Time Bridge
Event Planner

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Why Time Bridge?

Time Bridge is a simple, convenient and beautiful way to manage your daily events with an easy to use user interface. A cost efficient calendar with no bloat!

Tools We Used

Version Control	Git & Github
Database	PostgreSQL
Development With	VsCode, HTML, CSS, JS, NodeJs, Handlebars, Docker,Chai, Lucid
API's	axios@1.8.4,bcryptjs@2.4.3, body-parser@1.20.0, chai-http@4.4.0, chai@4.5.0, dotenv@16.5.0, express-handlebars@7.1.3, express-session@1.17.3, express@4.21.2, handlebars@4.7.8, ics@3.8.1, mocha@6.2.3, nodemailer@6.10.1, nodemon@2.0.21, npm-run-all@4.1.5,pg-promise@10.15.4

HTML, CSS, Javascript

- Styling with css
- Responsive & Accessible Design
- Modular Components
  - CSS and HTML are organized so that modals, tables, and forms are reusable components. This makes the code easier to maintain and extend
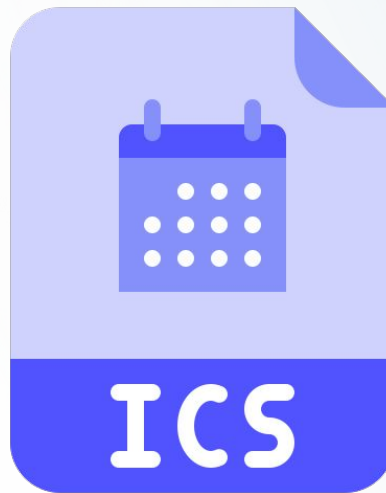
ICS

We chose the iCalendar (.ics) format because it's universally understood by Outlook, Google Calendar, Apple Calendar, and most other scheduling tools

Rather than copy & paste events, a single .ics file can bulk-import all of your appointments.

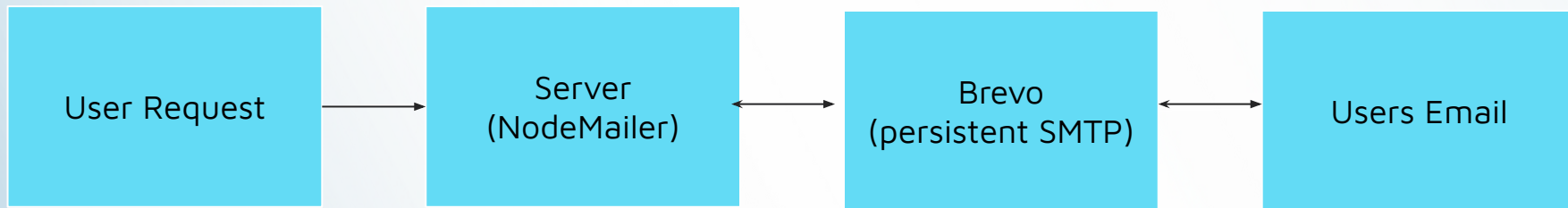Every time you click "Download ICS," we refetch the latest events and build a fresh file.

