

CS307 Sprint 2 Planning Document Team 16

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Sprint Overview

During this sprint we hope to improve the functionality of our application. Previous sprint had too many tasks and many were not finished. We hope to finish any incomplete functionalities as well as build upon our base structure to improve user experience. By the end of our sprint, we are aiming to give a deliverable webapp that a client can intuitively navigate and use with little to no errors and be able to create a basic document.

Scrum Master: Ancil Trent

Meeting Plan: Tuesday/Thursday @ 10:15 AM, and a weekend meeting at variable times.

Risks and Challenges

- Implementing saving and restoring state for our drag and drop create page is essential to moving forward.
- Maintaining users being logged in across all pages is also important for functionality and may require significant refactoring (auth0).
- Some pages should have a user be logged in in order to access them.
- Security for password needs to be upgraded to be encoded and hashed (auth0).
- Downloading the files to disk for a client to run presents a lot of research and difficulty.
- Automated tests require increased research for using Jest
- CD Pipeline requires increased research for using Docker and Jenkins

User Story #1
As a user, I would like my private information such as my password stored in a secure fashion.

#	Description	Test	Estimated Time	Owner
1	Encrypt user data and store it in the database.	Unit Test: Using an existing account, confirm that the password stored in the database is not a plaintext match for user password.	3 hours	Charlie
2	Edit page access should only be granted for pages owned by the currently logged in user.	Requesting page data from the database for a different user should result in an access denied response.	4 hours	Charlie
3	Create login functionality connected with Google. User can log in with email or Google		2 hours	Charlie

Total Estimated Time: 9 hours

- Given that the user has signed up to Dragon Drop, when their password information is stored in the database, then it should be stored in an encrypted format.
- Given that the user has logged in, when they go to their user page, then it should be populated with pages using authentication.
- Given that the user is attempting to access page editing, when it is for a page they do not own, then the request should be denied.

As a user, I would like to stay logged in as I navigate through the Dragon Drop application so that I do not have to log in all the time.

#	Description	Test	Estimated Time	Owner
1	Remove login/sign up from home page when user is logged in	Log in, goto homepage, and check if login and signup buttons are visible	1 hour	Mark
2	Maintain logged in state upon freely traversing from edit, user page, home page, and settings	Log in, go to edit page, then go back to user page. Confirm user was logged in on all 3 pages.	4 hours	Mark
3	Maintain logged in state upon creating new tab	Log in, open a new tab on dragon drop homepage. Confirm that user is logged into second tab as well.	2 hours	Mark

Total Estimated Time: 7 hours

- Given that the user is logged in, when the user goes to a different page, the user should maintain their login status.
- Given that the user has already logged in, when they go to the homepage, then they should not see the login/signup buttons.
- Given that the user has logged in, when they create a new tab of the site, then they will be logged in on that tab as well.

As a user, I would like to be able to add a header and a footer to my page so that my pages all have a consistent top and bottom.

#	Description	Test	Estimated Time	Owner
1	Modify existing header to have more content and be more visually appealing.		2 hour	Sarah
2	Create a universal footer UI with GitHub link, copyright date, and more.		2 hours	Sarah
3	Header and footer should be displayed on the homepage, user page, and the settings page.		1 hour	Sarah

Total Estimated Time: 5 hours

- Given the user is at any page besides the edit page, when they scroll to the bottom and the top of the page, then they should be able to see the footer.
- Given the user is at any page besides the edit page, when they scroll to the bottom and the top of the page, then they should be able to see the header.
- Given the user uses any button or link within the header or footer, when they click the link / button, then they should be taken to the appropriate content.

As a user, I would like a site settings page to access and change account settings and site visuals so that I can customize my user experience.

