**Project plan tasks**

**Redo current code better**

* Implement function to drive the robot at a linear velocity and angular velocity
* Get encoders working so I can calibrate the range of speed for each motor

**Implement Odometry**

* Use wheel encoders to calculate changes in heading and x,y position
* Use magnetometer for heading
* Use accelerometer and gyro also for odometry
* Take a weighted average of each method to calculate the position (will require a lot of testing to get good)

**Implement PID control**

* Use PID to control the velocities sent to the drive function depending on current distance

**Test to see how accurate the odometry/ PID is for navigation**

* Setup a small grid area and feed the robot a series of positions and see how close it gets each time (should be done concurrently with other tasks)

**Setup wireless communication via Xbee**

* Should be able to send positions to the Arduino via the xbee and write a script to read positions from the CSV and send them to the robot

**Setup RPI to Run script and command the robots**

**Fix/rework/rethink localization beacons**