CmpSci 201
Lab 8

For the following state machines, R0 is the state machine input, R2 is the state machine output, and the actual state of the machine should be stored in R4. Implement the entire machine, do not simplify (even if possible).

1. Implement the following state machine in ARM assembly.
2. Implement the following state machine in ARM assembly.

![State Machine Diagram]

- **S0**: \(R0 = 0 / R2 = 1\)
- **S1**: \(R0 = 1 / R2 = 2\)
- **S2**: \(R0 = 2 / R2 = 0\)
- **S3**: \(R0 = 1 / R2 = 0\)
- **S4**: \(R0 = 0, 1, 2 / R2 = 0\)