#	Description	Test	Estimated Time	Owner
1	Create a button on the user page that redirects to the settings page	Click button and check routing	1 hour	Lucy
2	Create a new settings page with options to change email, password, and account privacy		6 hours	Lucy
3	Create a way to change the email and password associated with user account	Confirm that database stores new values for the password and email	2 hours	Lucy
4	Create ability to change my entire profile from private to public and vice versa		1 hour	Lucy
5	Make it so that privatized users do not show up in the user search directory, and attempting to access their user page using a URL is denied.	Search for public/private users from another login, confirm that their information does/doesn't show	2 hours	Lucy

Total Estimated Time: 11 hours

- Given that the account settings page has been implemented, a settings button will show up on the Navbar at the top of the screen which will take the user to the account settings page if clicked
- Given that the user enters new values for their email or password, the database will store the new input values
- Given that the user has switched their profile from public to private, their profile and pages will not be available to others through search

As a user, I would like to view a user page so that I can access my already existing and create new pages.

#	Description	Test	Estimated Time	Owner
1	Create a "Create new page" button that directs users to the project editing page to a blank template	Confirm that the database stores a new blank project and the UI is redirected to editing the new project	1 hour	Sarah
2	Make existing pages clickable, so that users can be directed to the project editing page with the existing template	Unit test: create a saved page object and store into a test account in db. Retrieve page from db and check that the object matches object in test function	4 hours	Sarah
3	Have page previews on the user page that display a snapshot of that page.	Confirm that page snapshots match up with the actual contents of that page.	3 hours	Sarah

Total Estimated Time: 8 hours

- Given that the user is logged in, when the user is on the user page, then they will see a "Create new page" button.
- Given that the user is on the user page, when the user clicks "Create new page" button, then they should be redirected to the edit page.
- Given that the user is on the user page, when the user clicks on an existing page, then the user should be redirected to the edit page with the existing progress.
- Given that the user clicks "Create new page" button, when the user is redirected to the edit page, then a new blank project should be created in the database.
- Given that the user is on their user page with edited pages, when they look at the thumbnail of an edited page, then that thumbnail should match up with its actual contents.

User Story #6
As a user, I would like to be able to make my profile private or public.

#	Description	Test	Estimated Time	Owner
1	On connection to a user page, determine if the client is allowed to view based on profile type.	Unit test: Confirm that when a request is made to access a private profile, the search is denied.	1 hour	Charlie
2	Make other users' projects' privacy setting not alterable	Confirm when a user searches for a different user's pages, the toggle button for privacy setting is diabled	3 hours	Charlie
3	Make other users' pages not editable	Confirm when a user searches for a different user's pages, the found user's portfolios are not clickable	3 hours	Charlie

Total Estimated Time:7 hours

- Given that the profile privacy option has been implemented, when the user looks at their user page, then they will see a button to switch to private or public.
- Given that the profile privacy option is connected to the database, when the user changes their privacy setting, then the portfolio privacy type is updated in the database properly.
- When a user searches another user, only public portfolios will show.
- Given that public page display has been implemented, when a client views a user page they do not own, then they will only be able to view pages without editing, deleting, or creating them.

As a user, I would like to be able to download my created pages so that I can upload them to my own website.

#	Description	Test	Estimated Time	Owner
1	Convert pages to HTML and CSS		8 hours	Mark
2	Create a menu for a page including download, rename, duplicate.	Confirm that hitting rename, duplicate, download should execute functionality	3 hours	Mark
3	As a package the download contains all of the HTML/CSS code necessary to run the portfolio properly on their own website.	Confirm that downloading page files downloads all of the correct code	6 hours	Mark

Total Estimated Time: 17 hours

- Given that the download button has been implemented correctly, when users access page options on their user page, then they see the option to download the page.
- Given that the download button is responsive, when the user presses the download button, then they see options for how they want to download the page.
- Given that the download options are all implemented, when the user chooses a download option, then our server provides them with the proper file.
- Given that the web package system has been implemented correctly, when the user downloads a web package, then they can host it on their own site with all of the functionality it had on ours.

As a user, I would like to interact with a clear UI that has a dedicated component section, component editing panel, and building window.

#	Description	Test	Estimated Time	Owner
1	Create right sidebar for component editing tools		3 hours	Brandon
2	Create a left sidebar for adding new components		3 hours	Brandon
3	Make each component selectable. When it is selected, its properties can be changed.	Confirm that component can be edited	2 hours	Brandon
4	Make sidebars collapsible		5 hours	Brandon

Total Estimated Time: 13 hours

- Given that the user is on the create page, when they go to the left sidebar, then they should be able to create new components.
- Given that the user has components on the page, when they select a component, then the right sidebar is opened.
- Given that the user clicks on a component, when the right sidebar opens, then the building window should resize.
- Given that the user opens the create page, when they do, then they will see three separate distinct sections on the editor interface?

