

# Talking Reminder

CS 699 : Software Lab Project

by

Pankaj Kumar 193050065

Raushan Raj 193050073

Deepak Verma 193050080

under the guidance of

**Prof. Kavi Arya**



Department of  
Computer Science and Engineering  
Indian Institute of Technology, Bombay  
Mumbai 400 076

# Contents

<b>1</b>	<b>Main Goal Of The Project</b>	<b>2</b>
<b>2</b>	<b>Motivation</b>	<b>2</b>
<b>3</b>	<b>Prior Work</b>	<b>2</b>
<b>4</b>	<b>Requirements for App</b>	<b>2</b>
4.1	Hardware . . . . .	2
4.2	Software . . . . .	3
<b>5</b>	<b>Development Environment and Tools used</b>	<b>3</b>
5.1	Hardware . . . . .	3
5.2	Tools and Environment . . . . .	3
5.3	<b>Programming Languages</b> . . . . .	3
<b>6</b>	<b>Features</b>	<b>4</b>
<b>7</b>	<b>User Documentation</b>	<b>4</b>
7.1	UI Details . . . . .	4
7.2	Firebase Server Setup . . . . .	7
7.3	Brief of Code . . . . .	7
<b>8</b>	<b>Feasibility</b>	<b>8</b>
8.1	Technical Feasibility . . . . .	8
<b>9</b>	<b>Outcome</b>	<b>8</b>
<b>10</b>	<b>References</b>	<b>8</b>

# 1 Main Goal Of The Project

The main goal of the project was to make an Android app which instead of ringing and showing notification, the app should Speak up the Reminder text repeatedly - Speaking Reminder.

In addition to time-triggered reminders,a user should be able to set reminders for another user remotely from within the app .

## 2 Motivation

Elderly people like our parents and grandparents often don't like to rely on their phones to organize their reminders, they rely on people ( who are unreliable ;- ) ) They need reminders for important kinds of stuff like : Taking medicines on time They can't or don't like to create reminders by themselves, so if someone else could set their important reminders for them remotely would solve that problem.

## 3 Prior Work

There is no such app available on an Individual level but there are some apps available.Some of them are:

- And there are voice based reminders available also
- But there isn't any free reminder app that allows reminders be set for a user remotely by another authorized user and none of them provide all the aforesaid features

## 4 Requirements for App

User's System Requirements are:

### 4.1 Hardware

A smartphone with the following features:

- 2 GB of RAM
- 1 Ghz Processing Power

## 4.2 Software

- Android 8.0 (Oreo) or Higher

# 5 Development Environment and Tools used

## 5.1 Hardware

A personal computer with the following configurations were used:

- 8 GB of RAM
- 2.5 Ghz Processor

## 5.2 Tools and Environment

The softwares and tools used are:

- Windows 10 Home
- Ubuntu 18.04
- Android Studio 3.5.1
- GIT (for version control)
- Android Emulator
- Firebase
- npm
- nodejs
- L<sup>A</sup>T<sub>E</sub>X(Using Overleaf)

## 5.3 Programming Languages

- Java
- Typescript (to implement cloud function for firebase)

