Zeroth Presentation Speaker Notes

Introduction (`Nihal`)

- We want to build a 32-bit operating system/ kernel
- We will use the C programming language and x86 assembly
    - The reasoning behind why we did not choose a modern programming language like Rust will be explained in the later slides.
- Our three basic goals are:

1. Implement Display

- This involves printing text to the screen and drawing geometric shapes such as squares, triangles and so on ...
- Drawing text to the screen
- In our current design, we are using VGA text-mode and graphics-mode.
  This involves writing 2 bytes to memory location *0xB8000* to represent a character.

2. Input Drivers

- This involves implementing both keyboard and mouse drivers from scratch.
- Implementing keyboard driver involves reading scan codes from the PS/2 controller
- Implementing mouse driver involves handling interrupts

3. C standard library

- The functions that we take for granted - like strlen and printf, scanf, malloc are all parts of the C standard library.
- They are not provided by the compiler.
- It is upto the kernel to provide these libraries
- We will implement some parts of the stdlib (like string.h and malloc function)

- Since it is not really practical, we will exclude things like networking.