

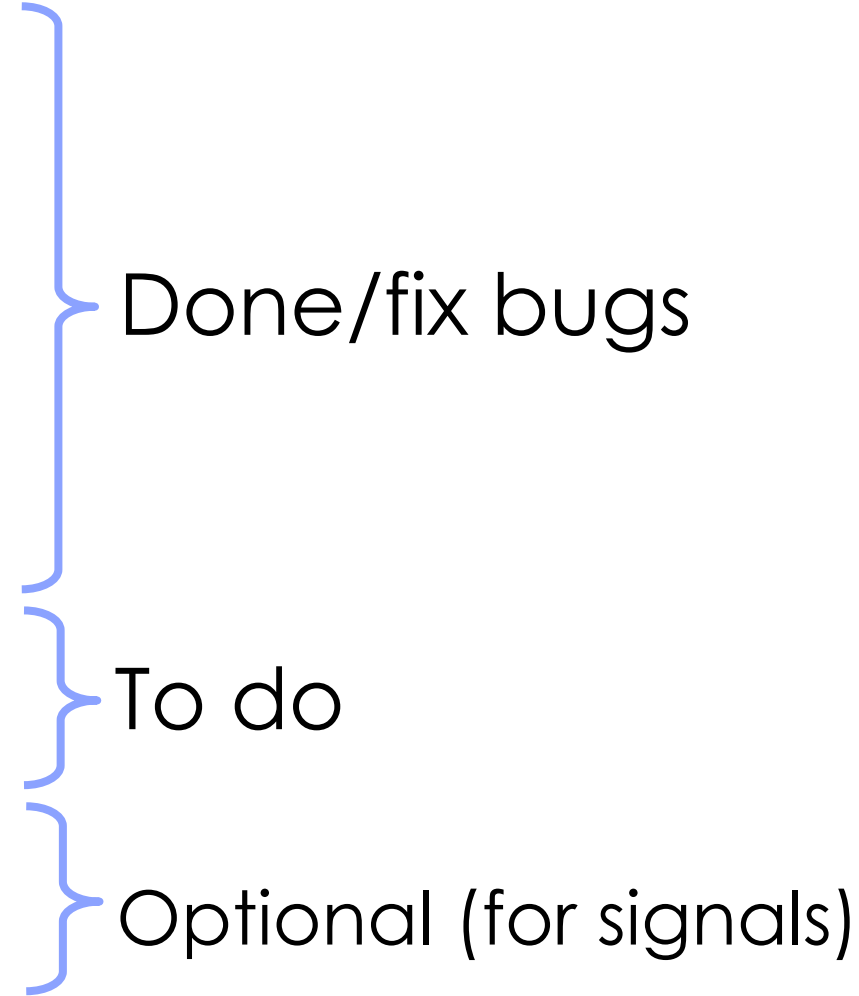
ECE 391 Discussion

Week 12

Announcements & Reminders

- ▶ MP3.4 due next Monday(Nov 14th) at 5:59pm
- ▶ MP3.5 due Sunday Dec 4th
- ▶ Recommend starting MP3.5 once you are done with MP3.4

MP3.4: Finish Syscall Implementation

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- A diagram showing a list of 10 tasks for finishing syscall implementation. The tasks are numbered 1 to 10. To the right of the list, three blue curly braces group the tasks into three categories: 'Done/fix bugs' (tasks 1-6), 'To do' (tasks 7-8), and 'Optional (for signals)' (tasks 9-10).
- 1. Halt
 - 2. Execute
 - 3. Read
 - 4. Write
 - 5. Open
 - 6. Close
 - 7. Getargs
 - 8. Vidmap
 - 9. Set_handler
 - 10. Sigreturn
- Done/fix bugs
- To do
- Optional (for signals)

MP3.4: New Syscalls Quiz

```
int32_t getargs (uint8_t* buf, int32_t nbytes);
```

