

# SelfMemo 2.0

Information Architecture and Web Usability 2024

Group 4

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# Project Summary

- Created Reminder Service inspired by MemoToMe<sup>[1]</sup> and SelfMemo<sup>[2]</sup>.
- Resolved backend issues by using cron-job.org<sup>[3]</sup>.
- Demo-URL: <https://self-memo2.vercel.app>
- Repository of project: <https://github.com/selfmemo2/SelfMemo2>

[1] MemoToMe: <http://www.memotome.com/>

[2] SelfMemo: <https://selfmemo.netlify.app/>

**Memo to Me** The Largest Reference Directory. **TopReference.com** a comprehensive reference directory

## Add Yearly Reminder

Save Cancel

**Description** Please enter a brief description of this event:  
  
(E.g., Luke's Birthday, Dentist Appointment)

**Event Schedule** This event occurs every  on the  day of the month.  
 on the   of the month  
at :

Temporarily disable sending reminders for this event

**Final Reminder** Send the final reminder   before the event occurs.  
[Send the warning reminders to other email addresses, mobile phones, or pagers.](#)

**Warning Reminders** In addition, before sending the final reminder, send me  warning reminder(s)   apart.

**Additional Notes** Please enter any more details you want to be reminded of when this event occurs:

# MemoToMe

Memo to Me
m

**Keith Andrews's Reminders** (If you're not Keith Andrews, [click here to login](#)).

	Subject (click to edit)	Type	Next Event (click to view schedule)
<b>What to View</b>	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Tue, 4 Jul, 2023</a> 12:00 AM
<b>Create a New Reminder</b>	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Fri, 4 Aug, 2023</a> 12:00 AM
<b>NAME YOUR PRICE for the Platinum Edition! Click here to learn more.</b>	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Tue, 15 Aug, 2023</a> 12:00 AM
<b>My Settings</b>	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Fri, 22 Sep, 2023</a> 12:00 AM
<b>What's New?</b>	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Tue, 26 Sep, 2023</a> 12:00 AM
<b>About Memo To Me</b>	<input type="checkbox"/> [blurred]	One-Time	<a href="#">Thu, 5 Oct, 2023</a> 1:00 PM
<b>Delete Checked Reminders</b>	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Thu, 12 Oct, 2023</a> 12:00 AM
	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Fri, 1 Dec, 2023</a> 12:00 AM
	<input type="checkbox"/> [blurred]	One-Time	<a href="#">Fri, 1 Dec, 2023</a> 9:00 PM
	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Fri, 26 Jan, 2024</a> 12:00 AM
	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Tue, 6 Feb, 2024</a> 8:00 AM
	<input type="checkbox"/> [blurred]	Yearly	<a href="#">Wed, 1 May, 2024</a> 8:00 AM
	<input type="checkbox"/> [blurred]	One-Time	<a href="#">Tue, 31 Dec, 2024</a> 6:00 AM
	<input type="checkbox"/> [blurred]	One-Time	<a href="#">Sat, 1 Mar, 2025</a> 2:00 AM
	<input type="checkbox"/> [blurred]	One-Time	<a href="#">Sun, 15 Jun, 2025</a> 9:00 AM
	<input type="checkbox"/> [blurred]	One-Time	<a href="#">Fri, 1 Aug, 2025</a> 11:00 AM
	<input type="checkbox"/> [blurred]	(Disabled) One-Time	<a href="#">Wed, 1 Dec, 2021</a> 12:00 PM
	<input type="checkbox"/> [blurred]	(Disabled) One-Time	<a href="#">Sun, 3 Jul, 2022</a> 7:00 AM
	<input type="checkbox"/> [blurred]	(Disabled) One-Time	<a href="#">Fri, 15 Jul, 2022</a> 1:00 PM
	<input type="checkbox"/> [blurred]	(Disabled) One-Time	<a href="#">Wed, 1 Feb, 2023</a> 8:00 AM

# SelfMemo 2.0



## Create new reminder

Name

Description

Type

Daily



This event occurs daily at

00:00



and should be repeated on:

Monday  Tuesday  Wednesday  Thursday  Friday  Saturday  Sunday

# SelfMemo 2.0



Type

Daily

This event occurs daily at

09:05

and should be repeated on:

Monday  Tuesday  Wednesday  Thursday  Friday  Saturday  Sunday

Enable Warning Reminders

Additionally, before sending the final reminder, send me  reminder(s)   apart.