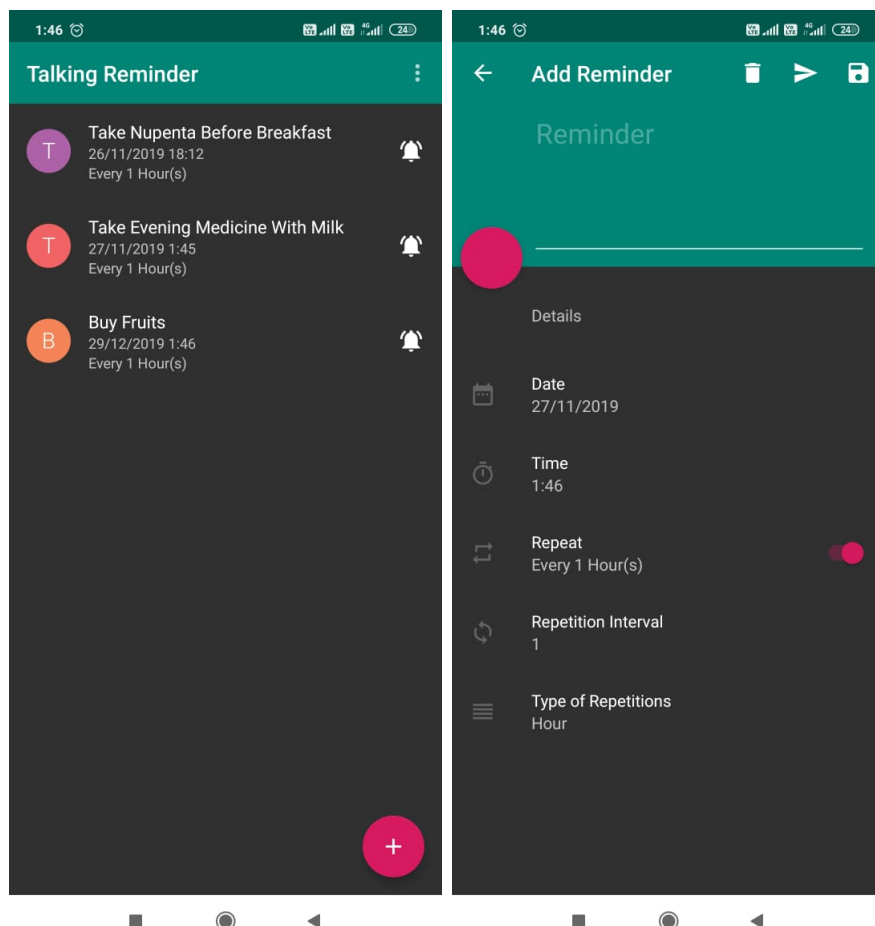
## 6 Features

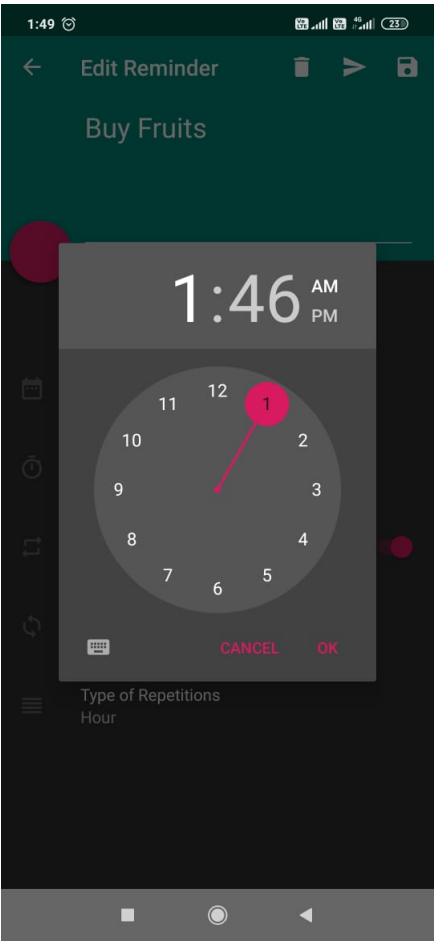
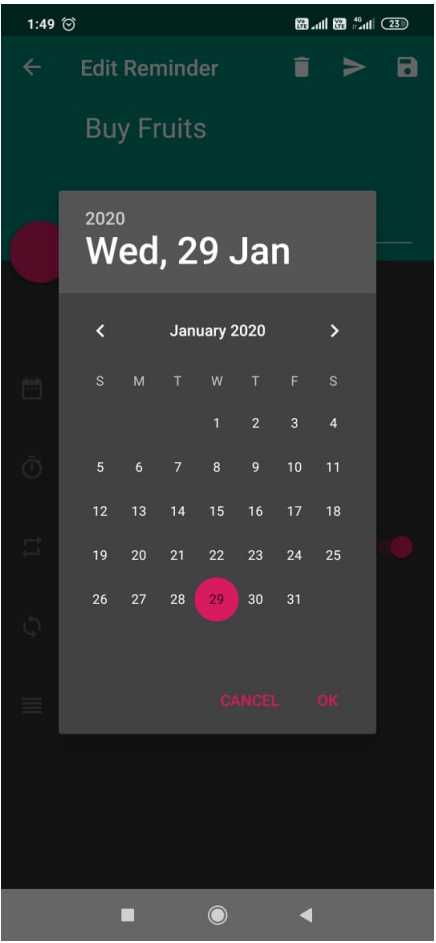
- **Basic Alarm feature** : This app has all the basic feature of alarm like to set repeat alarm on minute, hourly, daily and monthly and to show notification.
- **Speaking Reminder feature** : This app also speaks up the reminder text.
- **Send Reminder feature** : Feature to send alarm remotely to different authenticated user within the app.

