

Review Topic list

Single-cycle

- DataPath
- Control
- Reducing control by subdividing it

Multi-cycle

- Datapath
- Control
- Why/how to divide up the datapath into cycles

Pipelined

- Datapath
- Control
- Why/How to divide datapath into stages
- Hazards (control/data) - bubbles
- Forwarding
- Branch Prediction
- ILP

Exceptions/Interrupts

- causes of exceptions/interrupts
- What happens on an exception (PC->EPC, handler->PC, priv. mode)
- Responsibilities of a handler
 - Turn off exceptions
 - Save registers
 - Handle exception
 - Return CPU to pre-exception state
 - eret – exception return

Address Translation

- Virtual vs. Physical addresses
- MMU base and length
- BadAddress exceptions