Is active

Create Reminder

# SelfMemo 2.0



## Reminders

Manage all of your reminders.

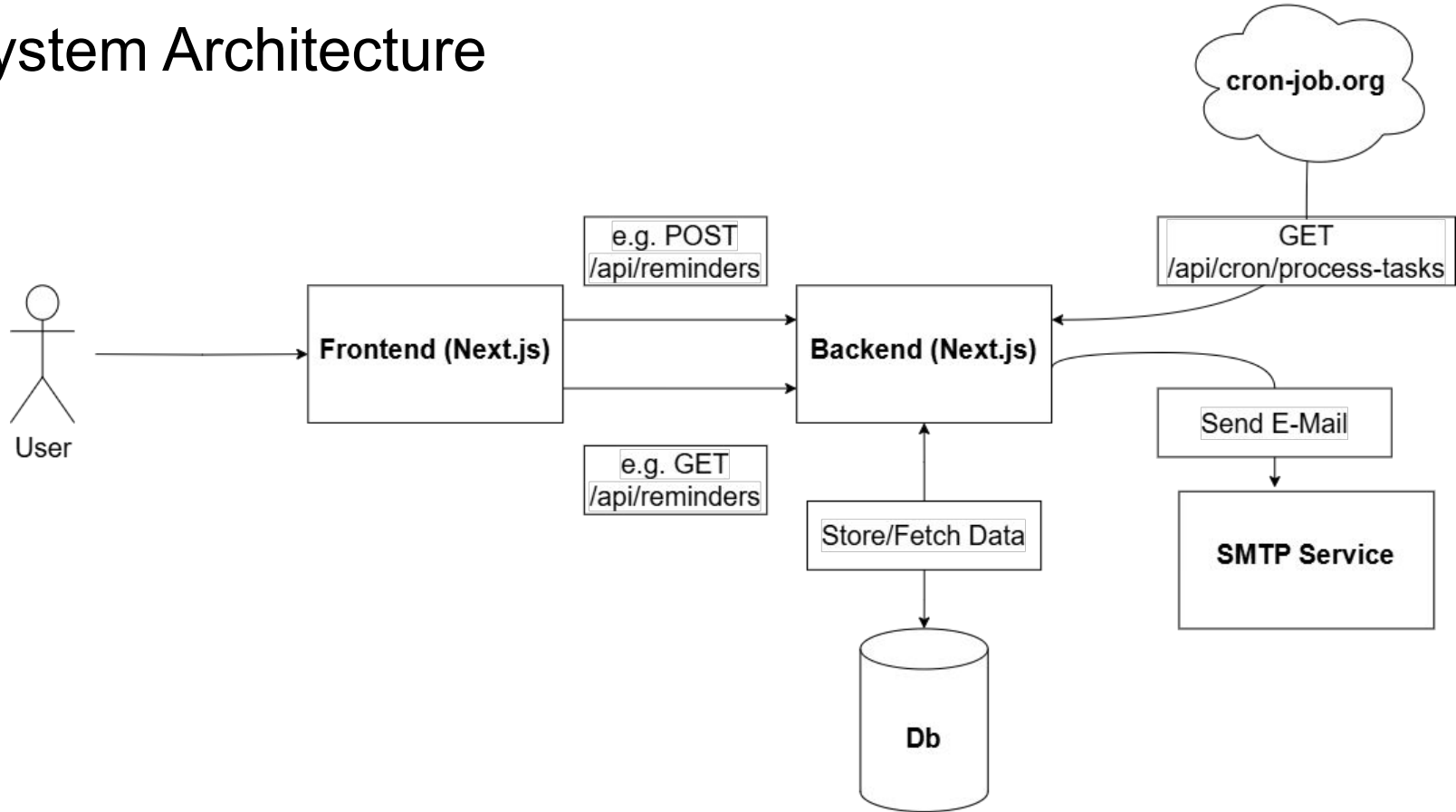
Create Reminder

<input type="checkbox"/> Name	Type	Status	
<input type="checkbox"/> IAWEB Progress Presentation	Daily	Active	<a href="#">Edit</a>
<input type="checkbox"/> IAWEB Final Presentation	One-time	Active	<a href="#">Edit</a>
<input type="checkbox"/> Test My Applications	N-weekly	Active	<a href="#">Edit</a>
<input type="checkbox"/> Somebodys Birthday	Yearly	Active	<a href="#">Edit</a>
<input type="checkbox"/> Renew Subscriptions For Server	N-yearly	Active	<a href="#">Edit</a>

Page 1 of 1 out of a total of 5 results



# System Architecture





# Full Tech Stack 1

- Frontend + Backend with Next.js<sup>[1]</sup>:
  - Simple and modern framework.
  - Based on React.js.
  - Uses TailwindCSS for styling.
- Cronjob Scheduling with cron-job.org<sup>[2]</sup>
  - Easy, reliable and free-to-use scheduling of API calls for reminders.

[1] Next.js: <https://nextjs.org/>

[2] cron-job.org: <https://cron-job.org/>

# Full Tech Stack 2

- Deployment with Vercel<sup>[1]</sup>
  - Free hosting provider
  - Serverless API routes
  - Automatic integration of database
- Database Hosting with Neon (Postgres)<sup>[2]</sup>
  - 190 computation hours
  - 10 Projects
  - 500 MB of Storage

[1] Vercel: <https://vercel.com/>

[2] Neon: <https://neon.tech/>

# Features of SelfMemo2

- Admins can create and manage users.
- User can create and manage reminder.
- Available Reminder-Types:
  - One-Time
  - Daily
  - Weekly
  - N-Weekly
  - Monthly
  - Yearly
  - N-Yearly

# Live Demo

<https://self-memo2.vercel.app>

[https://youtu.be/\\_f-c79lkzfo](https://youtu.be/_f-c79lkzfo)