We query only the fields we needed such as eventName, EventDate, and eventDescription for the Logged in user. Build an array that ICS will understand

```
Example: {
  title:      evt.eventname,
  start: [YYYY, M, D, H, Min],
  description: evt.eventdescription
}
```
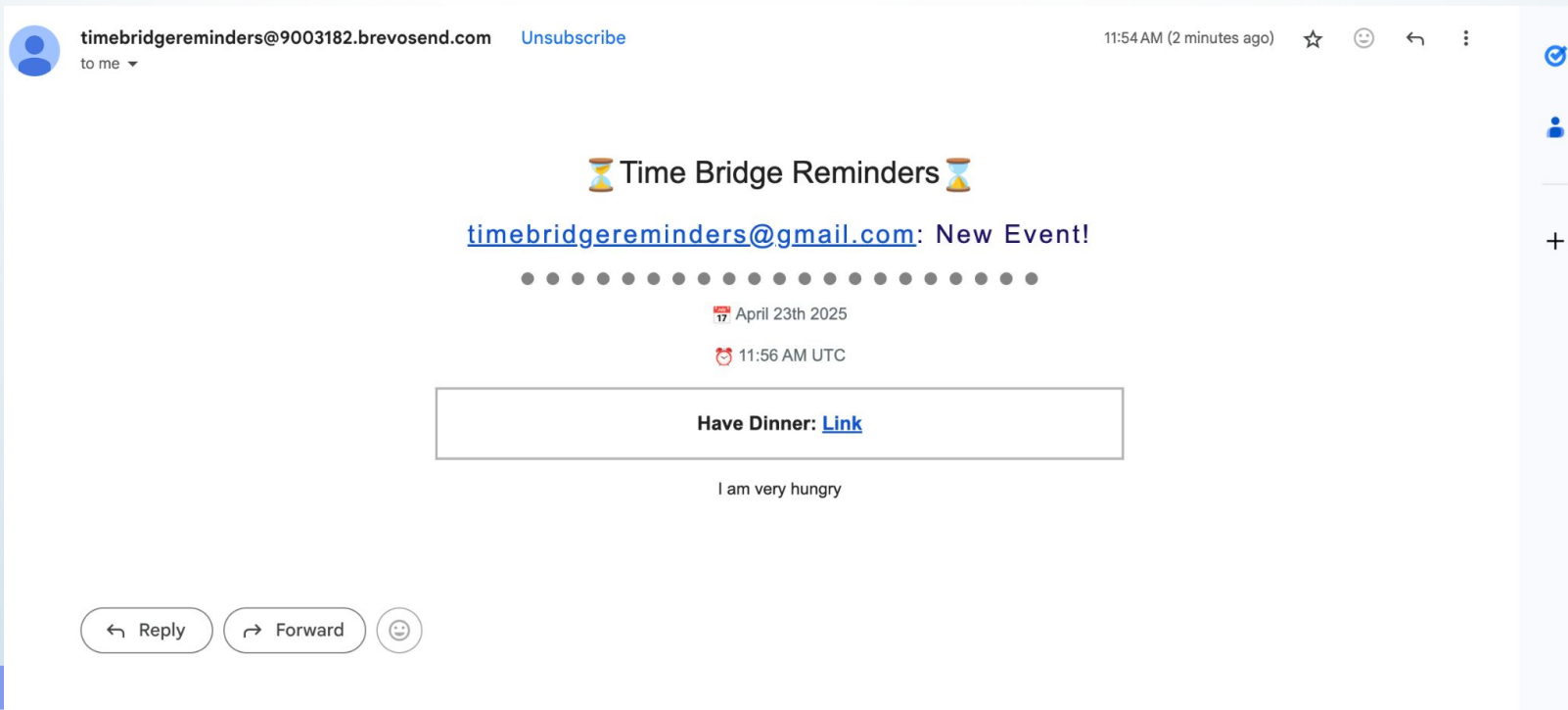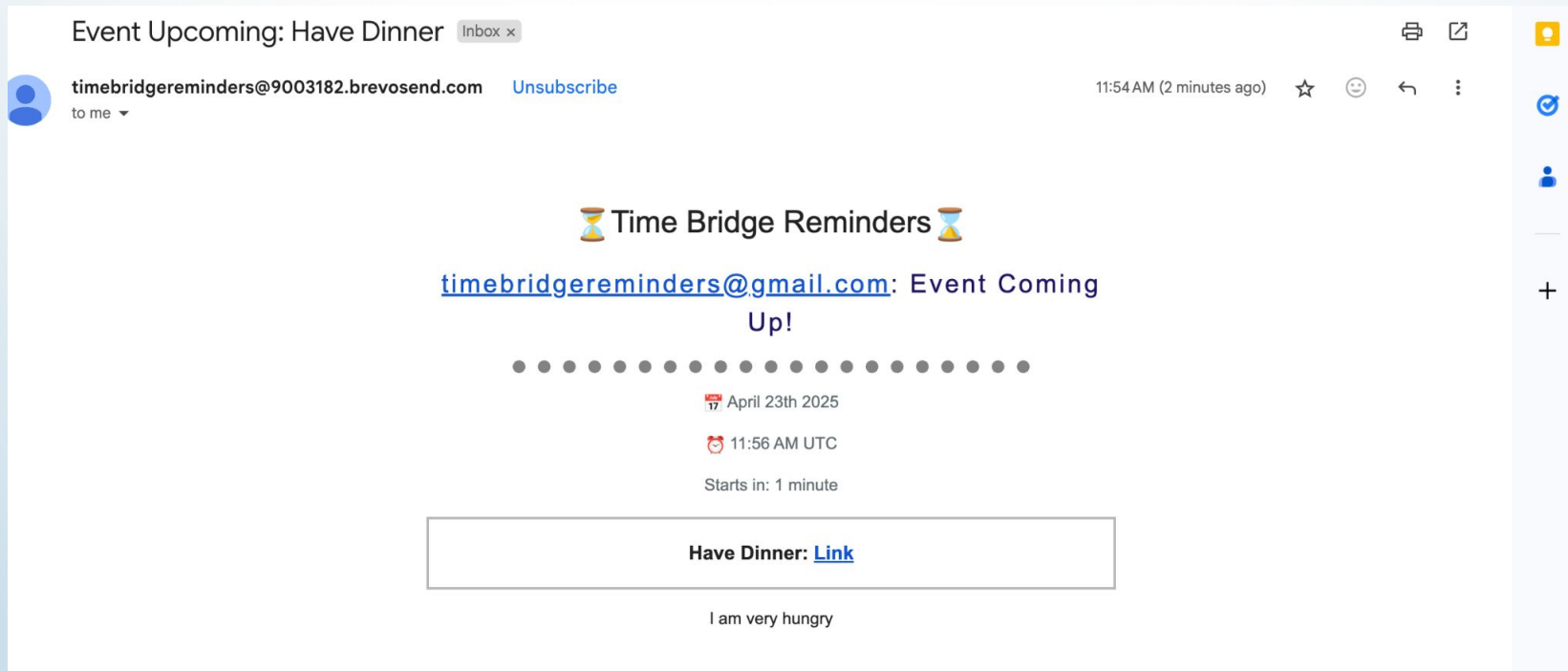
NodeMailer (package) & Brevo (API)

