

Support and Error Handling Guide

Overview

This document provides guidance for managing system errors, troubleshooting common issues, and supporting users effectively. A robust error-handling mechanism ensures seamless user experience and operational efficiency.

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1. Error Handling Overview

The Weight Loss Coaching System employs standardized error-handling processes to:

- Ensure all errors are captured and logged for analysis.
- Provide users with actionable and user-friendly error messages.
- Facilitate smooth recovery from failures.

Error Types

1. Client Errors (4xx):

- Occur due to invalid user inputs or requests.

- Example: Missing fields in API requests.

2. Server Errors (5xx):

- Indicate backend processing issues.
- Example: OpenAI service failures or database connectivity issues.

3. Network Errors:

- Happen when the system cannot connect to external services or the server.

4. Logical Errors:

- Errors in the backend logic or unexpected data processing scenarios.

2. Common Error Scenarios

Scenario Cause Resolution

Missing API Key The OpenAI API key is not set in .env. Ensure the OPENAI_API_KEY is added to the .env file and the environment variables are loaded.

Invalid Input Data User sends incomplete or improperly formatted data. Validate input data using middleware like express-validator.

Photo Upload Failures File size or format exceeds limits. Enforce limits on file size (e.g., 5MB) and acceptable formats (e.g., JPG, PNG).

OpenAI API Timeout Delayed response from the OpenAI server. Implement retry logic or provide a fallback response.

Leaderboard Ranking Errors Data inconsistency in gamification scoring. Recalculate rankings using stored user activity logs.

3. Error Codes and Responses

Standardized Error Codes

Error Code	Description	HTTP Status Code
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ERR-MISSING-FIELD	Required field is missing.	400
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ERR-INVALID-DATA	Input data is invalid or malformed.	422
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ERR-NOT-FOUND Requested resource does not exist. 404

ERR-INTERNAL General server error. 500

ERR-SERVICE-TIMEOUT Timeout while connecting to external service. 504

Example Error Response

```
{  
  "error": "ERR-MISSING-FIELD",  
  "message": "The 'preferences' field is required.",  
  "timestamp": "2024-12-06T14:00:00Z"  
}
```

4. Troubleshooting Guide

For Users

1. Issue: “I can’t upload my progress photos.”

- Cause: File format or size issue.
- Solution: Ensure the photo is in JPG or PNG format and under 5MB.

2. Issue: “My leaderboard position isn’t updating.”

- Cause: Delayed data synchronization.
- Solution: Wait up to 24 hours for leaderboard updates. Contact support if unresolved.

3. Issue: “I didn’t receive my updated plan on Sunday.”

- Cause: API delay or data submission issue.
- Solution: Verify all weekly updates (e.g., weight, photos) are submitted by Saturday.

For Admins

1. Issue: “A user’s plan is incomplete.”

- Cause: Missing data during onboarding.
- Solution: Request the user to re-enter their details or manually update the plan in the admin dashboard.

2. Issue: “System is displaying a 500 Internal Server Error.”

- Cause: Backend service or database failure.
- Solution:
- Check server logs for errors.
- Restart the server using `npm start` or equivalent hosting command.

5. Support Workflow

1. Ticket Submission:

- Users can submit support requests via the contact form in the dashboard or email (e.g., support@weightlossdashboard.com).

2. Priority Levels:

- High: System downtime, critical data loss.
- Medium: Issues affecting multiple users but not system-wide.
- Low: Individual user concerns or feature requests.

3. Resolution Timeline:

- High Priority: Resolved within 4 hours.
- Medium Priority: Resolved within 24 hours.
- Low Priority: Resolved within 48 hours.

4. Escalation:

- If an issue cannot be resolved by the support team, escalate to the development team with detailed logs and user impact reports.

6. Monitoring and Reporting

Error Logging

- Use logging libraries like winston to capture and store error logs.
- Include:
- Timestamp.
- Error code and message.
- User ID (if applicable).

Monitoring Tools

- Use tools like Sentry or New Relic for real-time error monitoring.
- Implement API health checks with a dedicated `/api/health` endpoint.

Analytics Reporting

- Generate monthly reports for:
- Most common errors.
- Average resolution time.
- User satisfaction post-resolution (via surveys).

This Support and Error Handling Guide ensures seamless troubleshooting and robust issue resolution for all stakeholders.