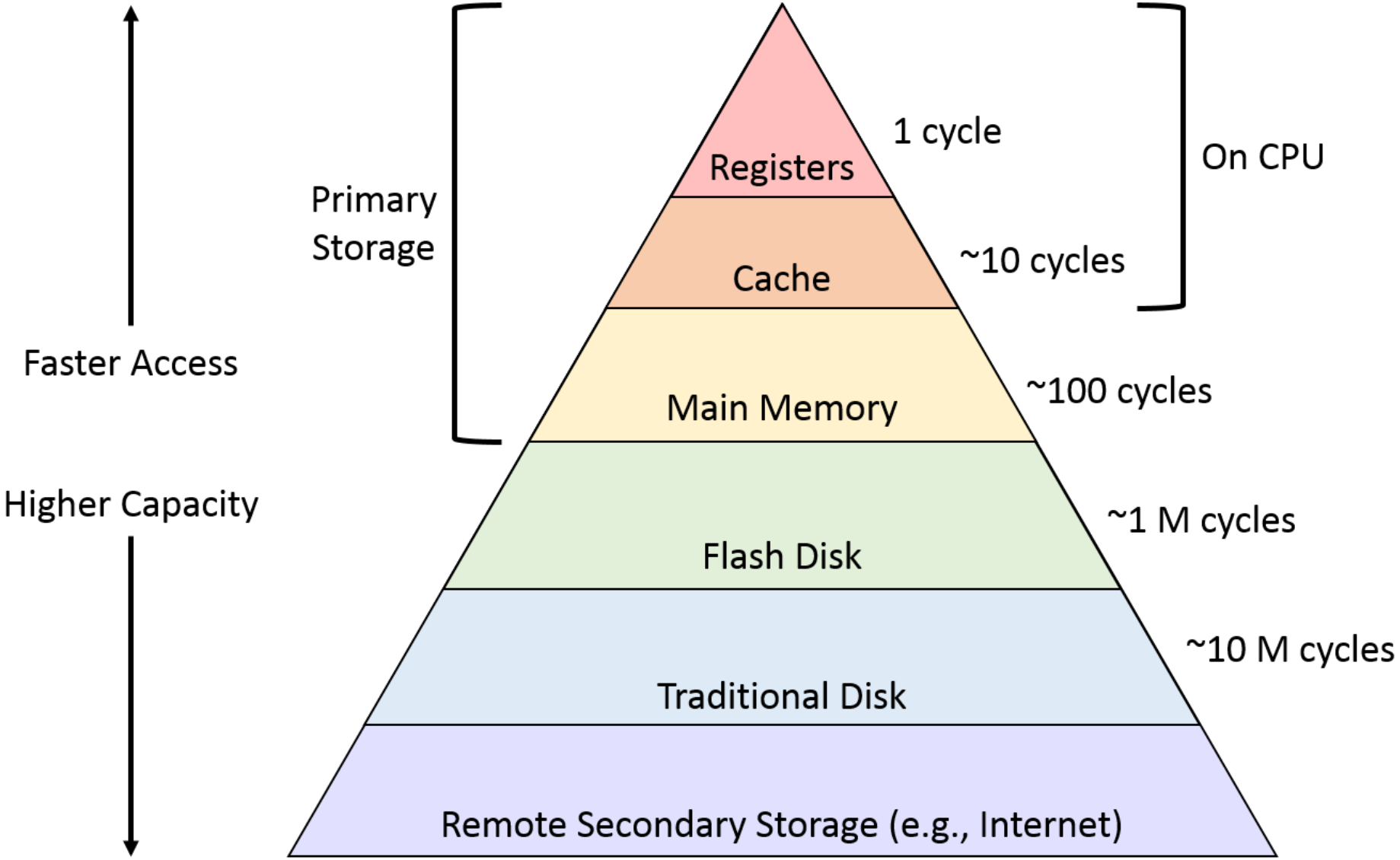
- **Registers:** The speed-demons of memory. Too fast to care, but you really should!
- **Cache:** The backseat driver of computing. It makes decisions you didn't ask for, often with surprising results.

Friendly Reminder

Regularly clearing your cache: not just good practice, it's like digital detox for your devices!

- **RAM (Random Access Memory):** The workaholic of memory. When it runs out, things go south quickly—plan wisely!
- **Storage:** The elephant's graveyard. Where all your code and files go to rest. Yes, your code lives somewhere physical!

Memory Hierarchy



The Memory Hierarchy

Defensive Programmig

Defensive Programmig. Expect the unexpected

Defensive programming is a bit like always wearing a full suit of armor. It's about preparing for the worst while hoping for the best, much like someone living in a zombie apocalypse with a bunker full of canned goods. In this approach, every function call is a potential trick, every user input a Trojan horse, and paranoia isn't just recommended, it's required!

Defensive Programmig. Expect the unexpected

Common errors in variable allocation

What does static mean?

Stack Memory

Heap Memory

Pointers

Callbacks