

Title: SleepEZ Dream Diary - Maintenance User Guide

Table of Contents

1. Introduction
2. System Requirements
3. Setup Instructions
4. Running the Application
5. Database Management
6. Handling Alarms
7. Generating Reports
8. Updating the Application
9. Troubleshooting
10. Contact Information

1. Introduction

This guide provides instructions for setting up, running, and maintaining the SleepEZ Dream Diary Android application. It is intended for maintenance personnel responsible for ensuring the application's smooth operation.

2. System Requirements

- Hardware:
- Android device running Android 8.0 (API level 26) or higher.
- Minimum 2GB RAM.
- Software:
- Android Studio Bumblebee or later for development and debugging.
- Java Development Kit (JDK) 8 or higher.
- Internet connection for updates and dependencies.

3. Setup Instructions

a. Clone the Repository

1. Open your terminal or command prompt.
2. Execute the following command to clone the repository:

```
git clone https://gitlab.com/yourusername/sleepez-dream-diary.git
```

3. Navigate to the project directory:

```
cd sleepez-dream-diary
```

b. Open in Android Studio

1. Launch Android Studio.
2. Click on "Open an existing Android Studio project".
3. Navigate to the cloned repository folder and select it.
4. Wait for Android Studio to build and index the project.

4. Running the Application

1. Connect an Android Device:
 - Enable Developer Options and USB Debugging on your Android device.
 - Connect the device to your computer via USB.
2. Build and Run:
 - In Android Studio, select the target device from the device selector.
 - Click the “Run” button or press Shift + F10.
3. Monitor Logs:
 - Use the Logcat window in Android Studio to monitor application logs for debugging and maintenance.

5. Database Management

a. Room Database

The application uses Room for local data persistence. The database includes two entities: Dream and Alarm.

b. Accessing the Database

1. Database Location:
 - The Room database is stored in the device’s internal storage, typically at:

`/data/data/com.example.sleepzdreamdiary/databases/sleepz_database`

2. Viewing Data:
 - Use tools like Android Debug Bridge (ADB) or Android Studio’s Database Inspector to view and manage database contents.

c. Backup and Restore

Implement backup and restore functionalities as needed, ensuring that user data is preserved during maintenance operations.

6. Handling Alarms

a. Scheduling Alarms

- Alarms are managed using AlarmManager and scheduled via AlarmScheduler.
- Ensure that the application has the necessary permissions (SCHEDULE_EXACT_ALARM for Android 12+).

b. Rescheduling Alarms

- The AlarmReceiver class handles alarm triggers and reschedules alarms for the next day.
- Verify that alarms are correctly rescheduled by checking logs and using the Database Inspector.

7. Generating Reports

a. Dream Reports

- Reports are generated as .txt files containing multiple columns and rows, including date-time stamps and titles.
- To generate a report:

1. Navigate to the Log section in the app.
2. Tap on the “Generate Dream Report” FAB.
3. Select the desired date range and folder location.
4. Confirm to generate and save the report.

b. Export Formats

- Future enhancements may include supporting PDF or CSV formats for reports.

8. Updating the Application

a. Pull Latest Changes

1. Open your terminal in the project directory.
2. Execute:

```
git pull origin dev
```

b. Sync Project with Gradle Files

- In Android Studio, click on “Sync Project with Gradle Files” to incorporate the latest changes.

c. Handle Migrations

- If database schema changes are introduced, update the version number in SleepEZDatabase.kt and implement necessary migration strategies.

9. Troubleshooting

Common Issues:

- App Crashes on Launch:
 - Check Logcat for error messages.
 - Verify that all dependencies are correctly installed.
- Alarms Not Triggering:
 - Ensure that the app has the necessary alarm permissions.
 - Check if the device’s battery optimization settings are restricting the app.
- Database Access Errors:
 - Confirm that the database passphrase is correctly set.
 - Use Database Inspector to verify database integrity.

Support:

For unresolved issues, refer to the Troubleshooting Guide or contact the development team.

10. Contact Information

- Developer: Gabriel Antonia
- Email: Gabriel.Antonia@Outlook.com
- Repository: <https://gitlab.com/wgu-gitlab-environment/student-repos/ganton8/d424-software-engineering-capstone.git>