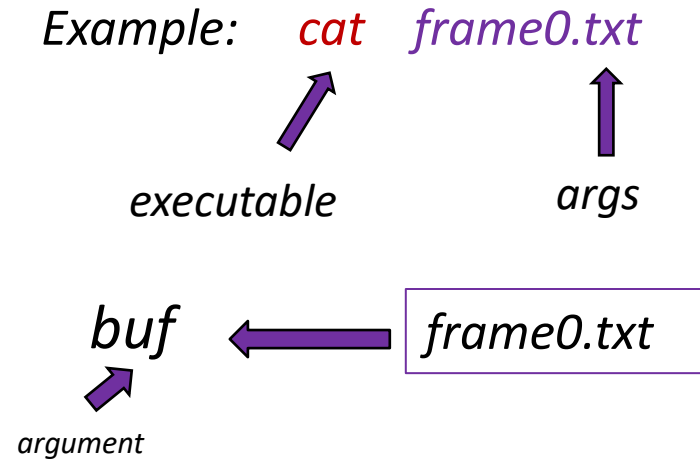
- ▶ What is buf?
- ▶ What is nbytes?
- ▶ What does getargs do?

```
int32_t vidmap (uint8_t** screen_start);
```

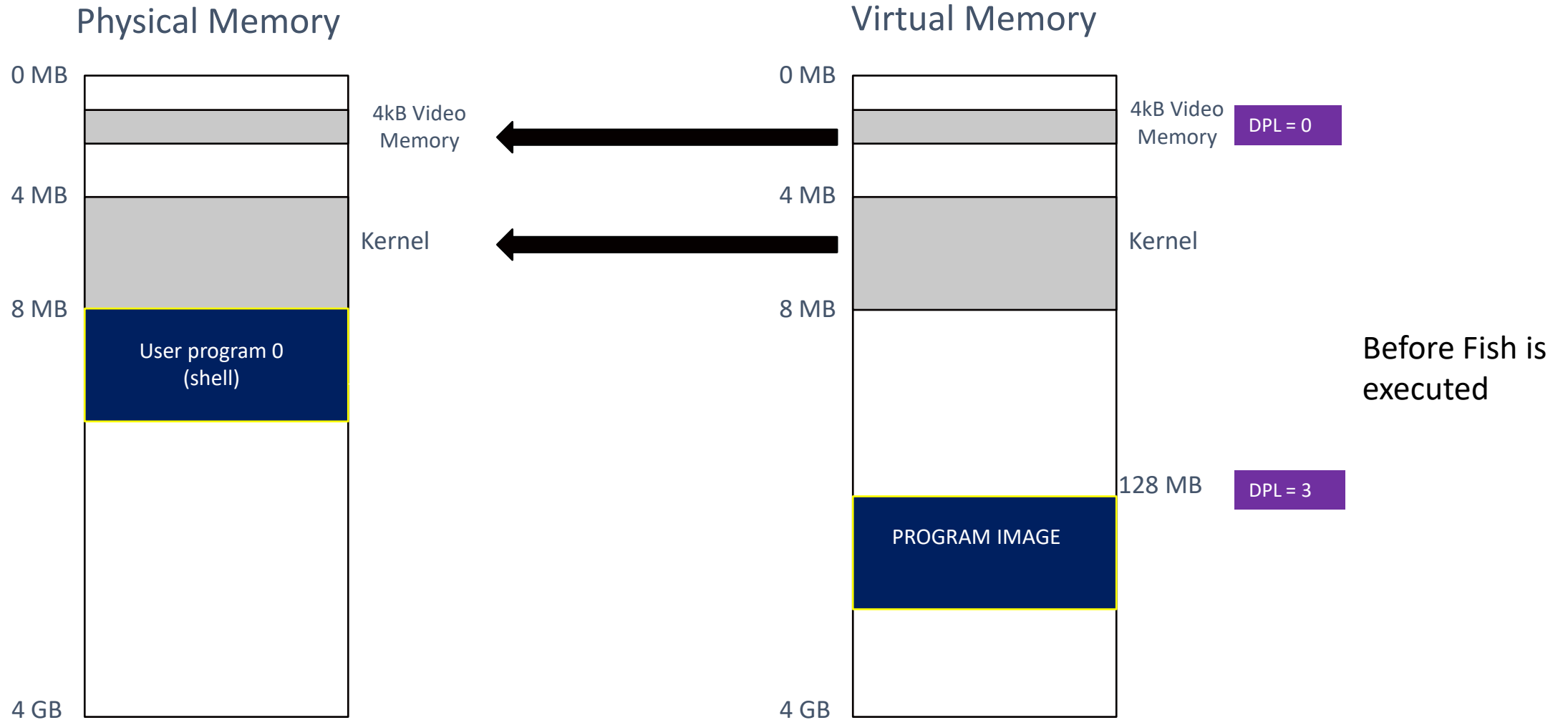
- ▶ What is screen_start?
- ▶ What does vidmap do?

