Binnacle
Sprint Plan #1
April 7 2019

High Level Goals

Touching base with the computer engineering team, we found that their sensor package may not come as a whole. This presents more granularity needed for the sensor data points and injecting at a lower level than we expected. In addition, over spring break the team did a lot of research on Flutter and found better design patterns to implement to achieve a 60 fps mobile application. We would like to prove that these designs are working, and will implement UI components (developer options). From our release retrospective, we're implementing some of the changes we recommended to Travis that will improve our development workflow. Lastly, we're doing clean up on the algorithm test bed (finishing development on some loose ends), and porting it to a Flutter library.

Sprint 1

1. As a sailor, I would like to be able to know what sensors are currently active in the data model. (Total task points: 37)
    a. UML diagram of one sensor module **(2)**
    b. Convert to StreamBuilders **(5)**
    c. Test coverage 80%+ for the refactor **(13)**
        i. SensorServices
            1. OpenWeather wind
        ii. SensorModule
        iii. WidgetTests
            1. Compass
            2. Binnacle
            3. BinnacleHeading
    d. Travis CI upgrades from release 1 retrospective **(2) (Will)**
        i. Pull requests require Travis passing to be merged
        ii. Snapshot testing so Travis generates goldens based on the MacOS
    e. SensorModule prioritization of SensorServices **(5) (Casey)**
    f. UML diagram of the project (3)
    g. UML diagram of the algorithm, sensor, and UI relationships (5)
    h. Remove dead code **(2)**

2. As a user, I would like the app to be visually cohesive so I am not context switching between the different components. (Total task points: 12)
    a. Unified theme in context in relation to colors and fonts (2) (Daniel)
    b. Arrow painter UI update based on Product Owner's mockup (2) (Daniel)
    c. List angle UI (5)

      d. Raw data panel of boat speed, wind speed, list angle (3)

3. As a sailor, I want to be able to choose which sensors are currently feeding data into the algorithm so that I have more control over the algorithm. (Total task points: 8)
   a. Drawer UI (3) (Donovan)
   b. Picker UIs for the list of SensorModules (showing the current active service) (3)
   c. SensorModule pickers change the current active service (2)

4. As a researcher, I would like the algorithm to be in its own codebase so I can focus on what the algorithm does. (Total task points: 3)
   a. Create empty Flutter library repository (1)
   b. Include algorithm library in the core application (2)

5. As a researcher, I would like the python testbed to use velocity made good charts for a more accurate path. (Total task points: 3)
   a. Include the VMG helper code into the testbed algorithm (3) (Nick)

Roles

Product Owner: Daniel Richards
Scrum Master: Casey Hillers
Developers: William Walker, Donovan Rost, Nicholas Kalscheuer