

### Lab 5 Prelab

1. Slave devices can't start transactions on their own. A master device produces clock transitions on the SCL line.
2. SDA (Serial Data) and SCL (Serial Clock) connections. The SDA line is a shared line where master and slave devices both produce data on. The SCL line is where the master device produces clock transitions.
3. Push-Pull allows devices to be put in high or low states. Open-Drain only allows devices to be set in low state.
4. I<sup>2</sup>C is a half-duplex bus which means devices must take turns transmitting. A restart condition is useful when transactions are chained, preventing devices to steal transmission time before the master can start again.
5. Control Register 2 (I2C\_CR2)
6. You'd write them in [7:1] in the middle of the SADD bit-field.
7. One thing that was confusing was the push-pull and open-drain differences and why it matters why you can only put devices in low state, and if that's the case with open-drain, why not always use push-pull which has more capability?