get_args(uint8_t* buf, int32_t nbytes)

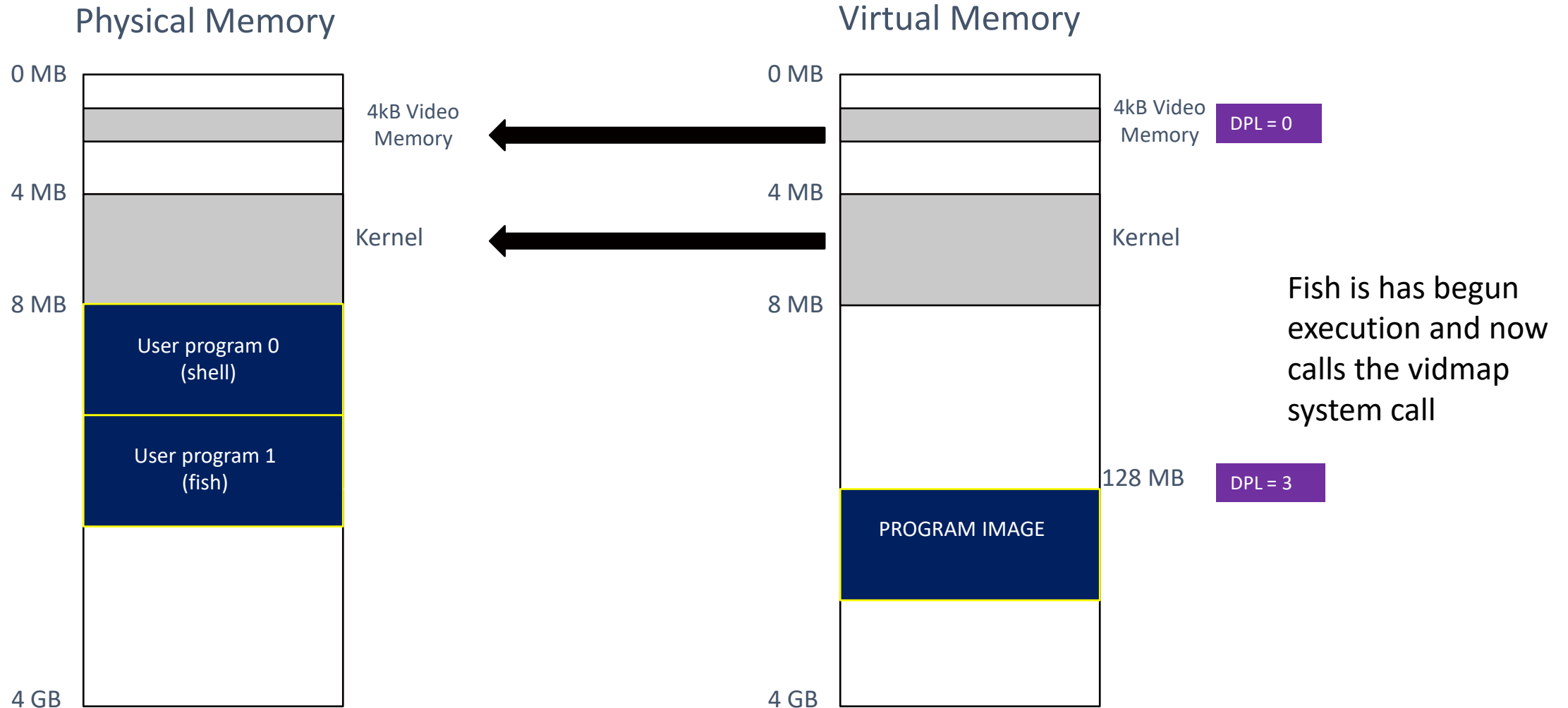
Arguments are parsed from the command buffer in execute