As a user, I would like to be able to scroll through the building window so I can create full pages

#	Description	Test	Estimated Time	Owner
1	Scrollbar appears on the right of the building window	Can see the scrollbar	2 hours	Sarah
2	Can scroll through the window	Clicking and dragging the scrollbar will move the window view	7 hours	Sarah

Total Estimated Time: 9 hrs

- Given that the user is on the editing page, when the user tries to scroll down, then the building window view scrolls down.
- Given that the user is on the editing page, when the user tries to scroll down, then the building window view scrolls down.
- Given that the user is on the editing page, when the user scrolls, then the user should be able to still edit the page.

As a user, I would like to be able to customize colors of website elements using a color tool so I can personalize my website.

#	Description	Test	Estimated Time	Owner
1	The color tool should be added to the edit section when a component is selected.	Confirm on the UI that after selecting a component, a pop-up that contains the color tool shows up	1 hour	Sarah
2	Create a color wheel and when a color is selected along a color wheel, the component's color changes.	Confirm on the UI that after selecting a color from the color toop, the selected component will change to the correct color	3 hours	Sarah
3	Able to enter color values in both Hex and RGB		2 hours	Sarah
4	The color wheel should have a palette of recently used colors.	Confirm that recently used colors are present in the UI and are accurate to the recently used colors	3 hours	Sarah

Total Estimated Time: 9 hours

- Given that the color tool has been implemented, when the user selects a component, then they should see the color customization tool on the sidebar.
- Given that the color wheel has been implemented, when the user selects a component, then they can choose a new color from the color wheel on the sidebar.
- Given that the color tool is functional, when the user changes the color, then the color of the selected component changes to match.
- Given that the color tool has Hex values, when the user enters a hex value, the RGB values should change to match the hex value.

As a user, I would like to modify the style and functionality of buttons, text boxes, and shapes I add to my portfolio.

#	Description	Test	Estimated Time	Owner
1	Create a Button component that performs a function when it is clicked	Confirm on the UI that after clicking a Button component, the function is performed	3 hours	Brandon
2	Text can be modified by being bolded, underlined, font size, and font type.	Confirm that when a request is made to change the font style, the font style is changed.	3 hours	Lucy
3	Implement functionality that allows shapes to be a variety of basic shapes: triangles, squares, rectangles, circles, and stars.	Confirm that after a shape is added to the page it can be transformed into any of the other shape types.	2 hours	Brandon
4	Shapes can have functions that happen on click.	Confirm that when clicked shapes perform their onclick function.	3 hours	Brandon

Total Estimated Time: 11 hours

- Given that the Button component is implemented correctly, users should be able to create new Buttons that perform the correctly linked functionality.
- Given that text modification has been implemented, when a user attempts to change font size and type, then the text size or font type should change.
- Given that the Shapes component is implemented correctly, users should be able to create new Shapes that perform the correctly linked functionality.

User Story #12
As a user, I would like to have a movement tool so that I can relocate components.

#	Description	Test	Estimated Time	Owner
1	When a component is selected and dragged the component should begin moving.		8 hours	Ancil
2	When the keyboard arrow keys are pressed, the component moves a specified number of pixels to the corresponding direction	The test should simulate keyboard inputs and check the position before and after to make sure that the position aligns with the expected position.	4 hours	Ancil
3	The component menu should have a text box containing the current position data where new coordinates can be inputted manually	Entering new coordinates into the position input box will move the box to the correct location	2 hours	Ancil
4	When the user enters manual position numbers the component should move to that position.	The movement function should be applied, and after the function is run, the position should be checked to ensure it is the same as the input.	3 hours	Ancil
5	When the user clicks the lock icon in the edit menu, the movement should disabled by any method.	After the lock is applied, movement functions should be applied and the position should be checked to ensure it does not change.	1 hour	Ancil

Total Estimated Time: 18 hours

- Given that the user selects a component when they hold down the mouse button and move the component, the component should follow their mouse
- Given that the user types in position coordinates, when the confirmation is pressed, then the component should instantly move itself to that location.

