### **Week 3**

# **Lecture 1:**

1. Hardware segmentation techniques: Emulation and Virtualization
2. Interpretation, Types of Emulation: static translation, dynamic translation
3. Instruction set architecture, Issues of Emulation: Types of Registers and Register mapping problem.
4. https://www.youtube.com/watch?v=3wchxlI\_CxE
5. https://www.youtube.com/watch?v=0MuPXOS30\_s

# **Lecture 2:**

1. Privilege levels (Ring levels) users and kernel mode
2. Types of Instructions: privileged, unprivileged and sensitive
3. Types of Interrupts, Interrupt handling routines, Vector Table
4. Chapter 18 virtualization from operating system concepts (attached)
5. <https://www.youtube.com/watch?v=i_TZh1dWoIk>