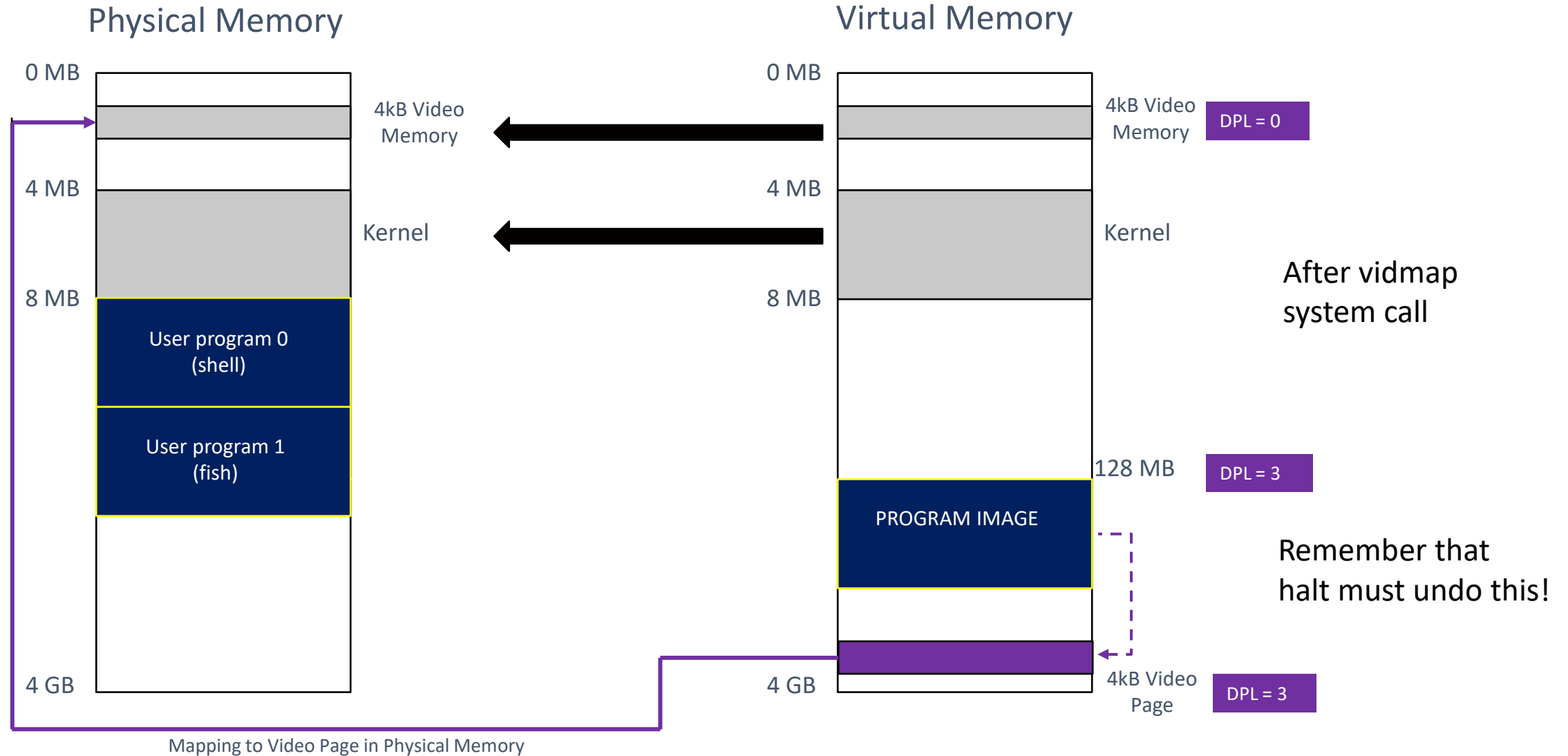
Vidmap(uint8_t ** screen start)



Vidmap(uint8_t ** screen start)



Vidmap(uint8_t ** screen start)



MP3.4: Tips

- ▶ Fix all bugs you might have
 - ▶ Small bugs will cause you big trouble in MP3.5
- ▶ Make sure all the user level programs listed below works
 - ▶ testprint/hello/counter – terminal read/write
 - ▶ syserr – bad system calls
 - ▶ ls – open directory
 - ▶ cat – open/read files and also use get_args()
 - ▶ grep – open/close all files
 - ▶ pingpong – RTC
 - ▶ fish – vidmap, RTC, open/read files

MP3.4: given executables

- ▶ Read the source! You must understand how each works for efficient testing/debugging
- ▶ Summary:
 - ▶ testprint/hello/counter – all print to the terminal
 - ▶ Hello also does a read, counter runs for a long time
 - ▶ syserr – series of malformed system calls
 - ▶ Your kernel should handle these “gracefully” and pass the tests
 - ▶ ls, cat, grep – do what they do in Linux, minus the bells and whistles
 - ▶ pingpong – runs forever (might want to have a ctrl-c functionality)
 - ▶ fish – animated fish (only executable using vidmap)
 - ▶ Multi-block executable..