

The "Calculative" Calculator

Interactive Digital Calculator

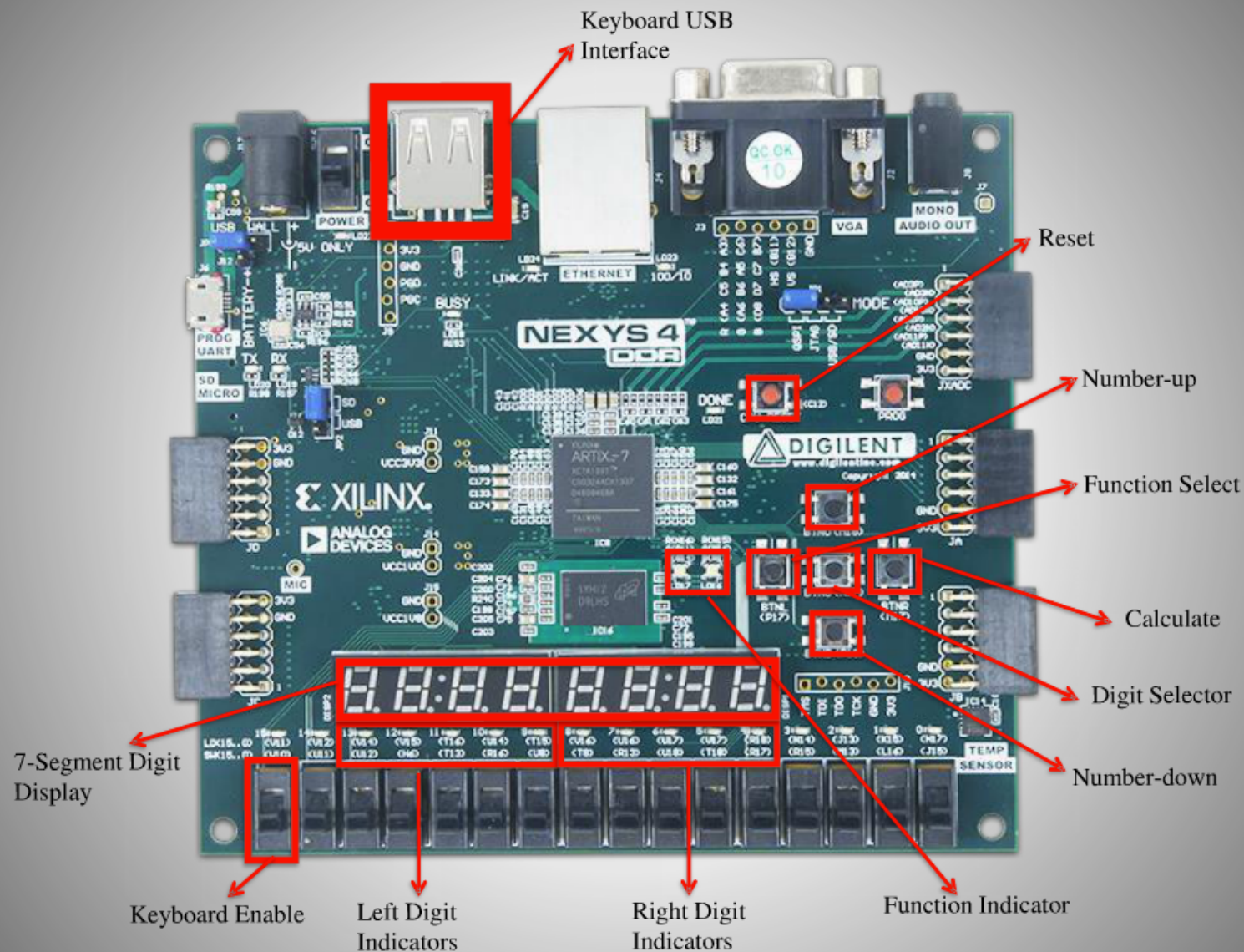
ECE 278 Final Project
Chandler Connolly
Sarah Elhage
Matthew Shina
Daniyah Alaswad

