Project Report Template

## 1 INTRODUCTION

1.1 Overview

Sleep-tracking apps promise to help you understand when you cross the threshold between waking and sleeping—and what happens in between.

1.2 Purpose

Sleep duration: By tracking the time you're inactive, the devices can record when you fall asleep at night and when you stir in the morning. Sleep quality: Trackers can detect interrupted sleep, letting you know when you're tossing and turning or waking during the night.

2 PROBLEM DEFINITION AND DESIGN THINKING
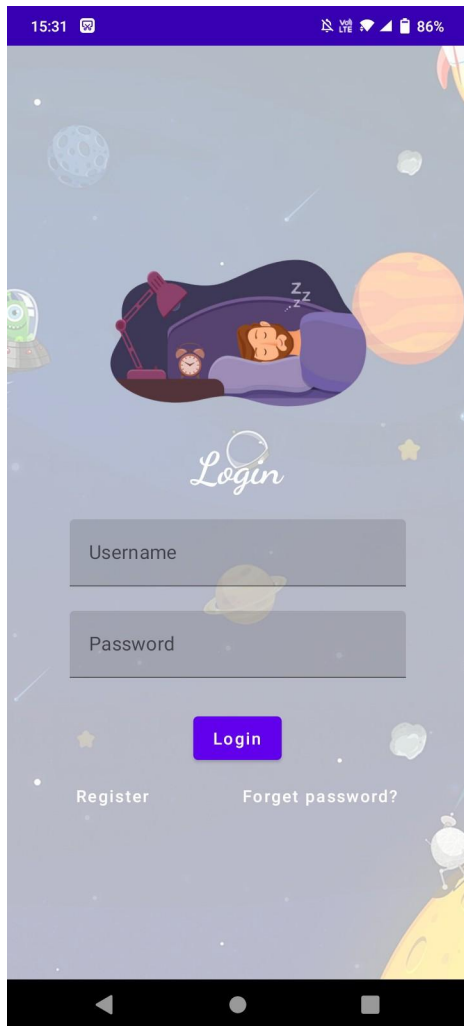
2.1 Empathy Map
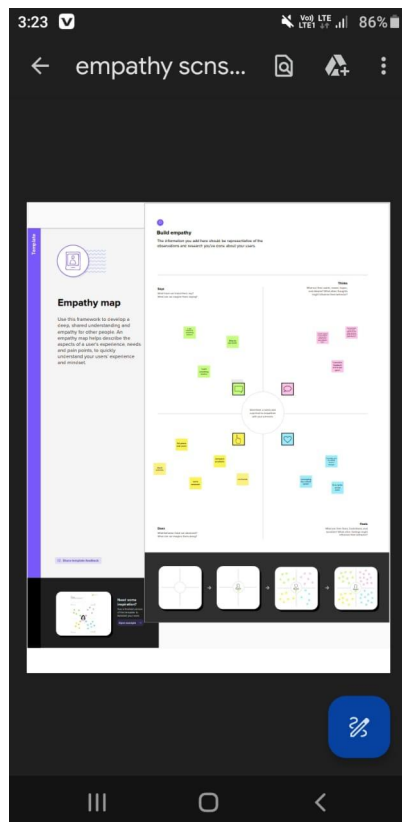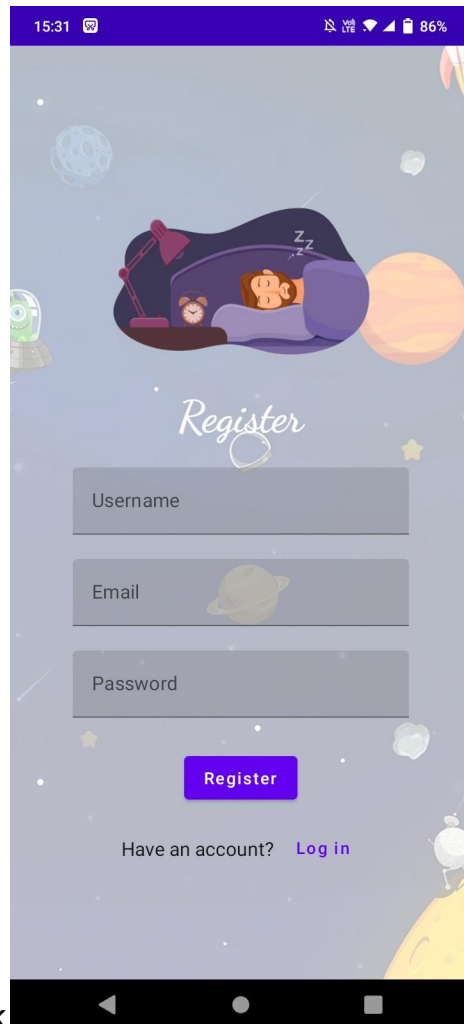

