



Project: Java and Web Development



GitHub repository:



<https://github.com/ElleWest/MinimalistNotesProject>



Phase 2: Development Phase

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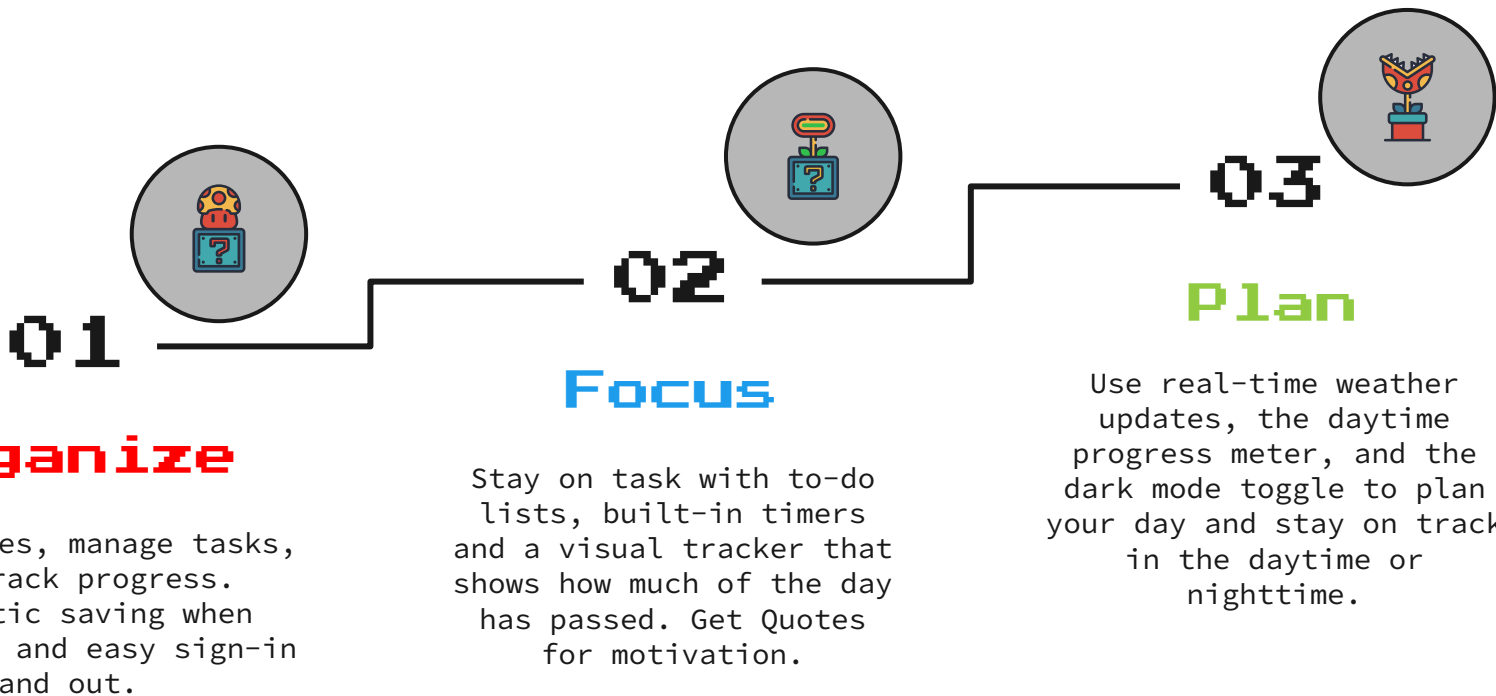
Student Nr: 9219438

Subject: DLBCSPJWD01



// Purpose of the Application

A minimalist daily sprint tool to organize, focus, and plan. One day at a time.



// Architecture // (Container Diagram)

The Minimalist Notes App is a browser-based web application hosted on GitHub Pages. The frontend is built using HTML, CSS, and JavaScript. The app has features like notes, to-do lists, a stopwatch, a day/time progress tracker, a weather widget, and a motivational quote button.

Users can sign in with Google authentication or manually with email and password. Once logged in, their data is saved and synced via the backend.

The backend software system was developed with Node.js and Express. It handles data processing and connects to a MongoDB Atlas NoSQL database for storage.

The app also integrates with three external APIs. 1. OpenWeatherMap for live weather data, 2. Google Authentication for secure sign-in, and 3. a quote API for daily inspiration.

