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PROJECT REPORT

1.INTRODUCTION:

1.1 OVERVIEW:

We have developed a project about tracking app to monitoring a person's sleep and to provide a better sleep cycle to them. It is an android app which track movements during sleep of a person to improve their sleep cycle.

1.2 PURPOSE:

The main purpose of develop an app that is comfortable to we and to have pretty much a very less learning curve when it comes to using the app for everyone.

2.PROBLEM DEFINITION AND DESIGN THINKING:

2.1 EMPATHY MAP:

Build empathy

The information you add here should be representative of the observations and research you've done about your users.

Says

What have we heard them say?
What can we imagine them saying?

This app helps in creating my sleep cycle

By improving my sleep cycle my stress level is now reduced

I have the record of my daily sleep

Thinks

What are their wants, needs, hopes, and dreams? What other thoughts might influence their behavior?

Alarm that alert us to sleep

They can improve their sleeping cycle

Quotes that motivates to sleep at time to make the next day wonderful

Give them a name and a portrait to empathize with your persons.

Does

What behavior have we observed?
What can we imagine them doing?

They may use this app as a simple timer

They may not go to sleep after starting the app

They may forget to turn off the app,thus the record may give false information

Feels

What are their fears, frustrations, and anxieties? What other feelings might influence their behavior?

They feel like they have the control over their sleep

If they want to start or stop the timer they should manually do it, which may frustrate them.

They fear the security for the data stored in the app

2.2 IDEATION & BRAINSTORMING MAP:

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

TIP

You can select a sticky note and hit the pencil [switch to sketch] icon to start drawing!

A.Rama Lakshmi

1) provide a regular sleep schedule need to be followed

2) keep the theme dark, to provide a better sleep

3) alert them when exposure to blue light continuousel y

S.Muthu rani

4) offer white noise or other calming sounds to provide a better sleep

5) include bed time stories for the kids

6) provide gentle alarm clock sounds

J.Muthu mari

7) add features like white noise generator, breathing exercise to improve the sleep

8) provide a relaxation technique guildelines to reduce the stress level

9) must provide a user friendly, informative and excellent customer serrvice

M.Durga@santhanamari

10) able to access in ofline too

11) able to create a group with friends and families

12) daily routine schedule will displayed on the app

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you and break it up into smaller sub-groups.

20 minutes

Planning and implementing

TIP

Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Provide a regular sleep schedule need to be followed

Keep the theme dark to provide a better sleep

Include bed time Stories for the kids

Alret them when exposure to the blue light continuously

Offier white noise or other calming sounds to provide a better sleep

Provide gentle alarm clock sound

Daily routine schedule will be displayed on the app

Add features like white noise generator, breathing exercises to improve the sleep

