605.204 - Computer Organization
Module 13: Assignment

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Brief Introduction

This assignment involves the implementation of several modulo counters within various Logisim circuits. All of my resulting work can be found at this *GitHub link* and can be cloned and viewed using the following commands:

```
git clone https://github.com/nhinke/computer-organization-repo.git
cd computer-organization-repo/assignments/module13/
```

Problem 1

1. Implement the following state diagram using the mod-4 counter as a starting point.

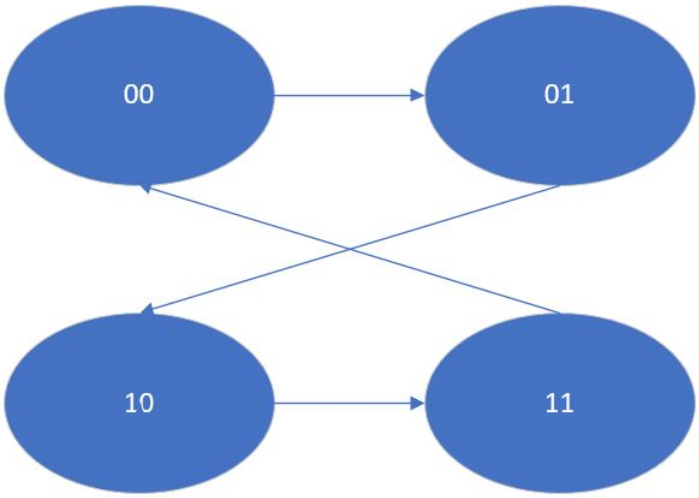

Figure 1: Screenshot of state diagram to be implemented using mod-4 counter

Circuits used to implement state diagram above are shown on the following page...

Final Circuit:

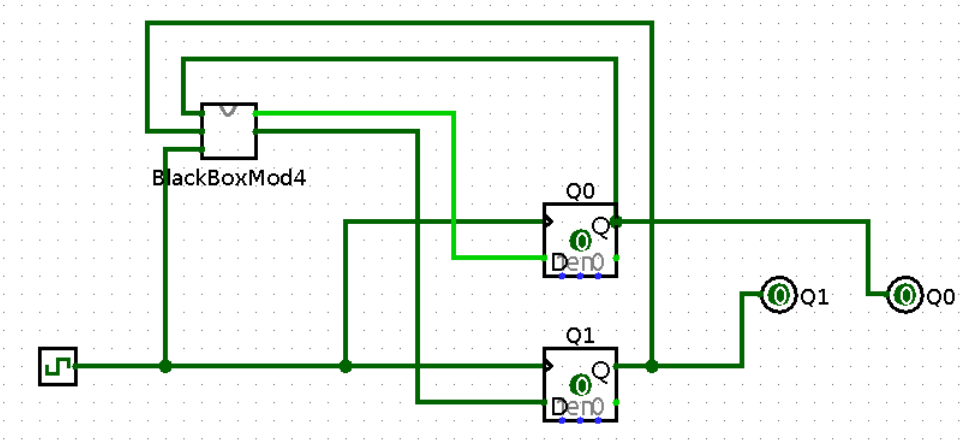

Figure 2: Screenshot of final circuit to implement state diagram

BlackBoxMod4:

