**Product Increment:**

Tagged in bitbucket as Sprint\_4\_Product\_Increment

**Test results and analysis:**

* Task 1: Testing Plot band titles
  + Unit Testing
    - Test Cases:
      * All Data in green
        + Expected Result: LOW RISK plot band always shows up. MODERATE RISK plot band shows up if .15 is on y-axis

**PASS**

* + - * All Data in yellow
        + Expected Result: All 3 plot bands show up.

**PASS**

* + - * All Data in red
        + Expected Result: HIGH RISK plot band always shows up. MODERATE RISK plot band shows up if .2 is on the y-axis

**PASS**

* + - * All Data in green/yellow
        + Expected Result: LOW and MODERATE RISK plot bands always show up. HIGH RISK displays when .2 is on the y-axis

**PASS**

* + - * All Data in yellow/red
        + Expected Result: MODERATE and HIGH RISK ploy bands always show up. LOW RISK displays when .15 is on the y-axis

**PASS**

* + - * All Data in red/green
        + Expected Result: All 3 plot bands show up

**PASS**

* Task 2: Resizing page bug
  + Black-Box testing
    - Test Cases
      * Resizing window
      * Minimize/Maximize
        + Expected result: Points do not change colors

**PASS**

* Task 3: Time zone labels – NOAA gives predictions only in every 3 hours starting with UTC 0
  + Unit testing
    - Test Cases
      * Try a zip code in the following time zones (Daylight savings time)
        + Pacific time zone

Expected Result: Get first available prediction and the times should be 5pm, 8pm, 11pm, 2am, 5am, 8am, 11am, 2pm. Should also display the appropriate time zone.

**PASS**

* + - * + Central time zone

Expected Result: Get first available prediction and the times should be 10pm, 1am, 4am, 7am, 10am, 1pm, 4pm, 7pm

**PASS**

* + - * + Mountain time zone

Expected Result: Get the first available prediction and the times should be 11pm, 2am, 5am, 8am, 11am, 2pm, 5pm, 8pm

**PASS**

* + - * + Eastern time zone

Expected Result: Get the first available prediction and the times should be 11pm, 2am, 5am, 8am, 11am, 2pm, 5pm, 8pm

**PASS**

* + - * + Alaska time zone

Expected Result: Get first available prediction and the times should be 10pm, 1am, 4am, 7am, 10am, 1pm, 4pm, 7pm

**PASS**

* + - * + Hawaii-Aleutian time zone

Expected Result: Get first available prediction and the times should be 5pm, 8pm, 11pm, 2am, 5am, 8am, 11am, 2pm

**PASS**

* + - * + Atlantic time zone

Expected Result: Get the first available prediction and the times should be midnight, 3am, 6am, 9am, noon, 3pm, 6pm, 9pm

**PASS**

* + - * + Chamorro time zone

Expected Result: Get first available prediction and the times should be 10pm, 1am, 4am, 7am, 10am, 1pm, 4pm, 7pm

**PASS**

* Task 4: Changing wind/concrete temperatures in std and metric. And task 5 Boundary for changing concrete temp/ wind speed in metric./std
  + Unit testing
    - Test Cases
      * Change wind in std
      * Change wind in metric
      * Change concrete in std
      * Change concrete in metric
      * Change concrete and wind in std
      * Change concrete and wind in metric
        + The appropriate std/metric labels should appear

**PASS**

* + - * + Correct concrete temp/ evaporation rate/ wind speed/ and point on graph is updated correctly

**PASS**

* + - * + Boundary for concrete temp (std) 40 – 99 degrees F

**PASS**

* + - * + Boundary for wind speed (std) is 0-35 mph

**PASS**

* + - * + Boundary for concrete temp (metric) is 4.4-37.2

**PASS**

* + - * + Boundary for wind speed (metric) is 0 – 56.3

**PASS**

* + - * + Make sure wind/concrete isn’t empty

**PASS**

* Task 6 – Validate create account form
  + Name
    - Not required
  + Email
    - **PASS**
  + Password
    - **PASS**
* Task 7; Validated the user class for the user table in the database
  + Test Cases:
    - addUser()
      * **PASS**
    - deleteUser()
      * **PASS**
    - changeName()
      * **PASS**
    - changeEmail()
      * **PASS**
    - changePasword()
      * **PASS**
    - isUserAdmin()
      * **PASS**
* Anomalies
  + **NONE**

***ASSUMPTION: We are assuming the library that gets city, state, and time zone from the zip code is correct***

**Sprint Review**

* Monday March 16th 4:30 – 5:30
* Daniel Grote, Zach Smith, Bryan Allen, Mark Grinter
* Discussion:
  + We demoed what was accomplished in sprint 4.
  + Discussed the following topics
    - Time zones
    - Concrete Temperature prediction formula
    - Change concrete temp/ wind speed for a point
    - City, state added to title
    - Validation
    - Hot/Cold warnings
    - Resetting data
    - Adding new series
    - Design of projects page
    - Server Access
    - Bounds of concrete temp and wind
    - Limit on number of projects/notifications – No
    - Notifications and how often to get updated weather predictions
    - Shared Projects and project owners
    - Notes
* Decisions:
  + Clients want the following changes/additions:
    - No upper bound on concrete temperature prediction formula.
    - Tooltips on buttons
    - Reset Button only appears after a series is added
    - Concrete temp then wind speed (inside and outside checkboxes)
      * This will change the entire graph and will be a separate series with a different line style
      * Series will be named by what the user changes (ex: if user enters 80 degrees F for the series will be called 80 degrees F)
    - Instead of displaying the time zone just say local time of zip code
    - Add sticky notes
    - Add legend because there will be different series now
    - Check once a day for change in state notifications
    - Projects get deleted after a month
      * If a project is passed the original week it will have an option to re-updated the graph for the next week.
    - No limits on how many projects/notifications users can make.
      * Note: We will have a limit but it will be a large number
* Follow up actions:
  + We will create notifications for various zip codes and see how much the prediction changes. Then let mark know and he will decide how to proceed with how the notifications will work.

**Sprint Retrospective**

* Everything is going well. Client had no complaints.

**Overview**

We were a bit behind in starting this sprint so we added in more functionality than what was originally planned to catch up.

* **Other notes:**
  + Time zones were a lot more complicated than we thought it was going to be
  + We finally got access to the server. **This will be the top priority for next sprint**
  + Dynamically assign height of graph. **ADD TO NEXT SPRINT**
  + Add metric button to graph page. **ADD TO NEXT SPRINT**

**Update Sprint Backlog:**

See Backlog.xlsx, Tab: Sp4

**Create Sprint Burndown Charts:**

See Burndown.xlsx, Tab: Sp4

**Create Sprint Effort and Velocity Charts:**

See “Effort and Velocity.xlsx”, Tab: Sp4

**Update Product Effort Charts:**

See “Effort and Velocity.xlsx”, Tab: Product

**Update Product Backlog**

See Backlog.xlsx, Tab: Current