Must provide a user friendly, informative and excellent customer service

Provide a relaxation technique guidelines to reduce the stress level

Access and sharing

Able to access in offline too

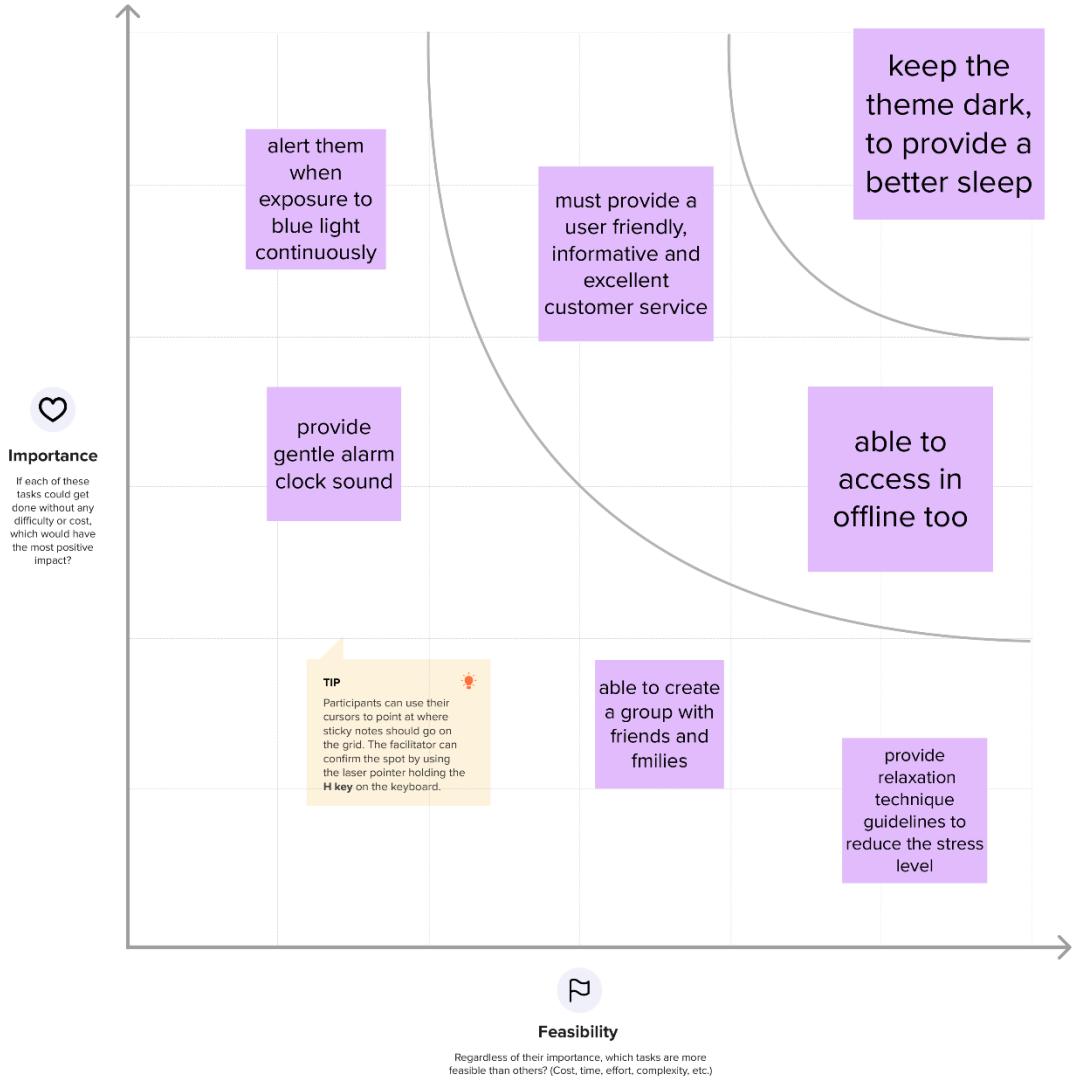
Able to create a group with friends and families