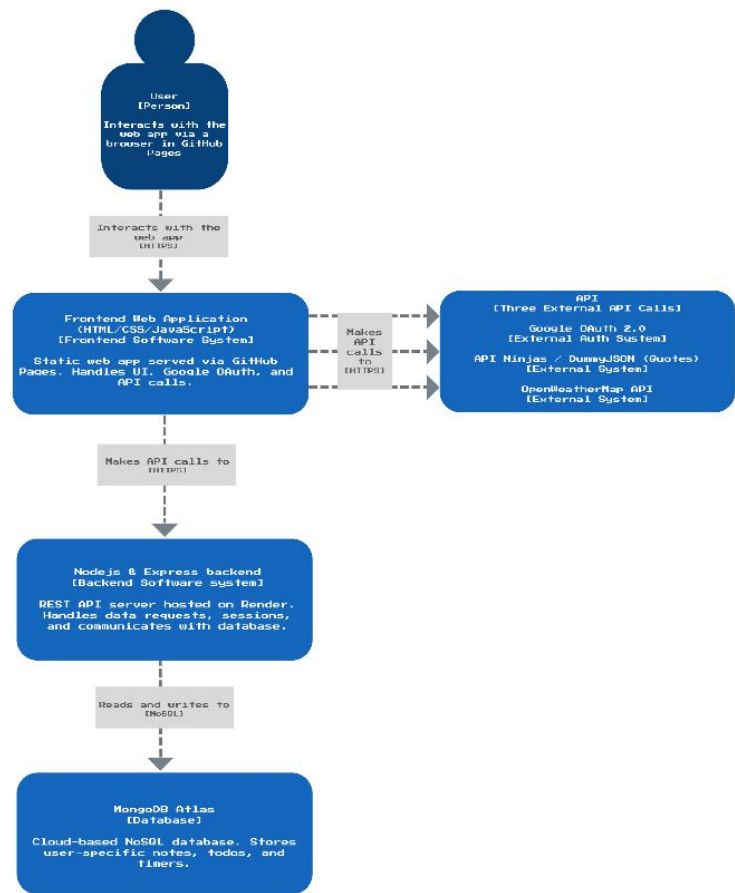


Figure 1: Architecture Container Diagram

Note: Diagram Created by author in Canva. Own representation.

// Technology Used

Web Application

Frontend

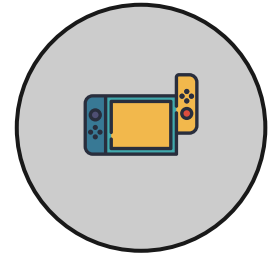


- HTML
- CSS
- JavaScript
- GitHub pages

Built with HTML, CSS, and JavaScript. The web app is hosted on GitHub Pages. Users can log in with Google or email/password. A Node.js and Express backend, hosted on Render, stores user data in MongoDB Atlas upon login.

The app also integrates with three external services: OpenWeatherMap for weather data, Google Authentication, and a quote API.

Backend



- [Node.js](#)
- Express
- MongoDB Atlas
- Render Hosting

//Changes to my proposal

Feature	Original	Final
Dark Mode	Not Proposed	Added for improved accessibility at night
Quotes	Not Proposed	Added for motivation & more dynamic elements
Visual Style	Retro MS-DOS style	Retro NES pixel style for aesthetics & interactivity
Weather	AQI,Temp & wind speed	Added humidity, rain chance and country
DayTime Flip Box	Simple Progress Bar	Flip-box effect for progress bar
Layout	Static fixed layout	Responsive layout with stacked sections
Sign In/Auth	Not Proposed	Dynamic log in
Backend/Database	Not Proposed	Store user content/data
Header Section	Not Proposed	Disappears when scrolling down for minimalism, contains sign in/dark mode & quote button/box

Light Mode

Light Mode button:

Switches to light mode setting.

Text Colors:

Text colors change to black.

Elements:

Elements such as buttons, lines and placeholder text change color.

Dark Mode

Dark Mode button:

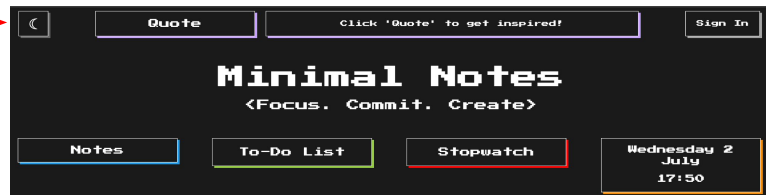
Switches to dark mode setting.

Text Colors:

Text colors change to white.

Elements:

Elements such as buttons, lines and placeholder text change color.



Sign In

Izel...



Sign in to ellewest.github.io with Google



Izelle van der Westhuizen

zelwest23@gmail.com

Sign in & Sign Out Button:

The user can sign in and save notes, to-do items and timer's to their account. They can log out and when they log in again the data is saved in their profile.

Sign in Modal:

The user can sign in via Google Authentication or manually sign in. New users will be automatically registered. Background is blurred when the modal pops up onto the screen.