2.2. Ideation and Brainstorming Map
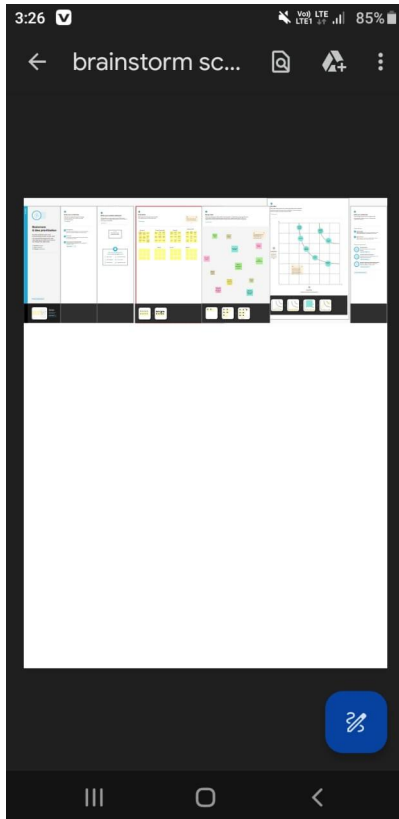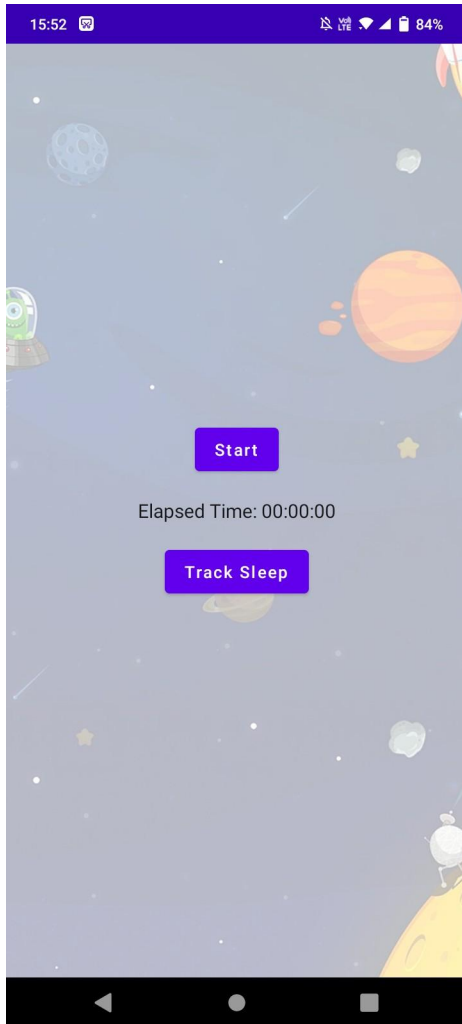
3 RESULT
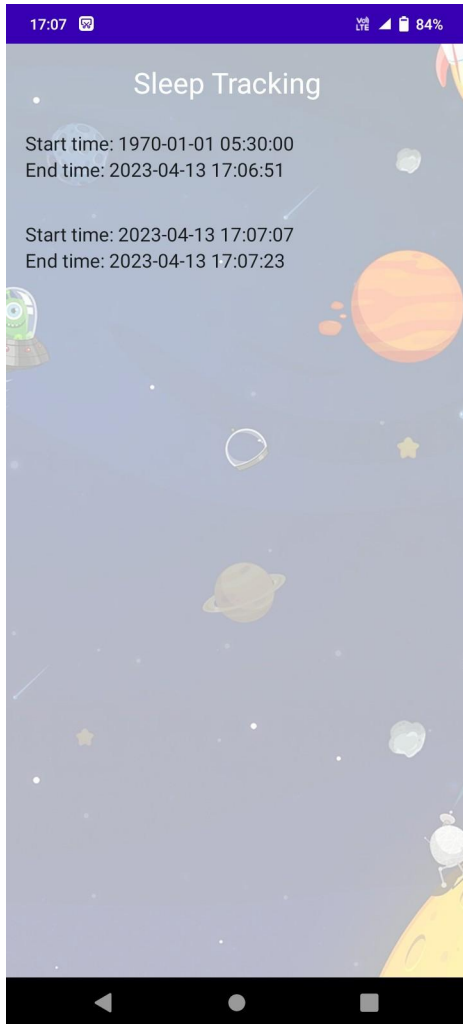
Login page:

Registration page:

Ok

Main page:

Track sleep page:

4 ADVANTAGES & DISADVANTAGES

Advantages:

Sleep apps track your sleep patterns and provide feedback on how to get better sleep. They can also offer relaxing sounds or music to help you fall asleep. Some apps even have games or other activities to help you wind down before bedtime.

Ultimately, a sleep tracker is a valuable tool that could make it easier to effectively track and optimize your sleep patterns. The data obtained by these devices could help you identify sleep issues and disorders and provide insights into making the right lifestyle choices to remedy them.

Sleep tracking tracks movement while you are sleeping and gathers data. By using a sleep tracker, you can measure things like:

- Sleep duration: By tracking the time you're inactive, the devices can record when you fall asleep at night and when you stir in the morning.
- Sleep quality: Trackers can detect interrupted sleep, letting you know when you're tossing and turning or waking during the night.
- Sleep phases: Some tracking systems track the phases of your sleep and time your alarm to go off during a period when you're sleeping less deeply. In theory, that makes it easier for you to rouse.
- Environmental factors: Some devices record environmental factors like the amount of light or temperature in your bedroom.
- Lifestyle factors: Some trackers prompt you to enter information about activities that can affect sleep, such as how much caffeine you've had, when you've eaten or whether your stress level is high.

Disadvantages:

1. Sleep trackers introduce poor sleep hygiene. When it comes to proper sleep hygiene, viewing devices immediately before or after sleep is a no-no. A sleep tracker may incentivize people to break this rule, argues Dr. Baron and colleagues.

2.Sleep trackers may be inaccurate. Sleep trackers may suggest you get more sleep than you do in reality. This is especially true for trackers that rely on movement sensors, as you could simply be lying awake at night. They're also unable to accurately distinguish between light and deep sleep. "Even medically validated diagnostic technologies are at risk for false positive and false negative results," points out Massachusetts General Hospital's Kathryn Russo and colleagues.

3.Sleep trackers can worsen insomnia. Across three case studies, patients spent an excessive amount of time in bed trying to maximize their sleep duration. Unfortunately, that's known to exacerbate insomnia.

4.Sleep trackers make some people resistant to treatment. In the same study, patients trusted data from their wearable devices over results from official sleep studies. They also neglected evidence-based treatments for insomnia, instead preferring to go it alone.

5.Sleep trackers are tied to a sleep disorder. Some people who wear sleep trackers become preoccupied with optimizing their sleep data. This condition, known as orthosomnia, enhances your nighttime anxiety, which can make it harder for you to sleep.