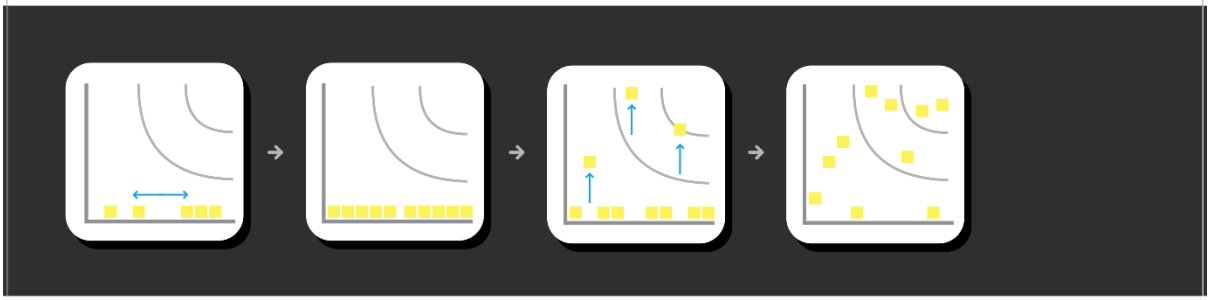
4

Prioritize

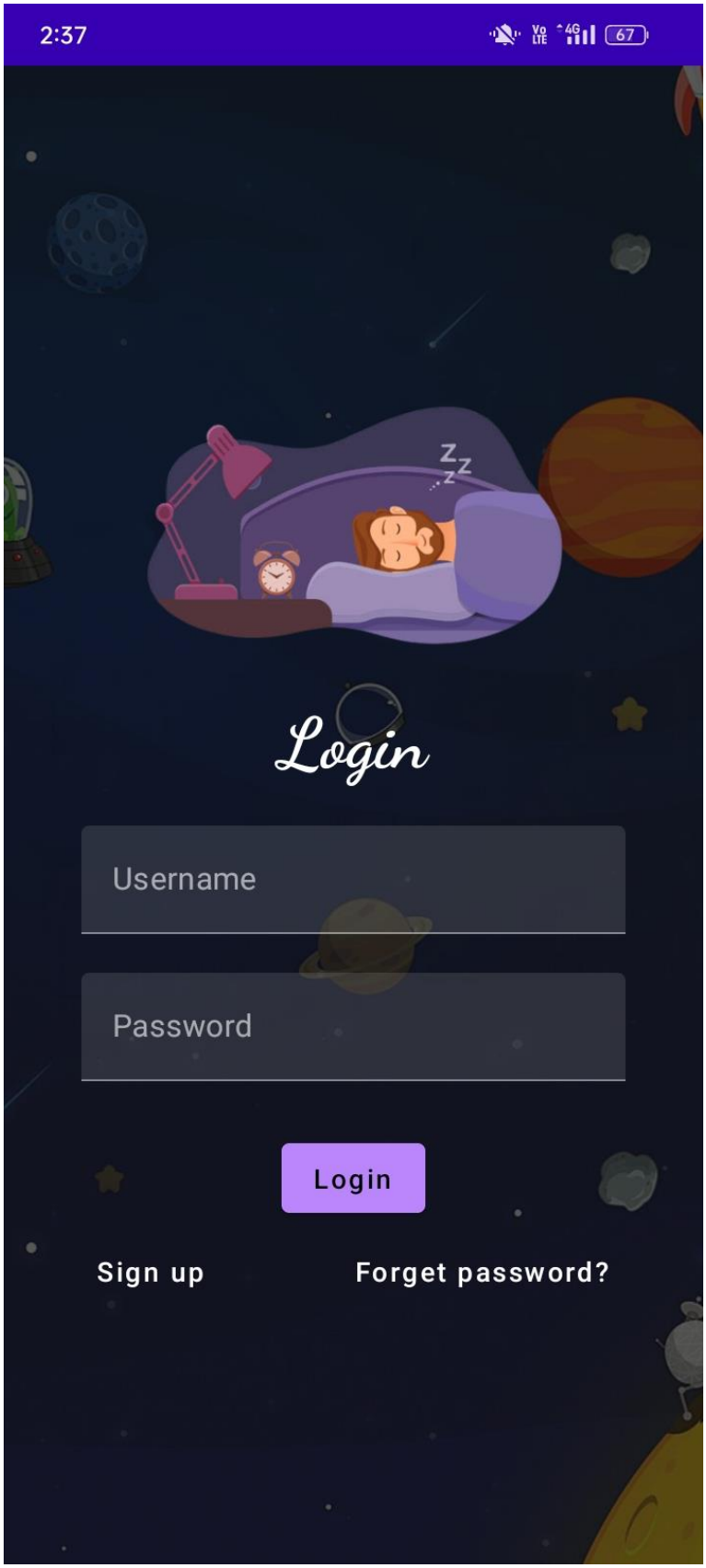
Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

