Weekly Progress Report (Week 6)

Team No. 510

Anthony Vo, Evan Gurry, Mateus Aurelio, Palak Tyagi

Sprint Review:

Status of the current sprint

Note: Use Item No. for non-user story work like infrastructure set-up.

User Story ID/ Item No.	Story Points	User Story Link	Owner	Status	Remarks
ITEM002-US010	3	n/a	Anthony, Mateus	On Hold (to remove from next planning)	We will look into some popular text-to-speech services to assist in our screen reader. This will help us understand how our data and button elements need to be structured. Update: Will remove from sprint planning until initial implementation is done.
ITEM003-US009	2	n/a	Anthony, Mateus, Palak	On Hold (to remove from next planning)	We will look into color schemes and specific accessibility designs that will help the visually impaired. Update: Low priority, this is something we will consider as we design the application, but we can remove from sprint planning for now. Some research into this was done during prototyping.
ITEM004-US006	5	n/a	Anthony, Mateus, Evan	In Progress	We will look into mathematical formula packages for TypeScript that we can use. IP: We began looking into math formula parsing tools as they will become extremely relevant with how we store our cell data and aim to calculate cell values “on-demand”.
ITEM001-US001	3	n/a	Anthony, Mateus, Palak, Evan	In Progress	We will create a data structure to hold our cell data. IP: Cell data structure has been created as a 2D array. Considering transition to

					a hashmap implementation for faster data lookup, or a DAG implementation for better interconnection between cells. **Highest Priority**
ITEM002-US001	…	n/a	Anthony, Mateus, Evan	In Progress	We will explore the React library to create components for the Options Pane and some buttons. IP: Began implementation of React components (FileHeader and OptionsPane). CellGrid on hold until data structure is finalized.
ITEM001-US002	…	n/a	Anthony, Mateus	In Progress	We will add the ability to insert a column to the cell data. IP: Working on in association with ITEM001-US001.
ITEM002-US002	…	n/a	…	On Hold	We will connect the ability to add a column to the “Add Column” button in the Options Pane. OH: Waiting for ITEM001-US002 to be complete.

Individual Contributions:

Please provide 1-2 sentences to describe the contributions of each team member during the past week.

Anthony Vo:

- Set up the codebase environment (using React, npm, Tailwind CSS) for project
- Created structure for defining React components without significant overhead
- Began creation of FileHeader and OptionsPane React components, defining the title bar and options bar at the top of the spreadsheet application.

Evan Gurry:

- Began setting up math libraries for the spreadsheet's formula functionality.
- Looked into ways to manage cell references and range references.

Mateus Aurelio:

- Began implementation of our planned data structures, classes, and interfaces in Typescript.
- Created functionality using 2D array storage for cells, began outlining a possible hashmap implementation.
- Defined Cells and Values and their basic functions.

Palak Tyagi:

- Began writing basic logic for the spreadsheet model creating rows and columns.
- Researched various implementation options for our data structures.

Sprint Retrospective:

Please answer the below questions in 1-2 sentences (use more if something really went wrong).

What went well in the previous sprint?

We were very successful in the initial structural setup of our application. The React side and the inner model both work well individually currently. Additionally, we are confident in our pace of the project and what we were able to accomplish this past week working on the backend and GUI (frontend) at the same time.

What obstacles were encountered in the previous sprint?

We had some difficulties in working together on the codebase simultaneously. We found that pair programming worked best, but will have to explore working on separate branches simultaneously more thoroughly.

What can we improve in the next sprint?

We will better organize who is going to tackle which part of the coding. With the frontend and backend feeling like two different components, it feels harder to separate the workload between four people.

Sprint Planning:

(NOTE: Everything from the past sprint is still "In Progress", so we continue these tickets.)

User Story ID/ Item No.	Story Points	User Story Link	Owner	Status	Remarks
ITEM004-US006	5	n/a	Anthony, Mateus, Evan	In Progress	We will look into mathematical formula packages for TypeScript that we can use. Goal: Select one specific parser package and attempt to implement a basic function.
ITEM001-US001	3	n/a	Anthony, Mateus, Palak, Evan	In Progress	We will create a data structure to hold our cell data. Goal: Finalize on a data structure that will strike a balance between ease of implementation and performance. **Highest Priority**
ITEM002-US001	…	n/a	Anthony, Mateus, Evan	In Progress	We will explore the React library to create components for the Options Pane and some buttons. Goal: Finalize FileHeader and OptionsPane React components. Begin work on CellGrid React component.
ITEM001-US002	…	n/a	Anthony, Mateus	In Progress	We will add the ability to insert a column to the cell data. Goal: Implementation functional.
ITEM002-US002	…	n/a	…	On Hold	We will connect the ability to add a column to the "Add Column" button in the Options Pane. Goal: Implementation works in the backend (GUI not required yet).

