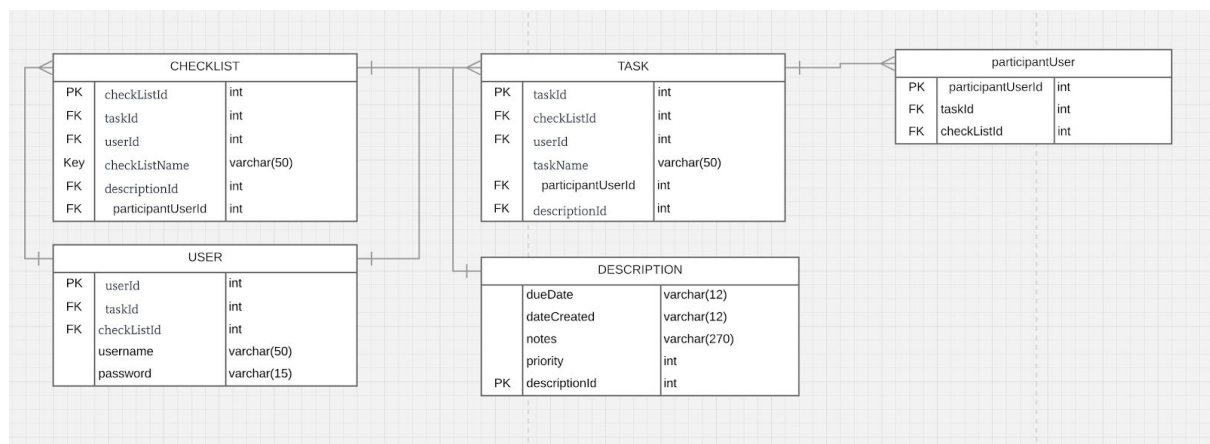# Database and ERD

Database

All the data will be stored and retrieved using the Firebase database which provides a real time database for users to sync data together.

Problem description - How will the data, task and checklist synchronize on different devices for every user ?