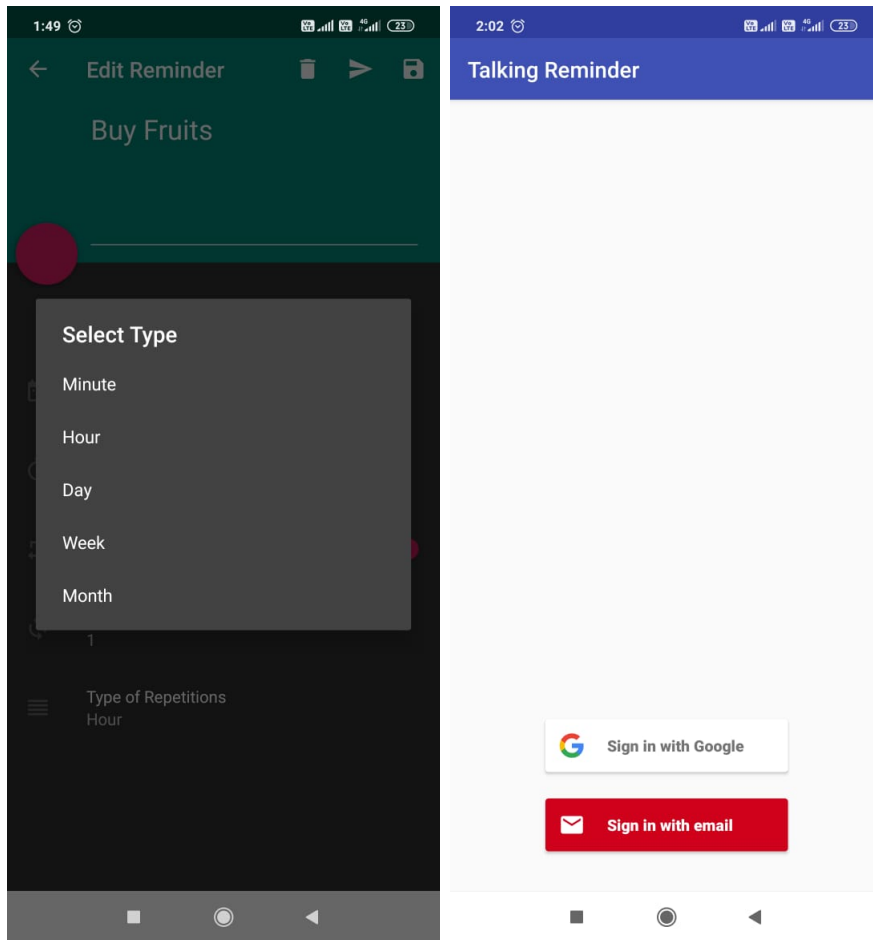
## 7 User Documentation

### 7.1 UI Details

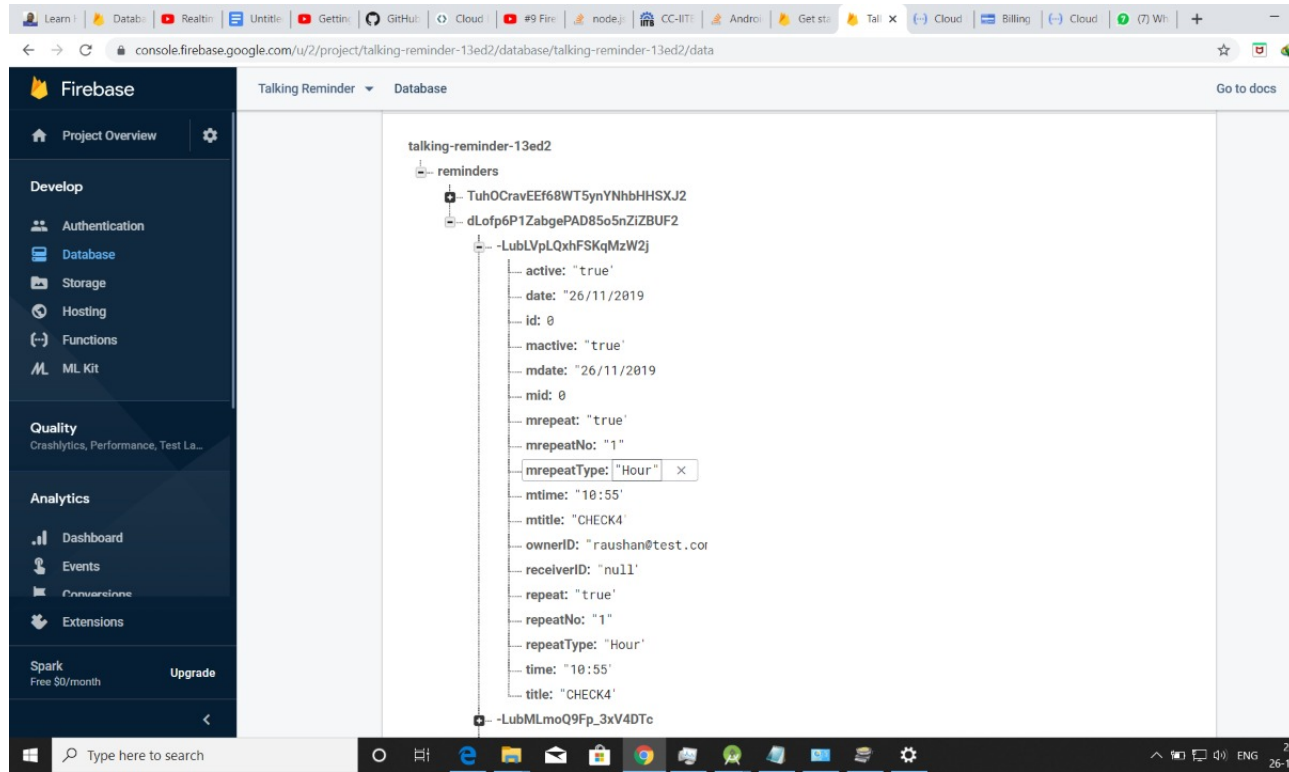
- Android app screenshot







- Firebase database screenshot



## 7.2 Firebase Server Setup

- **Server Setup** : Firebase and sqlite3 has been used in this project. The app should not require any server setup or database from user's side. All these configurations comes inbuilt in the app. As a end user, one would not need an admin privilege for central database hosted on firebase on which all user-data and user information is kept.
- **Cloud Function Setup** : Typescript has been used to implememt server side cloud function for database trigger. which uses nodejs and npm.

## 7.3 Brief of Code

This app is developed in java and should be compatible for almost all the android devices. This app is powered by Firebase realtime database and all the user's data is hosted on it.



## 8 Feasibility

The feasibility details are as follows:

### 8.1 Technical Feasibility

- Speaking reminder managed locally
- There are TTS module from google
- Send reminder feature has to be an online feature

## 9 Outcome

In the stipulated time we implemented basic alarm and notification features along with working voice feature. Send reminder feature is under development but user can still get a feel of it from the current implementation. We tried new technologies like Firebase and cloud functions to make this app more robust. Though app those functionalities are not implemented fully due to time constraints the app does a decent job at reminding stuff, which was our goal to start with. There are some known bugs and incomplete features in this app as of now which we will be passionately covering over next few weeks.

## 10 References

- (i) <https://www.cheezycode.com/p/android.html>
- (ii) <https://www.journaldev.com/9976/android-date-time-picker-dialog>
- (iii) <https://javebratt.com/firebase-cloud-functions-profile/>
- (iv) <https://firebase.google.com/docs/functions>
- (v) <https://github.com/gholken/android-hourly-reminder>