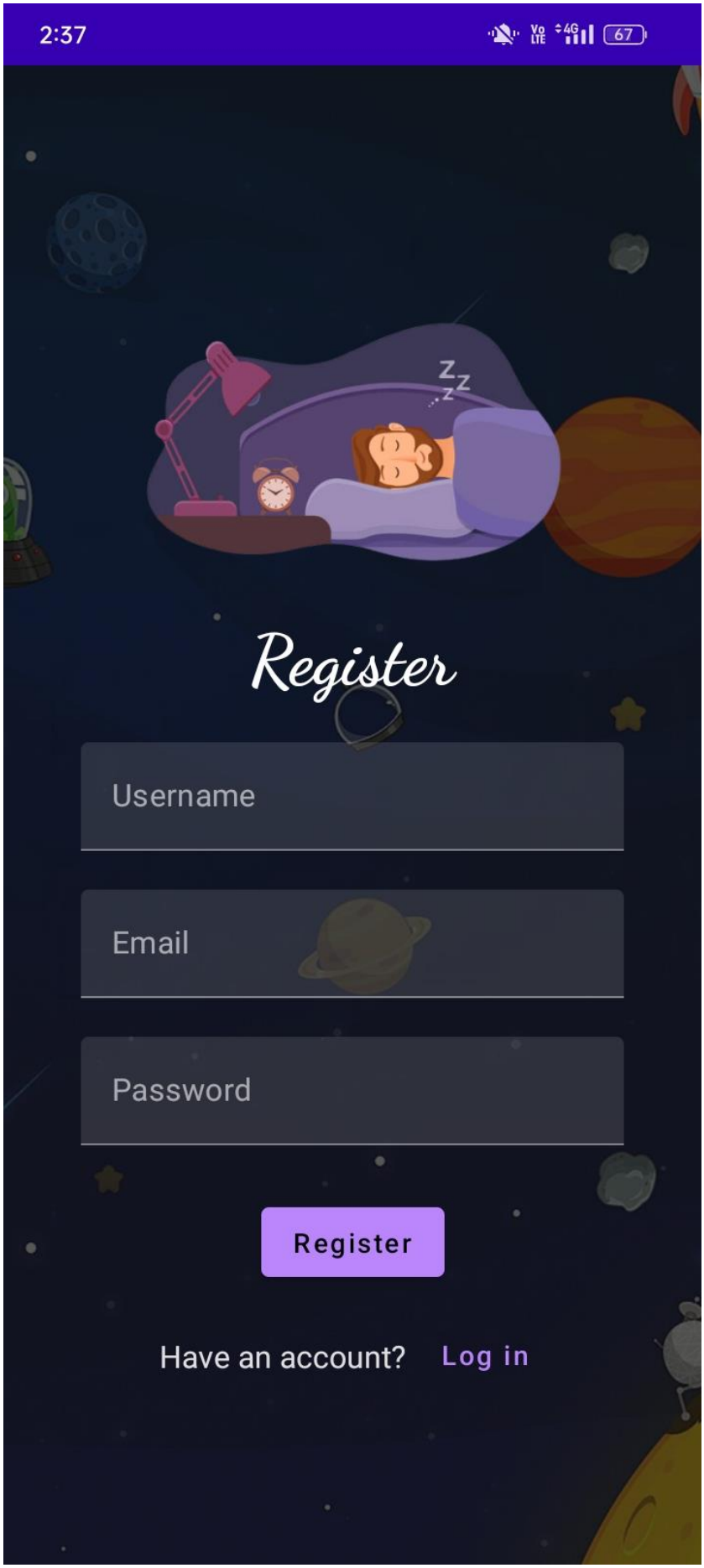
20 minutes

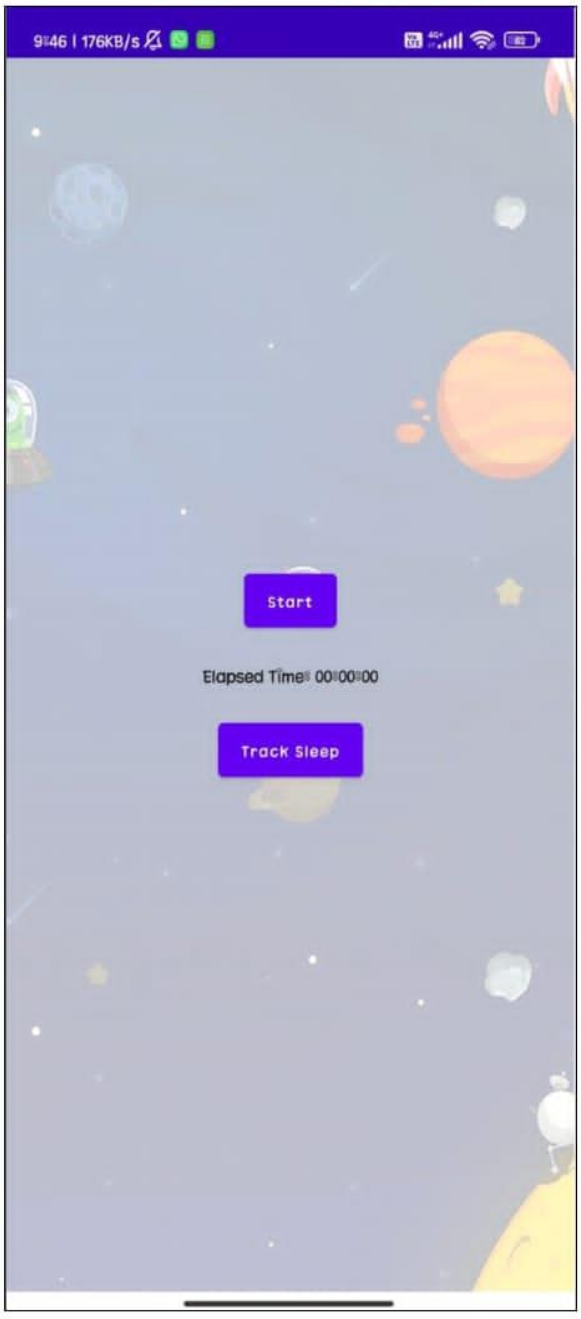