•	Given the user selects a component, when the user presses the arrow key, then the component should move a specified number of pixels.				

User Story #13
As a user, I would like to have a resizing tool so that I can resize components.

#	Description	Test	Estimated Time	Owner
1	When a component is selected, the user should be able to drag the edges/corners of the component to resize the component	Holding and dragging the edges/corners of the component will resize the component	8 hours	Ancil
2	The component menu should have a textbox containing the size data where new dimensions can be inputted manually	Entering new dimensions into the resize input box will resize the box to the correct position	2 hours	Ancil
3	When the user enters manual size numbers the component should resize to the specified height and width	Unit test: The resize function should be applied, and after the function is run, the size should be checked to ensure it is the same as the input.	2 hours	Ancil
4	Users should be able to maintain size ratio	After the ratio lock is applied, resize functions should be applied and the ratio should be checked to ensure it does not change.	1 hour	Ancil

Total Estimated Time: 13 hours

- Given that the resize tool has been implemented, when the user selects a component, then they should see the resizing tool on the border of the component.
- Given that the resize tool is functional, when the user drags on the edges/corners of a selected component, then the size of the component changes accordingly.
- Given that manual size changing has been implemented, when the user enters a manual size value, then the width and height of the component should change properly.
- Given that the aspect ratio lock has been implemented, when the user locks the aspect ratio, then the size can only be changed in a way that maintains the aspect ratio.

As a user, I would like to have an undo button so that I can revert to previous versions. As a user, I would like to have a redo button so that I can undo my undos.

#	Description	Test	Estimated Time	Owner
1	Implement undo to revert one change at a time	Undo should only revert one change after multiple changes have been made	4 hours	Lucy
2	Implement redo to restore one change at a time	Redo should only restore one change after multiple undos have been made	4 hours	Lucy
3	Have node tree store one edit such as insert, change text, change color, etc. at a time		4 hours	Lucy
4	Allow user to type ctrl-z on their keyboard to undo	Try to undo with ctrl-z	3 hours	Lucy
5	Allow user to type ctrl-y on their keyboard to redo	Try to redo with ctrl-y	1 hour	Lucy

Total Estimated Time: 16 hours

- Given that the user has made at least one edit, when the user hits the undo button, then they should have their actions reversed one by one.
- Given that the user has undone an action, when the user hits the redo button, then they should have their actions restored one by one.
- Given the user has not performed any actions, when the user hits the undo button, then nothing should occur.
- Given the user has not undone any actions, when the user hits the redo button, then nothing should occur.

As a user, I would like to upload my own images so I can personalize my page with my own creations.

#	Description	Test	Estimated Time	Owner
1	Once an image box has been clicked, the sidebar should give an option to upload your own image.		1 hour	Brandon
2	Pressing the upload image should prompt the user to select an image from their local storage.	The image linked within when uploading an image should match the data of the final image box.	3 hours	Brandon
3	Users can change the image content of existing image boxes and override previous data.		4 hours	Brandon

Total Estimated Time: 8 hours

- Given that the user has selected an image, when they go to the sidebar, then they should see an upload image button.
- Given that there is an upload image button, when the user presses it, then they should see a file explorer for their computer's file system.
- Given that image uploading works, when the user uploads an image, then it should replace the current image in the selected image box.

User Story #16
As a user, I would like to embed links so that viewers can be redirected to a different page.

#	Description	Test	Estimated Time	Owner
1	Right Clicking hypertext in a textbox component will redirect to a different page	Check that clicking the hypertext redirects to the correct page	2 hours	Mark
2	Right Clicking a shape with an embedded link will redirect to the linked page.	Check that clicking the shape redirects to the correct page	2 hours	Mark
3	Right Clicking an image with an embedded link will redirect to the linked page.	Check that clicking the image redirects to the correct page.	2 hours	Mark

Total Estimated Time: 6 hours

- Given that a textbox, shape, or image has been selected, when the user looks in the sidebar, then they should see a spot to add an embedded link.
- Given that embedded links have been implemented for text, when an embedded link has been added, then clicking the text should redirect to the linked page.
- Given that embedded links have been implemented for shapes, when an embedded link has been added, then clicking the shape will redirect to the linked page.
- Given that embedded links have been implemented for images, when an embedded link has been added, then clicking the image will redirect to the linked page.