Sign in Google Authentication:

The user can sign in via Google Authentication by selecting the Google Account they wish to sign in with. Once signed in a welcome message appears with the user's name. Please note there is a 60 second delay at first sign in as the backend is deploying on the free tier (render).

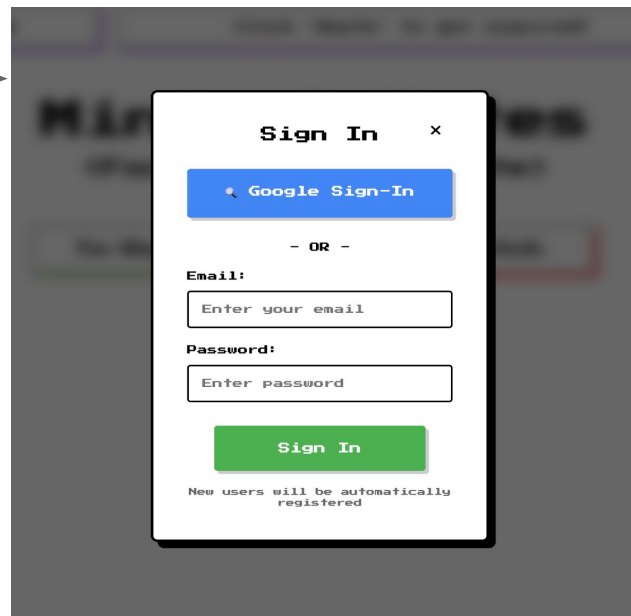
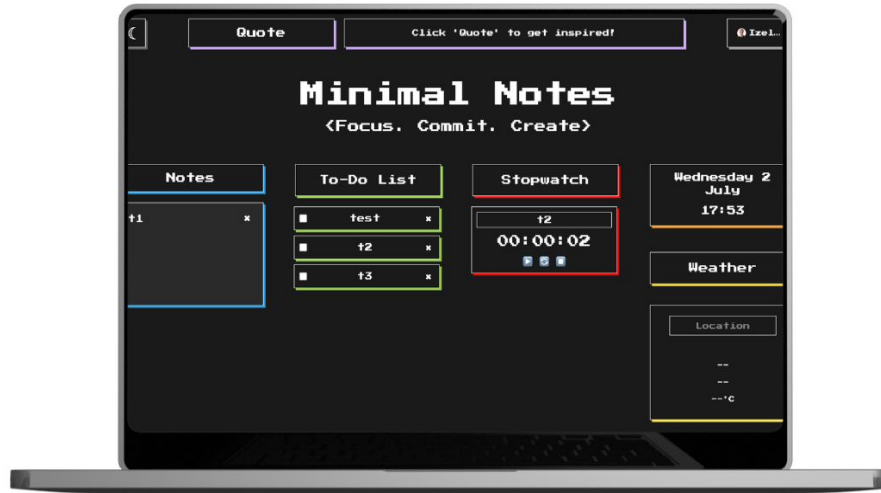
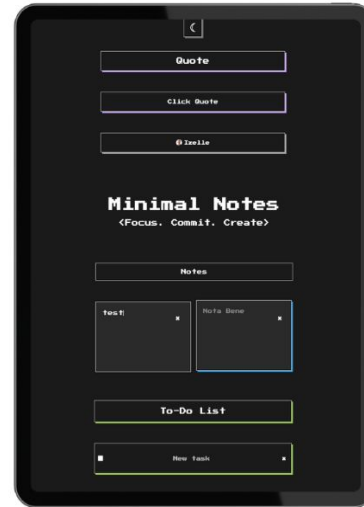


Figure 2: Responsive Design

RESPONSIVE DESIGN



Desktop



Tablet



Phone

Note: Image Created by author in Canva. Own representation.

Stopwatch button:
Creates a new stopwatch module

Text Area:
User can add a stopwatch title

Timer: Time is recorded in hours, minutes & seconds

Buttons:
User can start, pause, reset & delete a timer

Stopwatch

Screenshots

00:30:51



00:00:00



Notes

Nota Bene x

Notes button:
Creates a new notes module

x button:
User can delete a note with the x button

Text Area:
Latin placeholder text in the text area.

Once users select it, they can type notes.

To-Do list button:
Creates a new to-do list module

x button:
User can delete a to-do item with the x button

Text Area:
Placeholder text in the text area. Once users select it, they can type to-do items.

Check Box:
Once users select it, the item is crossed out & a checkmark is added.

To-Do List

☐ **Take Screenshots** x

☒ **Create PPT** x

Monday 16 June
09:27

Date & Time Flip Box:
Shows the current day & date
(day & month) based on the
user's location.