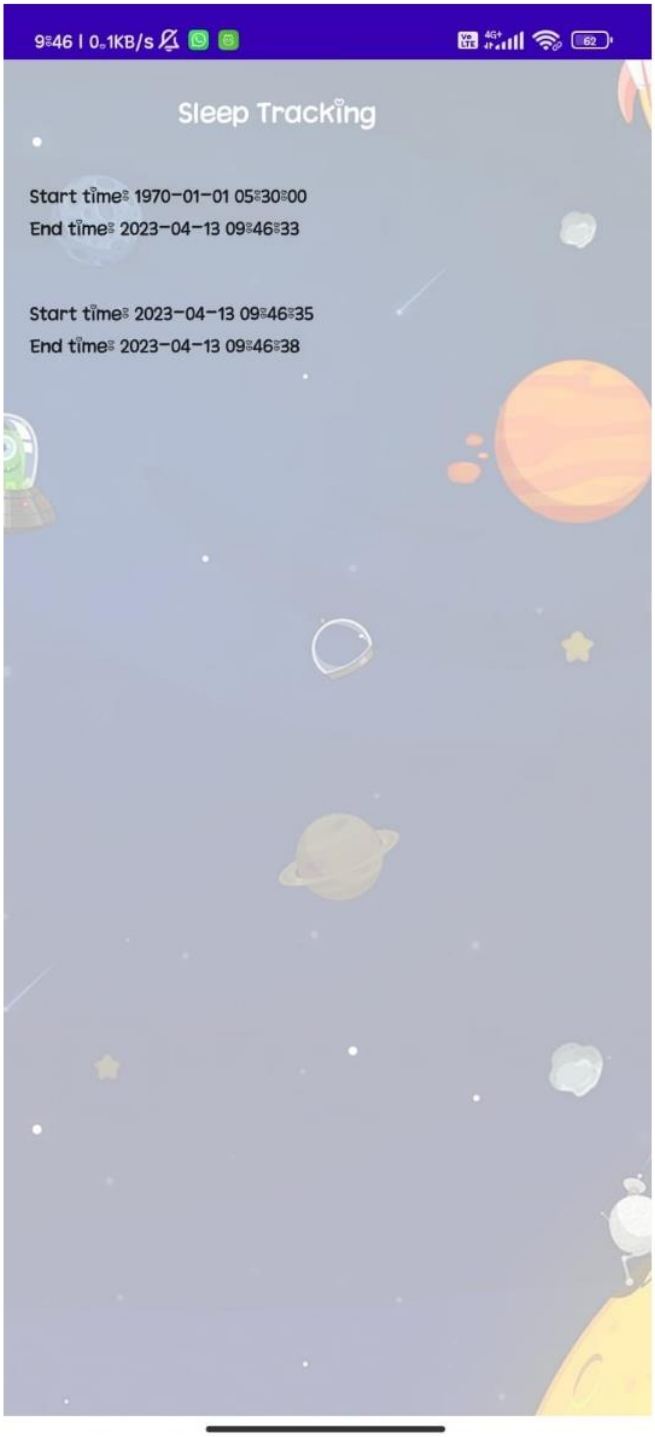


3.RESULT:


2:37
67
Login
Username
Password
Login
Sign up
Forget password?