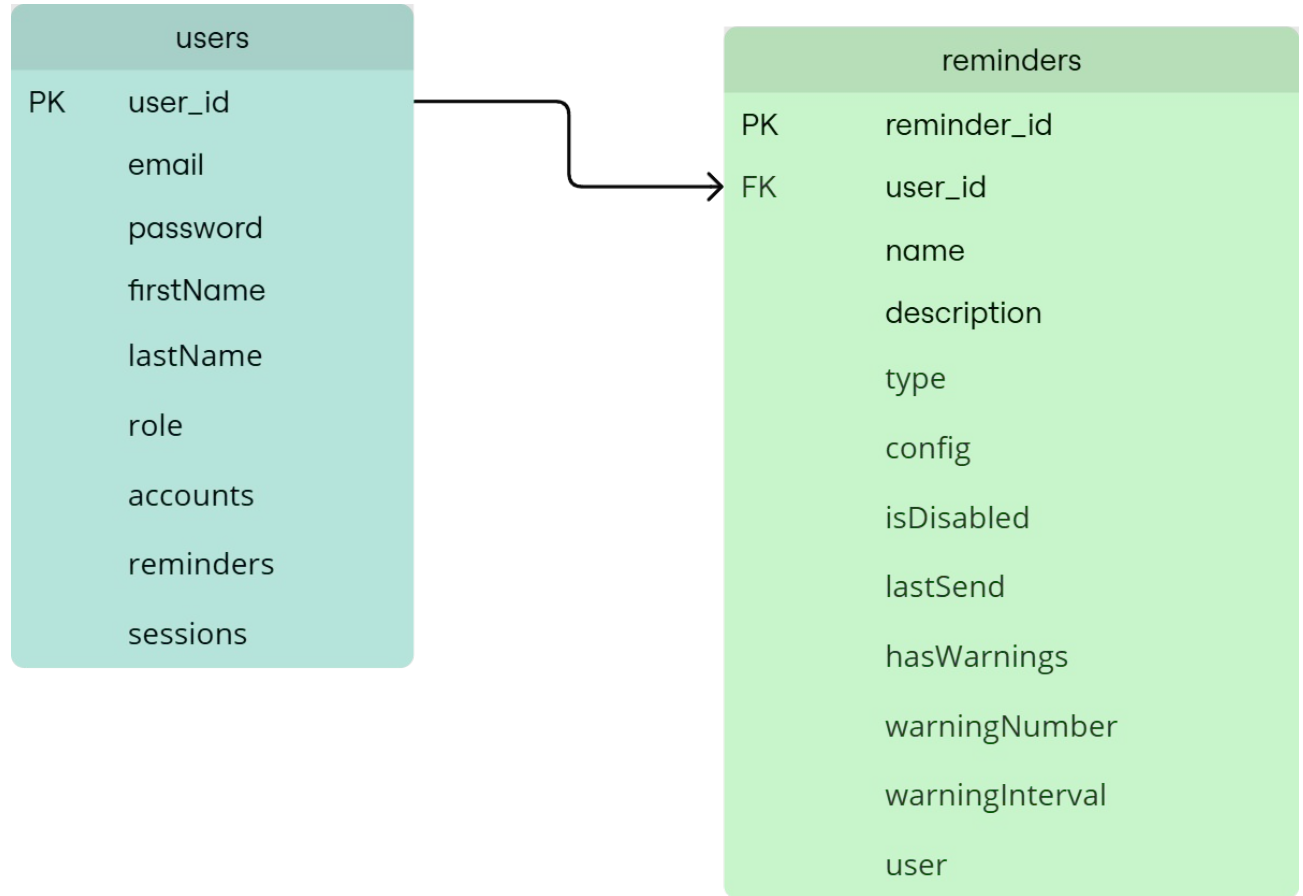
# New Features since SelfMemo v1

- Backend issue solved with cron-job.org.
- Multiple admins can be created.
- Warning Reminders are enabled.
- Editable template for email notifications.
- Page for reminder statistics.
- Disabling reminders.
- Users can change their credentials (Email, Name, Password).

# Prerequisites for Vercel-Deployment

- GitHub Account for accessing source code.
- Vercel Account for deploying globally.
- SMTP Account to send emails.
- cron-job.org Account to wake-up backend.
- Neon Account to host database and link to Vercel deployment.

# Database Schema



# Required Environment Variables

- NEXTAUTH\_URL= use domain or <http://localhost:3000>
- DATABASE\_URL= connection string from neon or database connection url
- AUTH\_SECRET= generate on <https://generate-secret.vercel.app/32>
- SMTP\_USER= yoursmtouser
- SMTP\_PASS= yoursmtppassword
- SMTP\_MAIL= yoursmtmail
- SMTP\_HOST: [mail.smtp2go.com](mailto:mail.smtp2go.com) or preferred smtp provider
- ADMIN\_EMAIL= youradmin@mail.ad
- ADMIN\_NAME= youradminname
- ADMIN\_PASSWORD= youradminpassword



# Setup Guide for SelfMemo2 with Vercel

- Fork the repository: <https://github.com/selfmemo2/SelfMemo2>
- Import git repository into Vercel.
- Setup Database on Neon: <https://neon.tech/docs/guides/nextjs>
- Set required environment variables and deploy.
- Send a request to create admin user: GET <https://your-vercel-url.com/api/seed>
- Setup cronjob pointing to: <https://your-vercel-url.com/api/reminders/trigger>

# Limitations

- No Sqlite databases with hosting on Vercel.<sup>[1]</sup>
- Extensive setup required.

[1] Compatibility of Vercel and Sqlite: <https://vercel.com/guides/is-sqlite-supported-in-vercel>

# Future Work

- Import and export for reminders (JSON, CSV etc).
- Visualize reminders in calendar.
- Make template for email notifications customizable by each user.
- Adapt reminders to current timezone of user.

Thank you for your attention!  
Questions?