Product Backlog:

User Story ID/ Item No.	Story Points	User Story Link	Owner	Status	Remarks
US001	13	https://github.com/neu-cs4530-fall2023/team510-project/issues/1	@everyone	Defined	As a user, I want to be able to create a blank spreadsheet so that I can start entering and storing data. Will have to break this down.
US002	5	https://github.com/neu-cs4530-fall2023/team510-project/issues/2	Palak, Evan	Defined	As a user, I want to be able to insert and delete rows and columns so that I can easily format my spreadsheet how I want it to look.
US003	5	https://github.com/neu-cs4530-fall2023/team510-project/issues/3	Mateus, Evan	Defined	As a user, I want to be able to insert, modify, and delete the contents of a cell (including its formula if used) so that I can enter and store data.
US004	3	https://github.com/neu-cs4530-fall2023/team510-project/issues/4	Mateus, Evan	Defined	As a data analyst, I want to be able to reference a single other cell and retrieve its value so that I can avoid adding redundant data.
US005	3	https://github.com/neu-cs4530-fall2023/team510-project/issues/5	Mateus, Evan, Anthony	Defined	As a data analyst, I want to be able to use range expansion (potentially in combination with formulas) to reference multiple cells so that I can quickly reference a lot of data at once.
US006	8	https://github.com/neu-cs4530-fall2023/team510-project/issues/6	Anthony, Mateus	Defined	As a data analyst, I want to be able to use formulas that can calculate values using data stored in other cell(s) (this includes the concatenation and arithmetic operators) so that I can quickly

					analyze the data I have.
US007	8	https://github.com/neu-cs4530-fall2023/team510-project/issues/7	Palak, Evan	Defined	As a user, I want to be informed when I make an illegal action (error handling) and tell me what I did wrong so that I can fix it without much hassle.
US008	8	https://github.com/neu-cs4530-fall2023/team510-project/issues/8	Palak, Anthony	Defined	As a user, I want to be able to save and open my spreadsheet so that I can continue editing it later with all the data intact.
US009	5	https://github.com/neu-cs4530-fall2023/team510-project/issues/9	Mateus, Anthony, Palak	Defined	As a visually impaired user, I want to be able to theme my spreadsheet application so that it is easier to view at night (dark mode), and for my weaker eyes (high contrast).
US010	5	https://github.com/neu-cs4530-fall2023/team510-project/issues/10	Anthony	Defined	As a visually impaired user, I want to be able to use this application using a screen reader application so that I am still able to use the software despite being visually impaired.
ITEM002-US010	3	n/a	Anthony, Mateus	On Hold	We will look into some popular text-to-speech services to assist in our screen reader.
ITEM003-US009	2	n/a	Anthony, Mateus, Palak	On Hold	We will look into color schemes and specific accessibility designs that will help the visually impaired.
ITEM004-US006	5	n/a	Evan	On Hold	We will look into mathematical formula packages for TypeScript that we can use.

General Scrum/Agile related guidelines:

- Spend the initial sprint to capture the work you foresee from now until the end of the project and create placeholder User Stories (with status defined) or Items for them (assigning tentative estimates if possible). These should all be part of the Product Backlog.
- Lifecycle (status) of User Stories:
    - Defined: User story exists for work item but several details are missing and is not ready to start development. (Exists in the Product backlog)
    - Ready: User Story has all the details (estimate, acceptance criteria, etc.) filled in and there is sufficient detail to start development. (Exists in Product backlog and can be pulled into a sprint)
    - In-progress: Some developer is working on the story (should have an explicit owner)
    - QAT (Quality Assurance Testing): (optional) Development complete and is being tested.
    - Complete: The development and testing for the story is complete and it is ready to demo.
    - Accepted: The demo is satisfactory and meets the acceptance criteria. Signifies successful implementation.
- User stories can move back and forth as part of development and testing.
- You can have multiple stories as “Defined” in the Product backlog and you can fill in information and move them to “Ready” as you have more information.
- However, a story must be “Ready” before you can include it in a sprint plan.