As a user, I would like to be able to save my unfinished page so that I can return to work on the project later.

#	Description	Test	Estimated Time	Owner
1	Save the current document to an object	Check that the saved object is not null	5 hours	Charlie
2	Get pageID from the individual editing page	Confirm that the pageID is passed from the page component to the edit page component	3 hours	Charlie
3	Overwrite currently existing database content	Check the state of the database before and after a save request and ensure the save overwrites the previous data.	1 hours	Charlie

Total Estimated Time: 9 hours

- Given the save button has been implemented, when the user is on a page they are editing, then they will see a save button they can press.
- Given the save button is functional, when the user presses the save button, then the current page info is pushed to the database.
- Given the page info has been successfully saved, when the server finishes saving, then the user sees a confirmation that their page has been saved.

As a user, I would like to be able to log out so that I can keep my account private.

#	Description	Test	Estimated Time	Owner
1	Create log out button on user page		1 hour	Charlie
2	Log out should remove users logged in state from website	Confirm that the user cannot access their user page after logging out.	3 hours	Charlie
3	Log out should only be available when the user is logged in	Confirm that if the user is logged in, the log out is available	1 hour	Charlie

Total Estimated Time: 5 hours

- Given that the user has logged out, they can no longer access their projects on the projects page.
- Given that the user has logged out, when the user is redirected to the Dragon Drop home page, then the user can log in again.
- Given that the user has logged out, when they manually go to the user page url, then they do not have access to their project.

Backlog

Functional Requirements

Login

- 1. As a user, I would like to be able to create a new Dragon Drop account so that I can create my own websites.
- 2. As a user, I would like to log in to my Dragon Drop account so that I can create websites and access my saved projects.
- 3. As a user, I would like to be notified that I input my login credentials incorrectly so that I can re-input my login.
- 4. As a user, I would like to be able to send a password reset request to my email if I forget it so if I forget my password or lose it I can still login.
- 5. As a user, I would like to be able to log out so that I can keep my account private.

Project access

- 6. As a user, I would like to access instructions on how to use Dragon Drop tools so that I can learn how to navigate and create with Dragon Drop.
- 7. As a user, I would like to be able to view a homepage that provides a description of what ean be done on Dragon Drop so that I can have a place to orient myself as well as log-in and read information about the page.
- 8. As a user, I would like to be able to create multiple pages so that I can have different websites for different things.
- 9. As a user, I would like to be able to save my unfinished page so that I can return to work on the project later.
- 10. As a user, I would like to view my unfinished projects so that I can update or delete them.
- 11. As a user, I would like to be able to delete a website so that I can remove an unwanted project.
- 12. As a user, I would like to be prompted with a confirmation before deleting a project so that my project won't be deleted if I accidentally clicked delete.
- 13. As a user, I would like to be prompted when I want to create a new project but I reach the maximum number of projects per user so that I am directed to delete a project.
- 14. As a user, I would like to be able to view other user accounts to see what websites they've built using Dragon Drop so that I can take inspiration from other people's websites.
- 15. As a user, I would like to be able to make my account private or public so that other people can view my websites if they wish.
- 16. As a user, I would like to feature certain projects publicly on my profile so that other people can only see select projects.
- 17. As a user, I would like to share my project with other users so that they can view the website preview.

