

Student Names:

Student IDs:

Group ID:

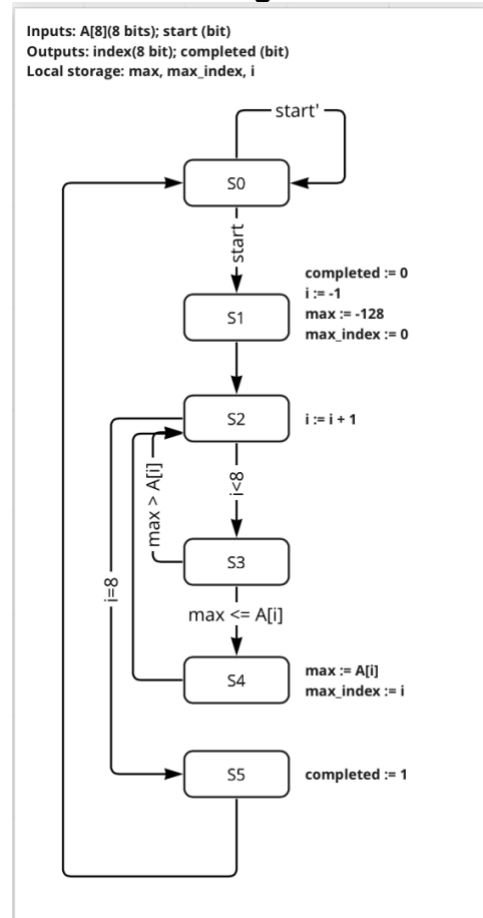
Session:

## CMPE 240 2022 Experiment 6 Preliminary Work

*(For illustrations you can use any drawing tool that you want including Microsoft Word Shapes. Do not use scanned images of hand drawn state machines and architecture diagrams.)*