-Whenever user adds new data, that data will be pushed into Firebase database and will simultaneously send out the data to all the other users linked with the same database. All the users will pull data from the database whenever they connect with the internet and will also be able to manually request to synchronize. When the user is not connected to the internet and make changes offline, Firebase will allow user to save changes locally in cache and it will push online when user connects online.
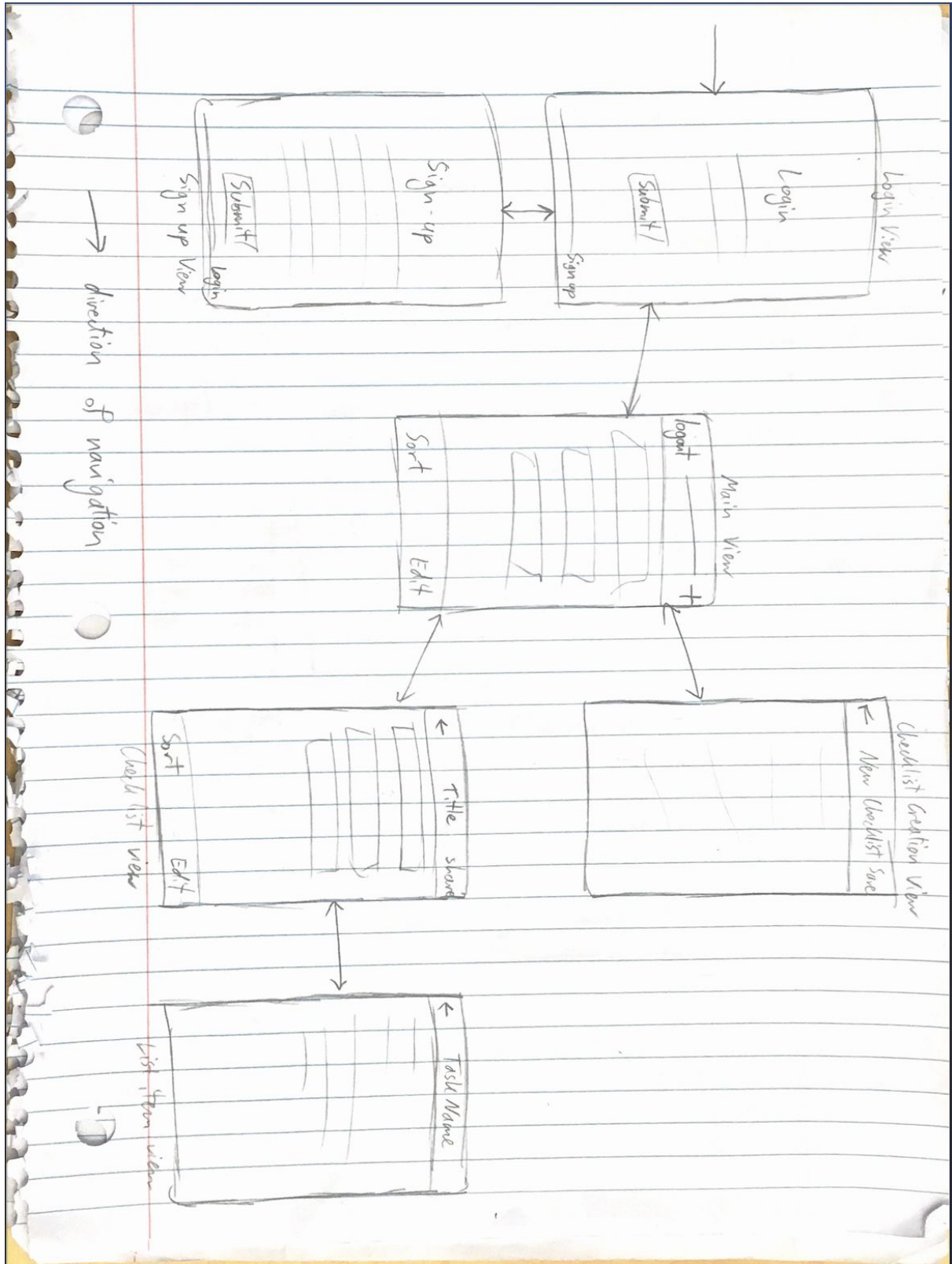
In a scenario when two users make a change in the taks or checklist, the data entered last will be pushed to all the users.
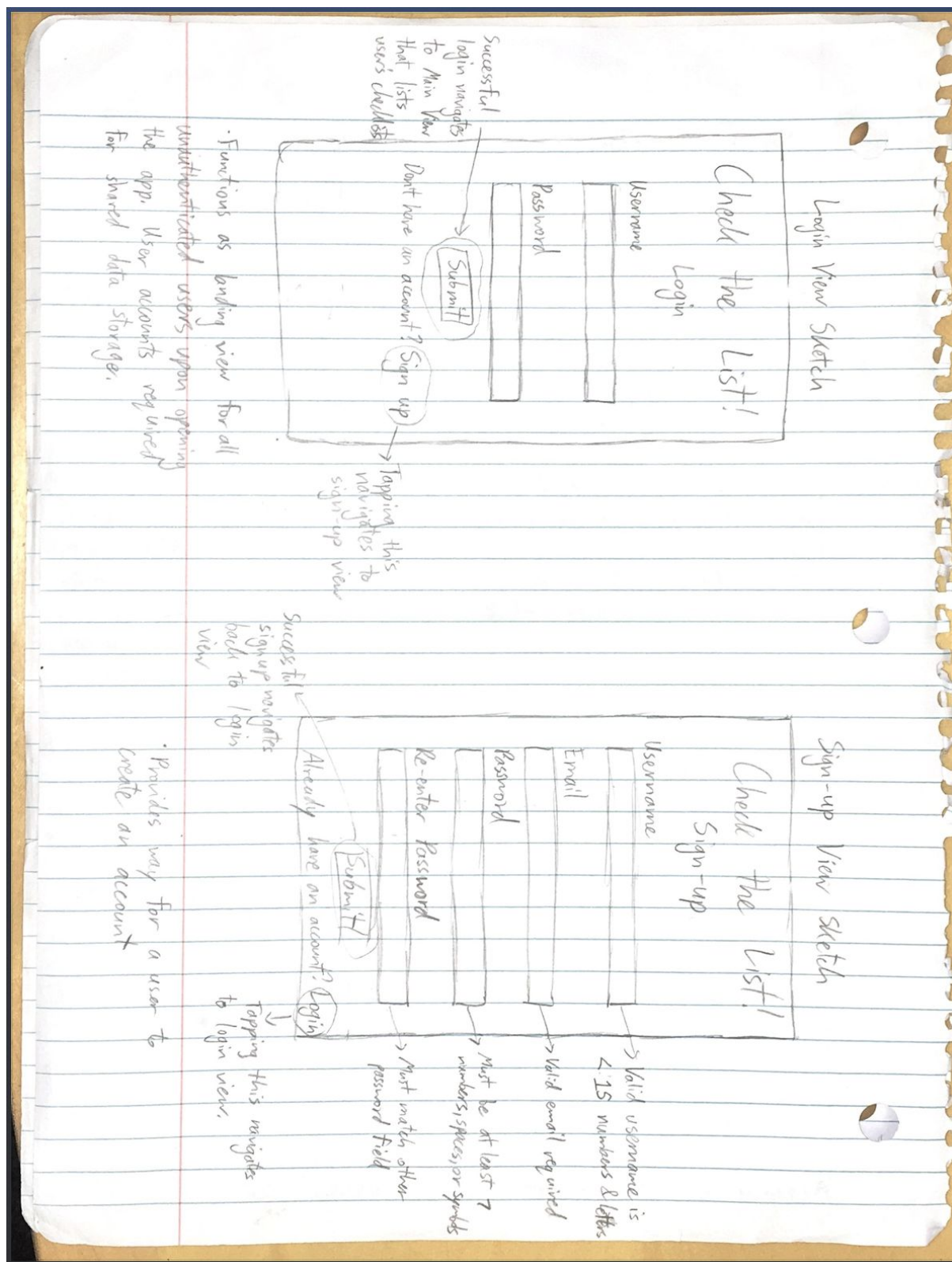
ERD

