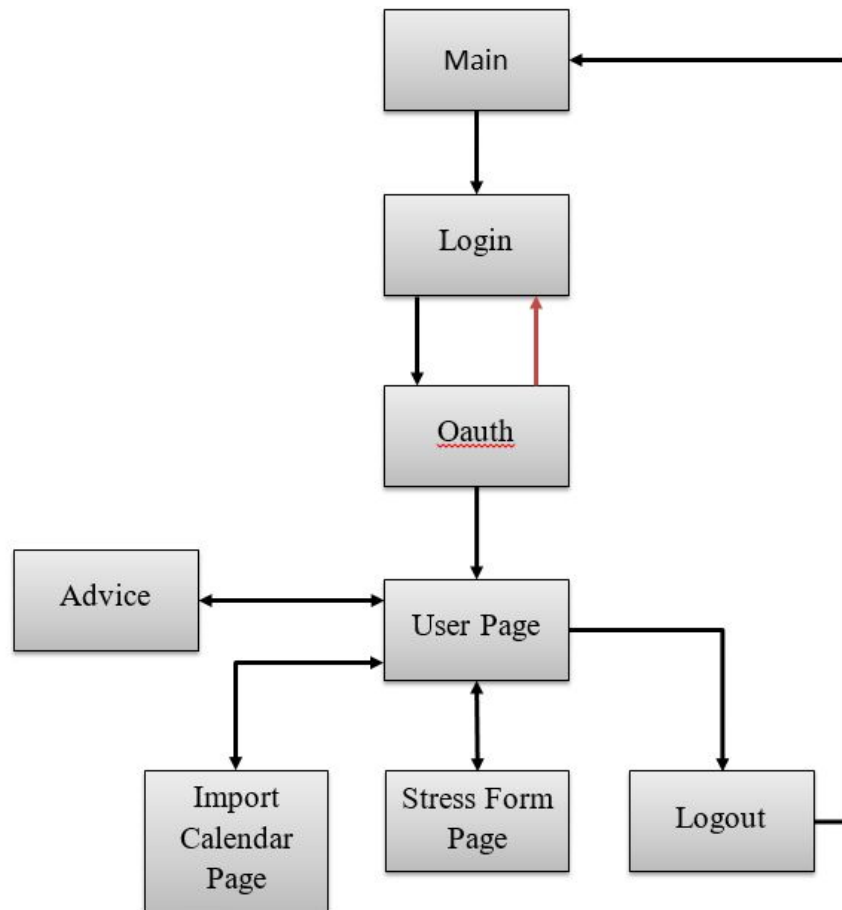


# Incremental and Regression Testing

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## Classification of Components

### Define All Components



- **Main:** The first component consists of launching and displaying the initial screen which consists of a navigation bar.
  - **Input:** GET
  - **Output:** Nav Bar
- **Login:** This component is navigated to from main and requires the user to select 'Sign in', which then redirects to google authentication.
  - **Input:** Onclick("Sign in")
  - **Output:** Redir to Oauth

- **Oauth:** This component requires the user to input google credentials, and an authentication token is generated. The database is checked to see if the user is new or existing. If the user is new, the user is added to the database.
  - **Input:** User Credentials
  - **Output:** Token or 302 Error with Redir to Login
- **User Page:** This component takes the authentication token, uses it to access the user's google calendar. The user's default Google calendar is displayed and options for importing calendars and rating stress is provided.
  - **Input:** Token
  - **Output:** Calendar, import button, rate stress button, logout button
- **Import Calendar Page:** The user is directed to this component when they select 'Import Calendars' from the User Page. This component allows the user to import different calendars from their Google account.
  - **Input:** List of calendars
  - **Output:** List of new calendar events with old calendar events
- **Stress Form Page:** The user is directed to this component when they select 'Rate Stress' from the User Page. This component allows the user to provide stress ratings to calendar events that currently do not have a stress rating.
  - **Input:** List of unrated calendar events for the week
  - **Output:** List of calendar events with stress ratings
- **Logout:** This component redirects the user back to the Main Module when the user selects 'Logout'.
  - **Input:** Onclick("Logout")
  - **Output:** Redir to Main Module
- **Advice:** Component provides advice to the user based on the current day of the week.
  - **Input:** Day of the week
  - **Output:** Helpful distressing message

## Form of Incremental Testing

We chose to implement **top-down testing** because it better overlapped with the program's design time frame. It was more efficient test as modules were created rather than create all the models prior to performing bottom-up testing. Because we are using top-down testing, stubs were created for each module to verify outputs.

# Incremental and Regression Testing

## Automation

Running *mvn test* will run all of the regression tests, and the Selenium tests can be loaded and executed with a browser plugin. There is currently some degree of manual browser setup with the Selenium incremental tests.

## Defect Log (5 most severe, 1 least severe)

<b>Module</b>	User Page
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### Incremental Testing

Defect No.	Description	Severity	How to Correct
1	Empty calendar causes TypeError	2	Checked if the calendar has data. If it doesn't just display an empty calendar
2	Recurring events only appear once	3	Modified the Google Calendar API call to include recurring events

<b>Module</b>	Logout
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### Incremental Testing

Defect No.	Description	Severity	How to Correct
1	Doesn't remove oauth token	1	Delete the cookie after logout

### Regression Testing

Defect No.	Description	Severity	How to Correct
1	Some new users' tables are not set up correctly and cannot log in.	5	If the Table doesn't exist, make it, or delete and replace any malformed tables. Added checked to prevent these malformations

<b>Module</b>	Stress Form Page
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### Incremental Testing

Defect No.	Description	Severity	How to Correct
1	If an event is recurring, it appears multiple times in the list of events to be rated	1	Using `lodash` removed all duplicate events by their title/summary
2	After rating events, the user is not immediately shown new event data, and must manually refresh the page	4	Call event fetching ajax call after successful stress rating ajax call.
3	Rating a recurring event results in 500 error stating, "One or more parameter values were invalid: Missing the key eventID in the item"	3	Typo in the Backend, just fixed that typo

<b>Module</b>	Import Calendar Page
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### Incremental Testing

Defect No.	Description	Severity	How to Correct
1	Not selecting a calendar from the drop down menu, even though one is shown, causes a 500 error because an empty string is sent to DB.	2	Verified that a calendar is actually selected
2	After importing a calendar, the user is not immediately shown new event data, and must manually refresh the page	2	Call event fetching ajax call after successful calendar add ajax call.

## Update Product Backlog

Product backlog updated, and table included here for your convenience.

Backlog Id	Functional Requirement	Hours	Status
1	As a new user, I would like to be able to create a new user. (only Google OAuth login, includes setup)	42 20	Completed sprint 1
2	As an existing user, I would like to be able to log into the app. (only Google OAuth Login)	3 5	Completed sprint 1
3	As an existing user, I would like to be able to import my Google Calendar.	6 10	Completed sprint 2
4	As an existing user, I would like to be able to rate how stressful or de-stressing certain events are on my calendar.	42 8	Completed sprint 2
5	As an existing user, I would like to see how stressful each day in my upcoming week will be.	14	Completed sprint 2
6	As an existing user, I would like to be able to see	8	Completed sprint 2

	suggestions popup to help me make my extremely stressful days less stressful. ( <del>aka. modify schedule</del> )		
7	As an existing user, I would like to be able to synchronize my calendars.	5	Completed sprint 2
8	As an existing user, I would like to be able to manually set my stress level of an event	3	Completed sprint 2
	<b>Total:</b>	<del>63</del> 73	