*(For tables please use insert table feature of Microsoft Word)*

**Step 1: Capture the High-Level State Machine: Describe the system's desired behavior as a high-level state machine.**



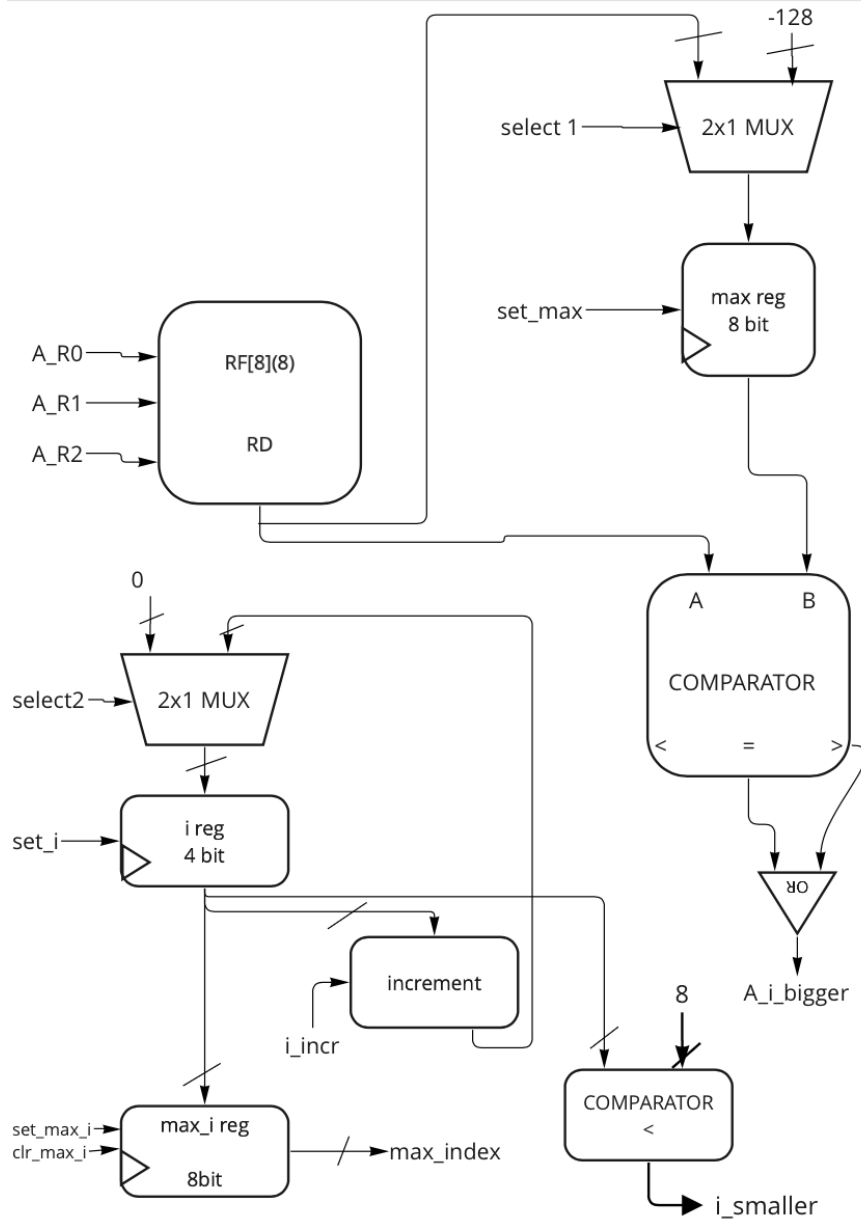
**Student Names:**

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**Session:**

**Step 2: Construct the Datapath: Create a datapath to carry out the data operations of the high-level state machine.**



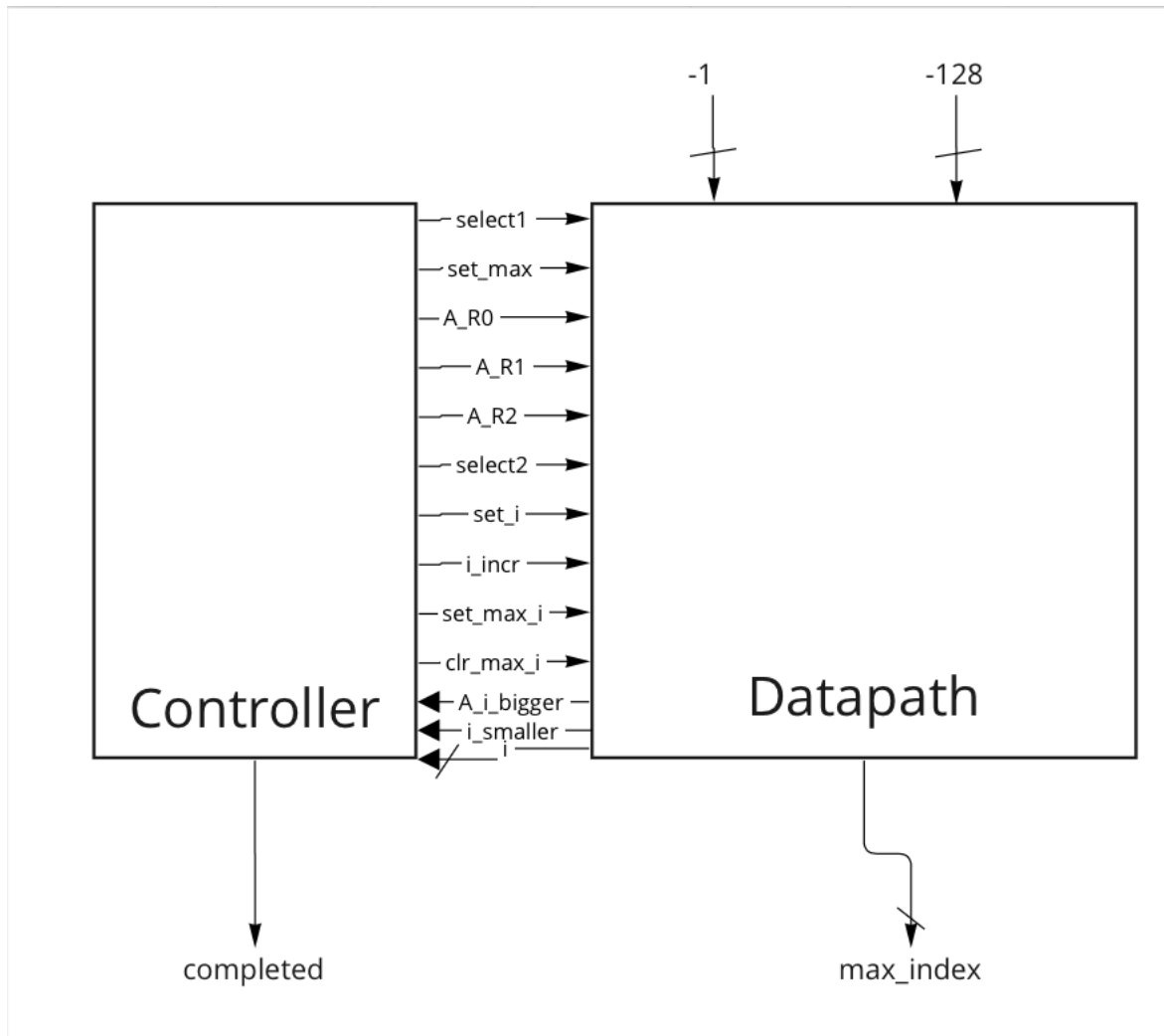