- Working with nodemailer package
  - Slightly difficult to set up
  - Worked very well with our emailing API Brevo!
    - Free! (Rate Limits)
  - Our project is able to send emails and reminders regarding upcoming events to all users
- Local Email & Email Template Module Dependency to simplify server interactions

| User Request | → | Server (NodeMailer) | ↔ | Brevo (persistent SMTP) | ↔ | Users Email |

Example Email (New Event)

timebridgereminders@9003182.brevosend.com   Unsubscribe   11:54 AM (2 minutes ago)

to me

⏳Time Bridge Reminders⏳

timebridgereminders@gmail.com: New Event!

● ●

📅 April 23th 2025

⏰ 11:56 AM UTC

Have Dinner: Link

I am very hungry

← Reply   → Forward

Example Email (Upcoming Event)

Event Upcoming: Have Dinner   Inbox ×

timebridgereminders@9003182.brevosend.com   Unsubscribe   11:54 AM (2 minutes ago)
to me

⌛Time Bridge Reminders⌛

timebridgereminders@gmail.com: Event Coming Up!

• •

📅 April 23th 2025

⏰ 11:56 AM UTC

Starts in: 1 minute

Have Dinner: **Link**

I am very hungry

PostgreSQL

Why PostgreSQL?

- Handles concurrent user access
- Scalable for future features (e.g., full-text search)

Key Features

- **ACID Compliance**: Ensures data integrity for event creation/updates
- **Optimized Queries**: JOINs for efficient data retrieval
- **Parameterized Statements**: Security - treating input as SQL commands

Relational Schema

- users, events, attendees
- Junction tables (users_to_events, events_to_attendees) for many-to-many relationships

Performance

- Indexes on critical fields (eventid, username)
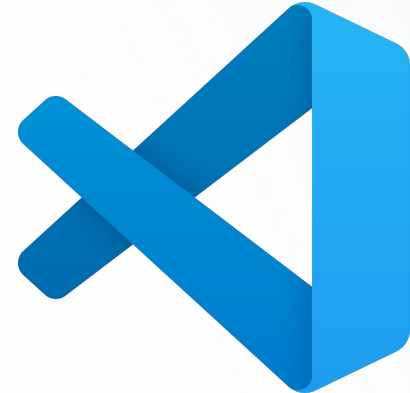- Batch operations for attendee management

Zoom & Messages

- Agile Methodology

- Made it easy to quickly contact everyone at once when we pushed/when others should pull.

- We would set up meetings and go through changes really easily at the spur of the moment with both of these tools together.

VSCode

- Primary tool utilized to test and write code
- Merging git branches
- Pushing to remote repository
- At times has issues, but still one of the most reliable tools for our application

