Know Error Database — Project Tracker

Project Name: Project Tracker

Team Roles

- **Project Creator**: Initiates and manages the project

- **Task Completor**: Executes assigned tasks

- **Admin**: Takes control if the Project Creator leaves

General Errors and Solutions

1. Database Connection Error (PostgreSQL on Railway)

- **Error**:

  - `password authentication failed for user "postgres"`

  - `could not connect to server: Connection refused`

- **Cause**:

  - Incorrect credentials (username/password/host/port)

  - Wrong or missing `.env` configuration

  - Railway database instance is inactive or expired

  - SSL not properly handled

- **Solution**:

Double-check `.env` variables from Railway dashboard:

```
PGUSER=your_user
PGPASSWORD=your_password
PGHOST=your_host
PGPORT=your_port
PGDATABASE=your_database
DATABASE_URL=postgresql://your_user:your_password@your_host:your_port/
your_database
```

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2. CORS Policy Error (Frontend ↔ Backend)

- **Error**:
  ```
  Access to fetch at 'http://localhost:5173' from origin
  'http://localhost:5000 has been blocked by CORS policy
  ```

- **Cause**:
  Missing CORS headers in Express

Solution:

```
const cors = require('cors');
app.use(cors({ origin: 'http://localhost:5000', credentials: true }));
```

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3. Firebase Admin SDK Initialization Error

- **Error**:
  ```
  Error: Failed to parse Firebase service account JSON
  ```

- **Cause**:

  - Invalid path to the JSON file

  - Malformed or incomplete service account file
```

- **Solution**:

  - Verify the path to `firebase-adminsdk.json`

  - Ensure the JSON is valid and includes all required keys

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# Project Feature-Specific Errors

## 4. Project Creation Not Saving

- **Error**:
  Project does not appear after form submission

- **Cause**:

  - Missing required fields

  - PostgreSQL query error

- **Solution**:

  - Validate all fields before sending request

Use error logging:

```
pool.query(sql, values, (err, result) => {
  if (err) console.error(err.message);
});
```

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5. Task Assignment Email Not Sent

- **Error**:
  No email received by task completor

- **Cause**:

  - Email service misconfigured

  - Backend not hitting email API

  - Email blocked as spam

- **Solution**:

  - Use `nodemailer` with proper SMTP settings (e.g., Gmail)

  - Check firewall/port access

  - Log success or failure of email sending

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6. Milestone/Task Edit Not Reflecting

- **Error**:
  Edits not visible after update

- **Cause**:

  - Incorrect or failed API request

  - PostgreSQL update query failed silently

- **Solution**:

  - Check browser network tab

  - Validate backend route and SQL UPDATE query

  - Re-fetch data on success or update state in frontend

Authentication Errors

7. Sign In with Google Not Working

- **Error**:
  `auth/invalid-credential`, `popup_closed_by_user`

- **Cause**:

  - Google OAuth not enabled in Firebase

  - Invalid redirect URI

- **Solution**:

  - Enable Google Sign-In in Firebase Console

  - Register authorized redirect URIs

Use Firebase SDK:

```
const provider = new GoogleAuthProvider();
signInWithPopup(auth, provider);
```

Notification Feature Issues

8. Notification Not Triggering

- **What Happened?**
  No one gets notified when a task is added or updated.

- **Why It Happened?**

  - There is no logic in your backend or database to send notifications.

  - You forgot to add code to trigger emails or alerts.

- **How to Fix It?**

In PostgreSQL, you can create a trigger to run when data changes:

```sql
CREATE OR REPLACE FUNCTION notify_task_update()

RETURNS trigger AS $$

BEGIN

  -- Add logic to insert into notifications table or send message

  RETURN NEW;

END;

$$ LANGUAGE plpgsql;
```

Or handle it in your Node.js code:

```javascript
// After task is updated

sendNotification(userId, "Your task was updated");
```