Most Popular Sleep

5 APPLICATIONS

Alarm Clock Xtreme has a lot going on. It's technically an alarm clock app. However, it also comes with sleep tracking features. It features a variety of alarms. The idea is to help people who have trouble waking up by giving them a bunch of different ways to try. It'll save what time you go to bed and wake up every morning. It'll even analyze your sleep quality as well as quantity. They're not what you'd think of when it comes to sleep tracker apps. However, it doesn't do half bad.

Google Fit seems to do just about everything. It will track your activity, steps, calories, and even your sleep. The app is fairly basic. You just do things and enter them into the app as needed. The app then spits out your progress. The app comes with integration with a ton of other services. They include Runkeeper, MyFitnessPal, Lifesum, Sleep as Android, and several types of fitness trackers. It even works with Wear OS devices. It's one of the better sleep trackers, especially if you use it with other apps.

PrimeNap is the second rebranding of this app. However, the app is mostly the same despite its new digs and name. It features detailed graphs, a sleep debt analysis chart, alarm clock functionality, and even some extra stuff like a dream journal and a noise machine function. It also boasts minimal permissions and no subscriptions, both features that we appreciate. It's relatively new, at least compared to others on this list. However, it seems to work quite well.

Sleep Cycle is one of the more expensive sleep tracker apps. The free version has a fair set of features. It'll try to wake you up when it senses that you're ready to. It also offers sleep analysis, nightly sleep graphs, and various alarms. The premium version includes additional features. Some of it, like the Philips Hue integration, is for iOS only. We thought that was lame. The premium version is a $29.99 per year subscription. We dunno if it's worth that. The free version is nice, though.

Smart wake-up feature based on sleep cycles
Useful "asleep after" timer
Online backup feature

SnoreLab is one of the more unique sleep tracker apps. It actually doesn't do most of the basic stuff. This one just records you snoring. It'll detect when you do snore, log the times, and then record you doing it. It'll also measure the intensity, frequency, and more. You can even log when you've been doing things like drinking to see their effects on your snoring. It'll email the sound files to you as well for easy reference. It won't give you graphs based on your N3 deep sleep cycle, but it's amazing for snoring.

Pure snore recording app
Nifty trends screen highlights potential issues
Journal for monitoring factors.

Fitness trackers and manufacturer apps make a lot of sense. You wear things like your Fitbit almost 24/7. The app can track your sleep. Why not use it for that? These

have the advantage of being made for specific hardware. That means they can generally do a pretty decent job of recording stuff. Other apps like Samsung Health have the same advantages as snoring monitoring. Samsung optimizes the app for the phones they make. Thus, it may be more accurate than a third-party solution. Your mileage may vary. However, you may want to try these out before seeking third-party solutions.

6 CONCLUSION

Thus by using this app we can track our sleep sleep patterns, check out your snoring and dream talks, and customize the smart alarm to relieve sleep issues and aid your sleep.

7 FUTURE SCOPE

Wearables are currently leading the pack in consumer sleep tracking tech, with capabilities now built into the popular Apple Watch, Fitbit, Amazon Halo and other devices. Beyond smartwatch wearables, exciting new advances are being made in adding sleep tracking technology to jewelry, textiles and even brain-tracking caps and earbuds.

8 APPENDIX

A.Source code

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:supportsRtl="true"
        android:theme="@style/Theme.ProjectOne"
        tools:targetApi="31">
        <activity
            android:name=".TrackActivity"
```

```xml
            android:exported="false"
            android:label="@string/title_activity_track"
            android:theme="@style/Theme.ProjectOne" />
        <activity
            android:name=".MainActivity"
            android:exported="false"
            android:label="@string/app_name"
            android:theme="@style/Theme.ProjectOne" />
        <activity
            android:name=".MainActivity2"
            android:exported="false"
            android:label="RegisterActivity"
            android:theme="@style/Theme.ProjectOne" />
        <activity
            android:name=".LoginActivity"
            android:exported="true"
            android:label="@string/app_name"
            android:theme="@style/Theme.ProjectOne">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```