Introduction

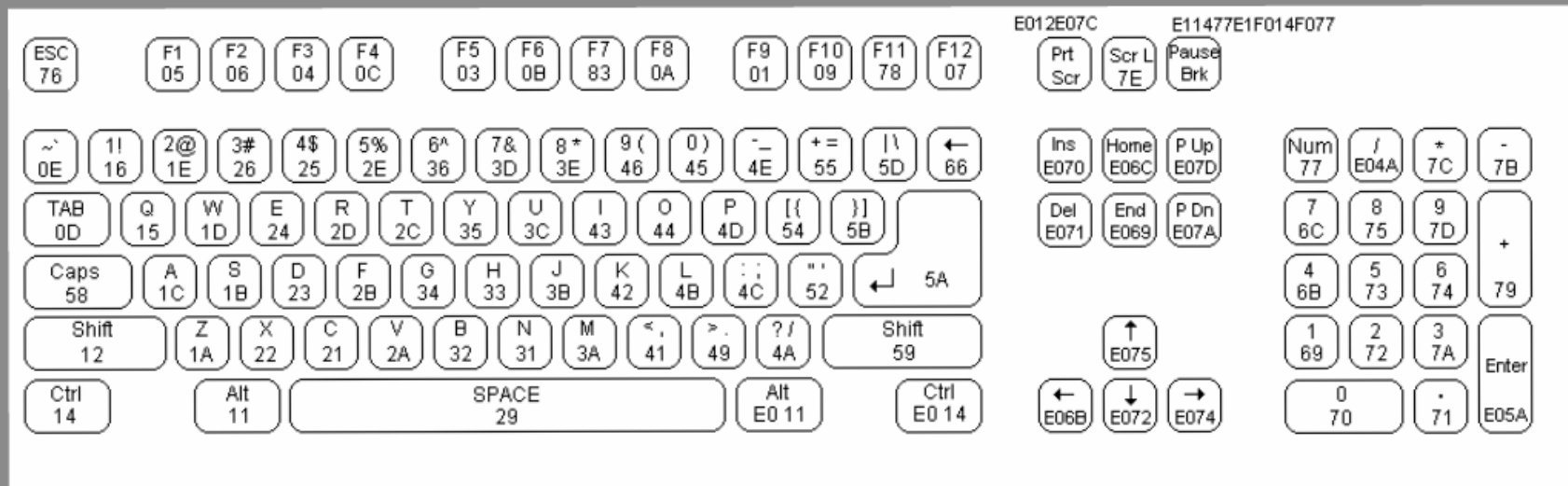
- Digital interactive calculator
- Addition, Subtraction, Multiplication, and Division
- Two 3 bit inputs
- Remainder is shown on 7-Segments
- Unsigned digits only
- Optional keyboard interface



NEXYS4 Button Map

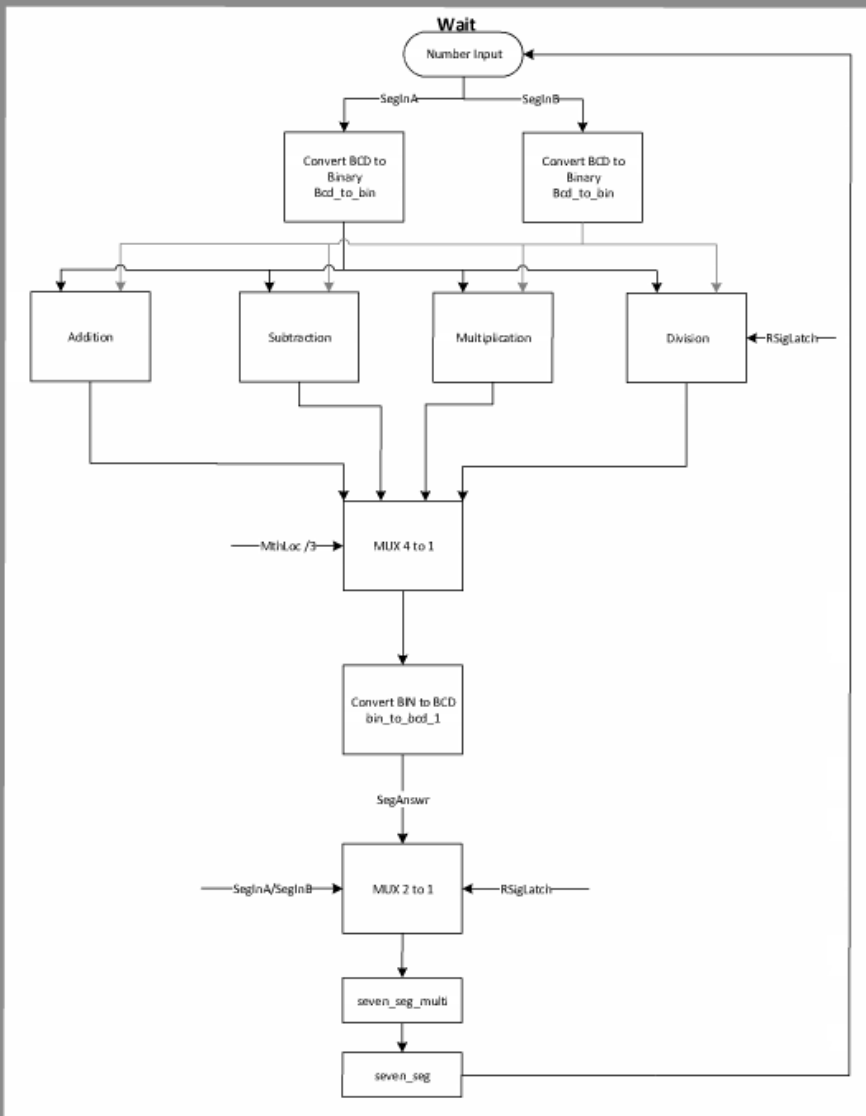


Keyboard Button Map



- Only number keypad has been optimized
- Functions must still be input on board

Flow Chart & Function



Components Consist of:

- 1 State Machine
- 7 Shift Registers
- 2 Latches
- 4 Counters
- 6 Multiplexers
- 50+ Full Adders

Improvements

- Auto-index to next digit and improve display capabilities with keyboard
- Up/Down buttons are a little buggy when incrementing
- Optimize for signed numbers
- Improve function indications
- Add extra functions
- Implement VGA display

Thank You