Handlebars

- Logic-free HTML layouts with dynamic calendar sizing.
- Harmony between the developer and the designer
  - A teammate who is focused mainly on the front-end styling can tweak a template without having to change js routing or sql queries.
- Easy mobile view drop-down for the navbar.
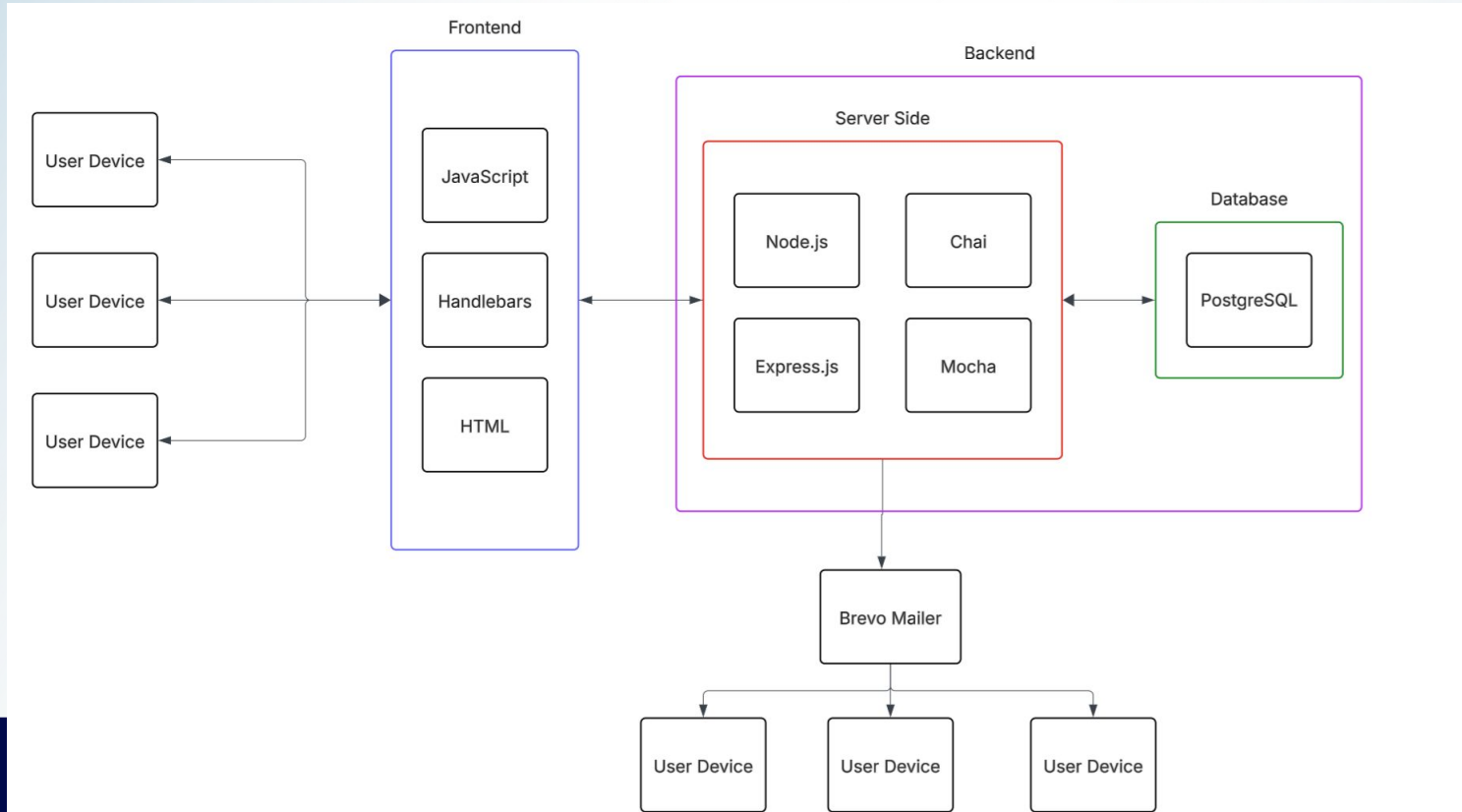- Including reused partials throughout the webpage was very helpful as well.

handlebars

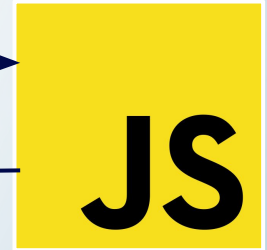It's a great tool and all around pretty easy to get the hang of! Rating is 4/5.

Architecture Diagram

Challenges (technical)

- Formatting Data between SQL and JS
  - Time and date initially separate
  - Later changed to single variable stored as 'TIMESTAMP'
  - Changed how inputs are received and data is processed
- Time Formatting Issues between mailing module and the user input
- Github merging issues
- Editing attendees from different accounts on the same event

Challenges (communication)

- Independent tasks
  - merge conflicts
  - multiple people working on the same features
  - features created that were effectively useless
- Time management
- Organization
  - Editing the core features of the database throughout development posed many challenges

Future Scope

- Create recurring events

- Extend further than email

- Functionality for accepting or declining by email

Welcome to TimeBridge Calendar!

Stay on top of your schedule with ease. Let's get you started.

Login   Register

Demo Video