2:37
Register
Username
Email
Password
Register
Have an account?
Log in


9:46 | 176KB/s
Start
Elapsed Time: 00:00:00
Track Sleep


9:46 | 0.1KB/s
Sleep Tracking
Start time: 1970-01-01 05:30:00
End time: 2023-04-13 09:46:33
Start time: 2023-04-13 09:46:35
End time: 2023-04-13 09:46:38

4.ADVANTAGES AND DISADVANTAGES:

ADVANTAGES:

. Gold standard of sleep assessment.

. Allows determination of sleep architecture.

. Identification of medical sleep disorders.

. Useful for assessment of daytime sleepiness.

. Non-intrusive.

. Less expensive than polysomnography.

. Provides data on routine can be utilised for extended periods.

. Validated against polysomnography.

. Increase sleep awareness.

. Promote athlete-staff interaction.

. Inexpensive accessible can be utilised for extended periods.

. May promote further evaluation.

. Cost effective.

. Provides information on routine.

. May be more accurate than questionnaires.

. Time effective.

. Can provide information on sleep disorders, daytime sleepiness, and sleep hygiene.

. Can provide behaviour information.

DISADVANTAGES:

. Expensive.

. Does not determine schedules.

. Intrusive unnatural sleep environment.

. Labour intensive.

. Expertise required.

. Does not measure sleep architecture.

. Does not measure breathing.

. Device can be removed.

. Requires some expertise for analysis.

. More expensive than commercial devices.

. Lack of validation.

. Little information on algorithms utilised.

. Likely to overestimate sleep.

. May cause increased stress and anxiety.

. Device not worn by individual.

. Apps may increase screen time.

. May cause increased anxiety.

. Requires compliance.

. May be influenced by recall bias.

. May be influenced by subject burden.

. May be influenced by response bias.

. Lack of standardised data for athletes.

5.APPLICATIONS:

. These applications provide a wide range of functions, including smart alarms, sleep aids, sound recording during sleep, and analysis of sleep.

. Other applications were designed to assist healthcare professionals in monitoring and screening their patients for habitual snoring and obstructive sleep apnea.

. A few health trackers were compared to standard sleep assessment tests including polysomnography (PSG), wrist actigraphy, and the Pittsburgh sleep quality index (PSQI).

. Parameters assessed in validation studies included sleep onset latency, total sleep time, snoring events, sleep stages, and sleep efficacy.

. Most applications have shown good correlation to wrist actigraphy but not PSG.

. Moreover, a drop in reliability was commonly seen in clinical populations compared to healthy

users, a trend also seen with conventional.

6.CONCLUSION:

We conclude that sleep trackers may be useful in improving user's self-management, and increasing sleep hygiene awareness, knowledge, and behaviours. Thus, app may present valuable tools for improving sleep quality. It is recommended to access behaviour changes associated with sleep trackers in different populations, such as elders, and people with sleep disorders and major illnesses.

7.FUTURE SCOPE:

Enhancements then can be made in the future must obey the following steps:

. Get a clear understanding the sleep apps and sleep tracking apps market, how it operates, and the various stages of the value chain.

. Understand the current market situation and future growth potential of the sleep apps and sleep tracking apps market throw out the forecast period.

. Strategized marketing, market-entry, market expansion, and other business plans by understanding factors influencing growth in the market and purchase decisions of buyers.

. Understand your competitors' business structures, strategies, and prospects, and respond accordingly.

. Make more informed business decisions with the help of insightful primary and secondary research sources.

8. APPENDIX:

Source Code:

Build.gradle: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/build.gradle

App/build.gradle: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/build.gradle

AndroidManifest: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/AndroidManifest.xml

Theme: https://github.com/ramalakshmi17/nm-sleep-tracking/tree/main/app/src/main/java/com/example/projectone/ui/theme

AppDatabase: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/AppDatabase.kt

LoginActivity: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/LoginActivity.kt

MainActivity: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/MainActivity.kt

RegisterActivity: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/RegisterActivity.kt

TimeDatabaseHelper: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/TimeDatabaseHelper.kt

TimeLog: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/TimeLog.kt

TimeLogDao: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/TimeLogDao.kt

TrackActivity: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/TrackActivity.kt

User: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/User.kt

UserDao: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/UserDao.kt

UserDatabase: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/UserDatabase.kt

UserDatabaseHelper: https://github.com/ramalakshmi17/nm-sleep-tracking/blob/main/app/src/main/java/com/example/projectone/UserDatabaseHelper.kt