**CSCI 4335**

**Lab 2**

**Instruction set**

**For the first assignment, you created an instruction set to handle just one operation. For this assignment, we are going to expand it include many more operations.**

**We have talked about 8-bit, 16-bit, 32-bit, and 64-bit architectures in our recent lectures. For this assignment we are going to take a 16-bit machine and use 4 bits for opcode and remaining 12bits for operand(s) or immediate number.**

1. **What is the maximum number of operations can we design within these 4 bits?**
2. **What is largest unsigned number we can assign as an immediate operand using the remaining 12 bits?**
3. **Create a general purpose (meaning you can do variety of things such as add, subtract, multiply, shiftleft, shiftright, compare, etc. Make sure to fill all the slots for 4 bits operations.**