


can you write a short poem of 4 lines about system level programming



Sure, here's a short poem about system level programming:



 Copy code

```
Beneath the surface, hidden from view  
A world of code, just waiting for you  
To explore and tinker, to build and to create  
Welcome to the world of system level programming, mate
```

I hope you like it! If you want me to make any changes or try a different topic, just let me know. Writing poetry is a creative task, and different people may have different styles and approaches. My poem is just one possible way to approach the topic of system level programming.

THREADS OR SOMETHING



IDK I'M LOST

SIZE_T

DANIEL

INT



A1 + A2 are the easy introductory examples?



"MY SANITY IS HANGING ON A THREAD"



"A THREAD!"



**"YOU GET
IT??? A PTHREAD"**



Making
memes for
the coins



Making memes
to keep yourself
entertained to
not lose your
sanity and break
under the pressure
of neverending deadlines

**DOING
MEMES**



**DOING
SNP**



**DOING
MEMES FOR SNP**

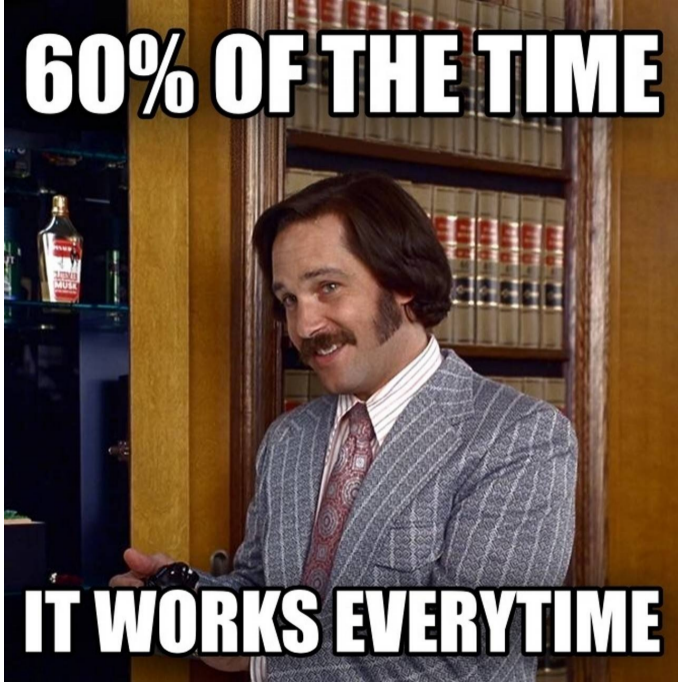


5555 coins for 'Meme and helping others' by lava



A2 is full of race conditions

60% OF THE TIME



IT WORKS EVERYTIME

Types of Headaches

Migraine



Hypertension



Stress



Racecondition





threads

me, trying to
get A2 working
without a race-condition

I don't want to play with you anymore

A meme featuring a cartoon character and a sign. The top part shows a pair of hands holding a white sign with the text "YOU HAVE A RACE CONDITION" in bold, black, outlined letters. The bottom part shows a cartoon character with brown hair, wearing a blue and white baseball cap with a blue tree logo, a blue jacket, and a red shirt. He is holding a white envelope and looking at it with a wide, happy smile. The background is a cartoon town street with buildings and trees.

**YOU HAVE A
RACE CONDITION**

Woah.

This is worthless!

ME TRYING TO FIND

RACECONDITION THE

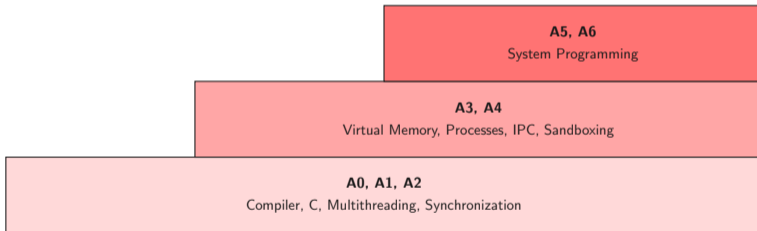


**THERE ARE NO RACE
CONDITIONS IN MY CODE**

And
Other Hilarious Jokes
You Can Tell Yourself

Volume II

Course Overview



A3 - Virtual Memory

**JUST ANSWER A
FEW QUESTIONS FOR A3**



**THERE ARE OVER
30 QUESTIONS**

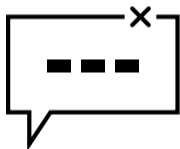


**ANOTHER
GLOBAL VARIABLE**

DANIEL

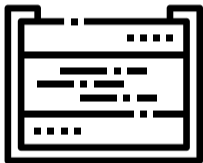
**GLOBAL
VARIABLE**

Segmentation fault



- We've all been there: access to "invalid" memory location
- But aren't pointers indices of this large array called RAM / physical memory?
- How can addresses in physical memory be "invalid"?

Virtual Memory



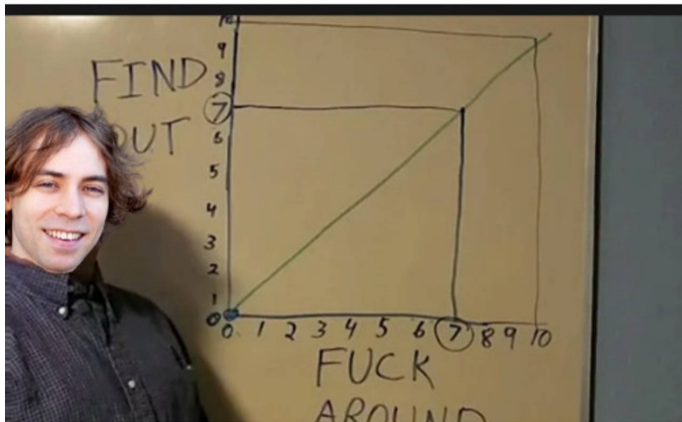
- **Pointers are not addresses/indices in a large array called RAM / physical memory**
 - **but** in a large array called **virtual memory**
 - There is a **big map** to translate pointers (virtual addresses) to actual physical addresses
 - In SLP / as a userspace programmer: we **never** see actual physical addresses - only pointers / virtual addresses!
 - mapping block-wise is easier: mapping a block aka **page**
- different processes can use the same pointer / virtual address, but “see” different things there

A3 - Memory Layout and Demand Paging



- Experiment with different kinds of variables, which addresses do they get?
- Observe memory usage in practice, when does it really increase?
- **Answer questions from the test system questionnaire!**
- **Register + participate in one of the virtual memory discussions!**

SLP in a nutshell



the more you fuck around
the more you're gonna find out

A3 - Changes due to Virtual Setting



- How to proceed? (if you ignore this you won't be able to answer all of A3)
- Answer **all** questions, question by question
- “I guessed correctly” → not sufficient
- “I read online that this is the answer” → not sufficient
- We want a full explanation for the answer and **what I have to do to observe the behavior you describe**
- Don't collaborate with others - we cross check who did what when, answered which question when, etc.