Page customization

- 18. As a user, I would like to drag a textbox onto my page and drop them so that I can customize the view of my website.
- 19. As a user, I would like to drag a button onto my page and drop them so that I can customize the view/functionality of my website.
- 20. As a user, I would like to drag an image/video onto my page and drop them so that I can customize the view of my website.
- 21. As a user, I would like to have an undo button so that I can revert to previous versions.
- 22. As a user, I would like to have a redo button so that I can undo my undos.
- 23. As a user, I would like to change the sizes of components so that components fit well within the page.
- 24. As a user, I would like to be able to have the page autosave so I don't lose progress suddenly.
- 25. As a user, I would like to have a wide selection of font types and sizes to use so that I can have a customized page.
- 26. As a user, I would like to upload my own media files so I can personalize my page with my own creations.
- 27. As a user, I would like a site settings page to access and change account settings and site visuals so that I can customize my user experience.
- 28. As a user, I would like to be able to customize colors of website elements using a color wheel so I can personalize my website.
- 29. As a user, I would like to be able to choose a template so that I can easily make a presentable website.
- 30. As a user, I would like to link to my LinkedIn so that I can easily have professional career information displayed on my page.
- 31. As a user, I would like to include Github functionality so that I can display projects of my own.
- 32. As a user, I would like to embed links so that viewers can be redirected to a different page.
- 33. As a user, I would like to be able to download my page so that I can host it on my own.
- 34. As a user, I would like to be able to disable and enable the editing mode to view the website so I may see how it looks as a final product.
- 35. As a user, I would like to be able to contact the creators so that I can get additional help.
- 36. As a user, I would like to be able to resize the window so that my website is compatible with various window sizes.
- 37. As a user, I would like to be able to navigate between my different pages so that I can have a multilevel website.
- 38. As a user, I would like to "favorite" certain tools and components so that I can access then faster
- 39. As a user, I would like to create shortcuts for tools and components to certain keys so that I can switch between tools easily and fast.

- 40. As a user, I would like to have a movement tool so that I can relocate components.
- 41. As a user, I would like to have a resizing tool so that I can resize components.
- 42. As a user, I would like to be able to add animations to elements so that my pages are dynamic and interesting.
- 43. As a user, I would like to be able to add a header and a footer to my page so that my pages all have a consistent top and bottom.
- 44. As a user, I would like to be able to choose different styles for each part of my page so that I can express myself creatively.
- 45. As a user, I would like to be able to create scripts that can be activated by parts of the web page such as buttons so that I can add functionality to my page.
- 46. As a user, I would like to be able to import my own HTML/CSS code so that I can modify it more easily.
- 47. As a user, I would like to be able to login using a pre-existing Google, Facebook, Github, or LinkedIn account so I don't have to create a new user account.
- 48. As a user, I would like to choose between a light and dark mode for Dragon Drop so that I can change the view to my preferences.
- 49. As a user, I would like to be able to choose from a variety of shapes for website features such as buttons so I can customize my website with different features.
- 50. As a user, I would like to be able to search for media through the website and add it directly so I can customize my website with media from the web.
- 51. As a user, I would like to be able to make a gallery in premade templates like slideshows or collages using uploaded photos so that I don't have to make it myself
- 52. As a user, I would like to see guidelines of when a component is lined up or centered on the webpage so that I can properly align elements on my page.

If time allows

- 53. If time allows: as a user, I would like to be able to use Dragon Drop on a variety of different platforms so that I can edit on any device.
- 54. If time allows: as a user, I would like to collaborate with other users on the same website so they can help me create my website.
- 55. If time allows: as a user, I would like to edit offline so that I can continue creating websites even without an internet connection
- 56. If time allows: as a user, I would like to sell ad spots on my website so that I can make money.
- 57. If time allows: as a user, I would like to be prompted with a spell checker if I spell something wrong so that I can fix my mistakes.

Non-Functional Requirements

Architecture

Dragon Drop will use a separate front end and back end with front end pulling from the back end using API requests. Both ends will be built in Javascript with the front end using React and the

backend using Node.js. Using a strong layer of separation simplifies the development process and makes it easier to create separate versions of Dragon Drop for different platforms. We'll use a database like MongoDB or MySQL to store user accounts / projects.

Security

Dragon Drop makes use of encryption and hashing to protect user accounts. All accounts must be made with an email to ensure password recovery capability. User accounts are by default private to prevent information being revealed to the public without the users consent. Users are only able to edit templates that they have created.

Performance

Dragon Drop can handle 500 simultaneous users at once. Each user can create a maximum of 5 projects. Should be able to load projects in less than 5 seconds. Dragon Drop should be able to stay up indefinitely with no impact to performance.

Usability

Dragon Drop will provide a clean and easy to use interface and support a variety of popular browsers so that users can create projects on their preferred browser. Additionally, we want the interface to support various screen sizes.