**Product Increment:**

Tagged in bitbucket as sprint\_2\_product\_increment

**Test results and analysis:**

* **T**ask 1: Add colors to graph background
  + Unit testing
    - Test Cases:
      * 1) If all data is in green section
        + Expected Result: Green and part of the yellow section visible
      * 2) If all data is in yellow section
        + Expected Result: Yellow section appears with part of green and red sections visible
      * 3) If all data is in red section
        + Expected Result: Red section appears with part of yellow section visible
      * 4) If all data is in yellow and green section
        + Expected Result: Yellow and green section displayed with part of red section visible
      * 5) If all data is in yellow and red section
        + Expected Result: Yellow and red section displayed with part of green section visible
      * 6) If all data in in green and red section
        + Expected Result: All colors are displayed
      * 7) If all data is in all 3 colors
        + Expected Result: See test case 6
      * 8) If data has negative numbers
        + Expected Result: See test case 1
* Task 2: Add option for inputting concrete temp
  + Unit Testing different concrete temp boundary of -50 to 150 (in fahrenheit)
    - Test Cases:
      * If left blank
        + Expected Result: concrete temp set to air temp
      * >150
        + Expected Result: Doesn’t Work
      * <-50
        + Expected Result: Doesn’t Work
      * Characters
        + Expected Result: Doesn’t Work
      * -50
        + Expected Result: Works
      * 150
        + Expected Result: Work
      * 75
        + Expected Result: Works
      * 12.401234153
        + Expected Results: Doesn’t work
* Task 3: Show weather variables when hovering over a point and add metric conversions
  + - See integration testing
* Task 4: Improve input and output UI
  + Test to see if UI looks the same on IE, Firefox, and Chrome.
  + Date is correctly formatted Month-Day-Hour
* Task 5: Validation of zip code
  + Unit Testing
    - Test Cases:
      * Leave blank
        + Expected Result: Doesn’t Work
      * 6 digits long – 123456
        + Expected Result: Doesn’t Work
      * 4 digits long – 1234
        + Expected Result: Doesn’t Work
      * Characters
        + Expected Result: Doesn’t Work
      * Invalid 5 digit zip code – 11111
        + Expected Result: Submits but page reloads because of invalid zip.
      * 620.34
        + Expected Result: Doesn’t Work
      * 6203.4
        + Expected Result: Doesn’t Work
      * 62,034
        + Expected Result: Doesn’t Work
* Integration testing
  + Input form, calculation, metric, graph output
    - If concrete temp is blank it needs to bet set to air temperature
    - Metric calculations displayed on graph output when desired
    - Weather variables are correctly displayed in tooltip
* Performance testing
  + Test to see that the graph takes less than 5 seconds to load

**Update Sprint Backlog:**

See Backlog.xlsx, Tab: Sp2

**Create Sprint Burndown Charts:**

See Burndown.xlsx, Tab: Sp2

**Create Sprint Effort and Velocity Charts:**

See “Effort and Velocity.xlsx”, Tab: Sp2

**Update Product Effort Charts:**

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

**Update Product Backlog**

See Backlog.xlsx, Tab: Current