**Student Names:**

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**Step 3: Connect the Datapath to a Controller: Connect the datapath to a controller block.**



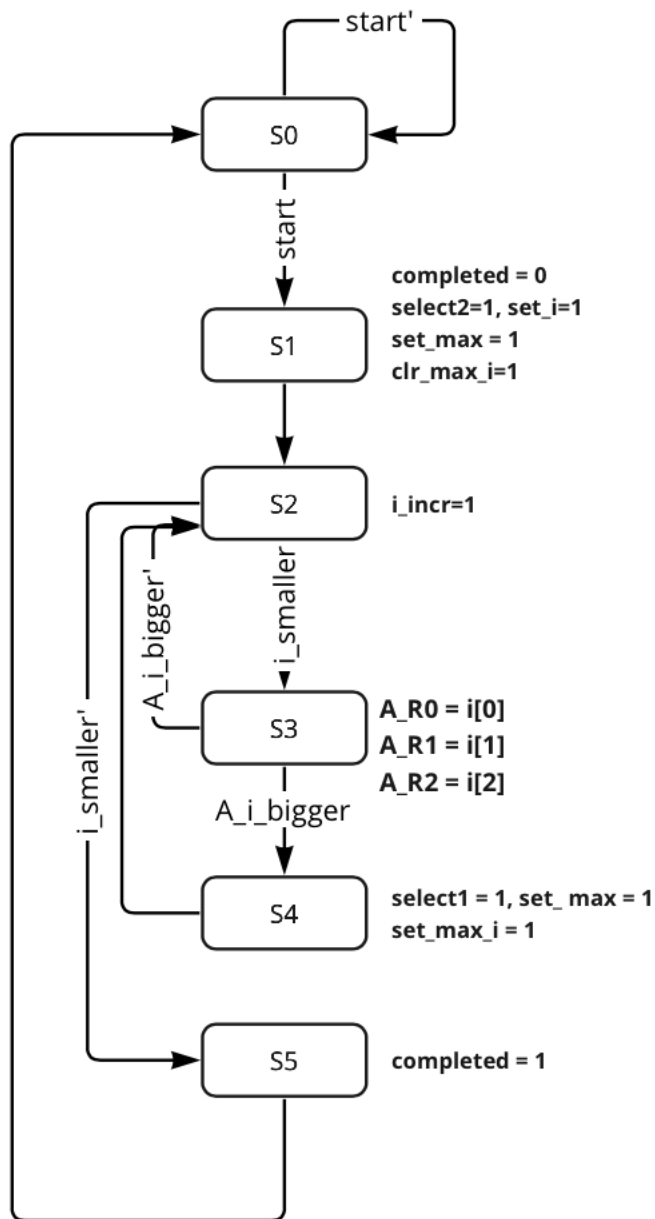
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**Step 4: Derive the Controller's Finite State Machine: Convert the high-level state machine to a finite state machine for the controller, by replacing data operations with setting and reading of control signals to and from the datapath.**



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