Jonathan Tang

	Expected hours	Hours consumed	Status	
Create a task diagram	1	1	In progress	
Create cutting points list	1	1	In progress	
Create the maze and holes	5	5	In progress	Planned function: displaySizeInLCD(). Designed a struct for the maze, walls, and holes. And Init function to generate the maze. Week 5: Implemented a struct maze, walls, and holes, figuring out how to display them on LCD and check for collision
Create a marble that is control by the physics task	5	5	completed	The marble moves according to to the properly
Gyro task to control marble movement	5	5	In progress	The marble moves according to to the properly
Button task to enable physics disrupter.	5		Not yet started	
Physics task that controls of velocity, energy, recharging rate	8		Not yet started	
Debugging, unit testing, etc	14	2	In progress	Developed testing for marble movement

Unit tests:

Cutting points:

1. Ball movement checks: The gyro, button, physics, all affects the movement behavior of the drone. Therefore, we want to add unit tests for each task specifically to check whether the task interacts with the drone properly.
   - In progress: Checked that the gyro is correctly collecting values. Later have to test the ball movement after implementing the physics

2. Energy consume and recharge task: The energy is constantly consumed and recharged. Careful checks for energy behavior is essential.
   - Still pending. Will start implementing energy once maze and ball is configured.

Functional tests:
1. Maze display test: The LCD displays the mazes and holes correctly.
2. Maze randomization test: Different mazes are displayed throughout tests.
3. Button test: The interrupt is correctly configured and the button works.
4. Gyro test: The gyro is correctly configured and the button works.
5. LCD Timer check test: The timer that refreshes LCD runs and updates the LCD periodically.
6. Energy mutex test: Energy data is initialized properly and the mutex protects the data.
7. Ball mutex test: ball data is initialized properly and the mutex protects the data.
8. Physics test: The gyro and buttons correctly interact with the ball with the correct physics.

Summary statement:
- In this week I have made a task plan, task diagram, created cutting points and also made a risk assessment table. I have not implemented any code yet.

- In week 2, I got some more clarifications on the project. Planned more functional tests and had a better vision on the project. I have not implemented any code yet.

- In week 3, I started working on the maze configuration and ball movement. For ball movement, the gyro driver is modified so it takes both x and y axis readings. Next step is to implement the physics to allow the ball to move. FOr maze configuration, I have made the idea of implementing a function to convert sizes to the LCD display. Will then work on configuring walls, holes and waypoints.

- In week 4, I mainly continued on the maze configuration. I spent time understanding the requirements of the maze, and how to generate the walls. I have created a struct for teh maze cells, walls, and holes. Also each cell had 4 pointers that connected the adjacent walls to keep track of the wall generation.

Summary effort:

- In week 1, I worked 2 hours on a task plan, task diagram, cutting points and a risk assessment table. Therefore I completed 4.5% (2/44) of the project. Expected hours for these completed tasks were 2 hours (2/2), which is 1.00x the rate I expected.

- In week 2, I worked 1 hour on functional test planning. Therefore I completed 6.8% (3/44) of the project. Expected hours for these completed tasks were 3 hours (1/3), which is 0.33x the rate I expected.

- In week 3, I worked 3 hours on the Gyro task to control ball movement, 1 hour on maze configuration. Therefore I completed 16% (7/44) of the project. Expected hours for these completed tasks were 6 hours (4/6), which is 0.67x the rate I expected.

- In week 4, I worked 2 hours on the maze configuration, 1 hour on marble initialization. Therefore I completed 22.7% (10/44) of the project. Expected hours for these completed tasks were 6 hours (3/6), which is 0.5x the rate I expected.

- In week 5, I worked 2 hours on creating a struct for maze, 6 hours on gyro movement, 1 hour on testing of the marble movement. Therefore I completed 43.2% (19/44) of the project. Expected hours for these completed tasks were 8 hours (9/8), which is 1.125x the rate I expected.