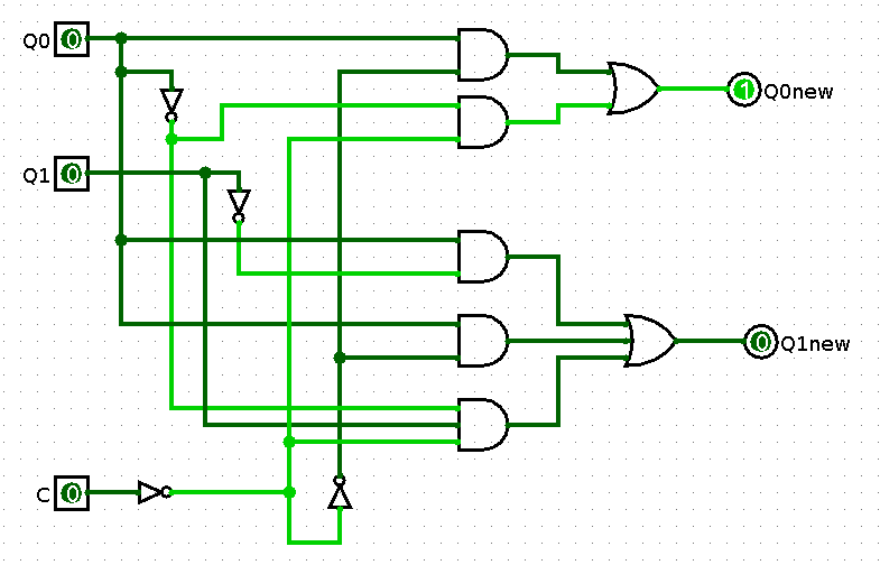

Figure 3: Screenshot of "BlackBoxMod4" circuit used within final circuit

Problem 2

2. Implement a Mod-6 counter using 3 registers and a 6x3 ROM memory.

Final Circuit:

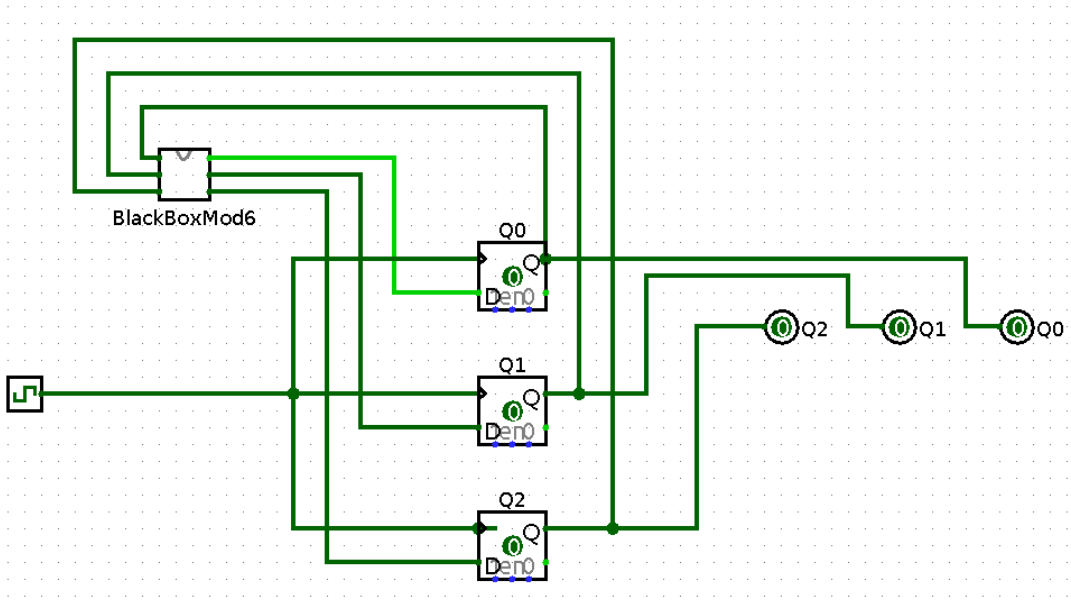

Figure 4: Screenshot of final circuit to implement mod-6 counter

BlackBoxMod6:

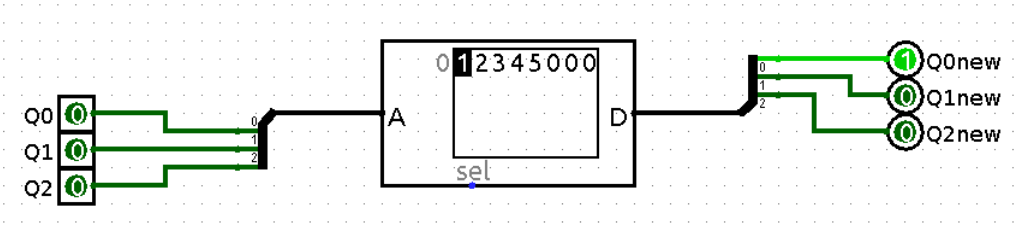

Figure 5: Screenshot of "BlackBoxMod6" circuit used within final circuit