Day Left Widget:
Once the box is clicked, a bar
is shown with how much of the
day is left.

Day Left:
61%

Quote

Click 'Quote' to get inspired!

"A dream you dream alone is only a dream"

Quote Button & Quote Container Box:

The user clicks the button and a quote is pulled via api and appears in the quote box and scrolls through the box like a news ticker. The user can stop the quote from scrolling by clicking the quote box to pause the quote.

Text Area:

The user can type in their location and the system shows the place(city), country and degrees in Celsius.

Weather Button :

User can select the button and the weather widget expands showing more weather details.

Information:

Weather Information like AQI, Wind Speed, Chance of Rain and Humidity are shown in the expanded widget.

Information is pulled into the web app via API.

Weather

george

George
ZA
14° C

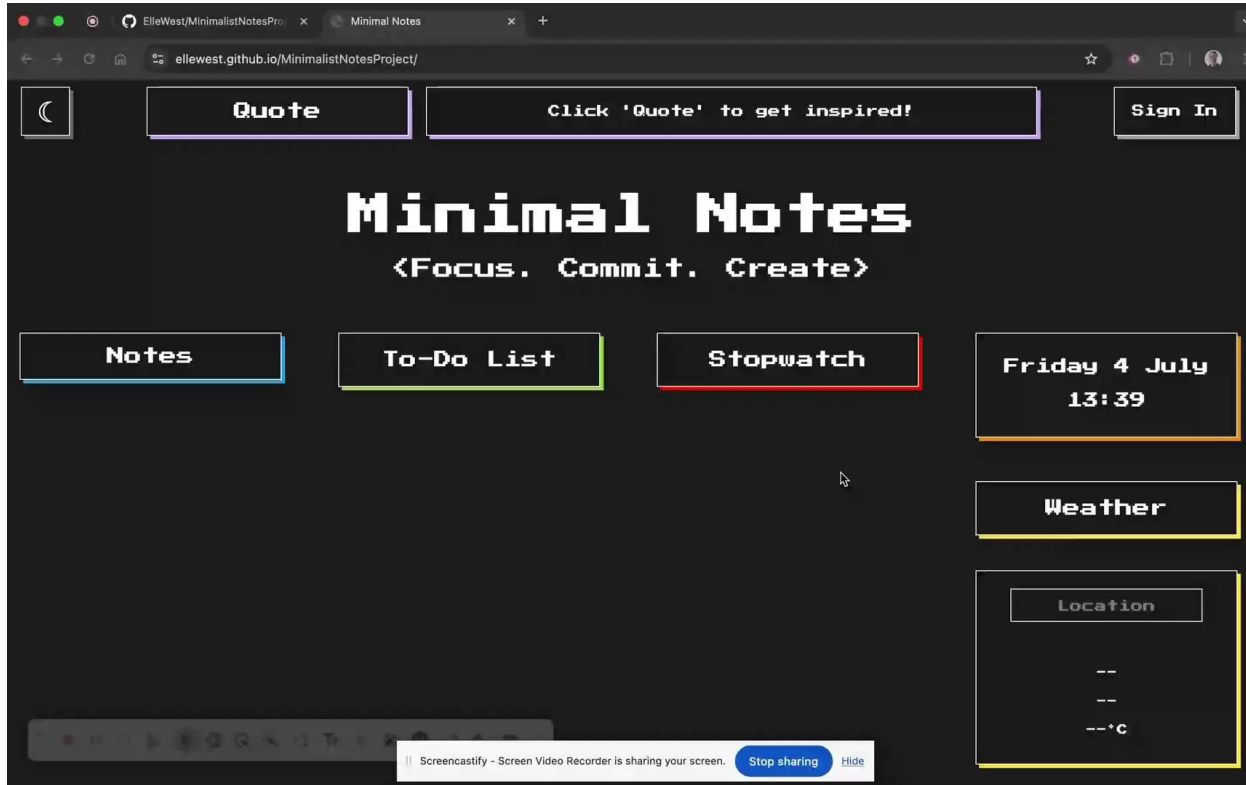
Weather

george

Location:	George
Country:	ZA
Temperature:	14° C
AQI:	2
Wind Speed:	3 km/h
Chance of Rain:	63%
Humidity:	74%

Screencastify Recording

Video is embedded below (just click the play button) or alternatively can be viewed at:
<https://drive.google.com/file/d/1Bsg1PFV-kjq0sNvCKMRpWJItP-LeDyzx/view?usp=sharing>



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List of Figures

Figure 1

Architecture Container Diagram. Created by author in Canva. Own Representation.

Figure 2

Responsive Design. Own Representation. Created by author in Canva.

Screenshots from <https://ellewest.github.io/MinimalistNotesProject/>.