CHECKLIST

PK	checkListId	int
FK	taskId	int
FK	userId	int
Key	checkListName	varchar(50)
FK	descriptionId	int
FK	participantUserId	int

TASK

PK	taskId	int
FK	checkListId	int
FK	userId	int
	taskName	varchar(50)
FK	participantUserId	int
FK	descriptionId	int

participantUser

PK	participantUserId	int
FK	taskId	int
FK	checkListId	int

USER

PK	userId	int
FK	taskId	int
FK	checkListId	int
	username	varchar(50)
	password	varchar(15)

DESCRIPTION

	dueDate	varchar(12)
	dateCreated	varchar(12)
	notes	varchar(270)
	priority	int
PK	descriptionId	int

Interface and Front End Design

Storyboard and Navigation

Login Page and Sign up

Login View Sketch

Check the List!

Login

Username

Password

Submit

Don't have an account? Sign up

Successful login navigates to Main View that lists users checklist

Tapping this navigates to sign-up view

Functions as landing view for all unauthenticated users upon opening the app. User accounts required for shared data storage.

Sign-up View Sketch

Check the List!

Sign-up

Username

Email

Password

Re-enter Password

Submit

Already have an account? Login

→ Valid username is <15 numbers & letters

→ Valid email required

→ Must be at least 7 numbers, spaces, or symbols

→ Must match other password field

Tapping this navigates to login view.

Successful signup navigates back to login view

Provides way for a user to create an account

- create checklist
- show checklist details → navigate away or accordion?
    - list view
    - board view

CS 455 - Design for Project

- Display all checklists for a user
    - Information shown: - list of all projects user was/is a part of
        - For each project, show: - project name   - deadline
            - whether completed or not   - if not completed, percentage done
    - List sorted by emergence of deadline for not completed, and date completed for the completed projects (from most to least recent)

Your Check lists   + → Add New Checklist

Table View →
Sections:
  i) In Progress
  ii) Completed
  iii) Cancelled

Title
Completion: 80%   ☐
Due: 8 Oct, 2018

Title
Completion: 20%   ☐
Due: 28 Oct, 2018

Title
Completed: 28 Sept, 2018   ☑
Due: 29 Sept, 2018   } Completed Slightly Greyed

Title
Completed: 25 Sept, 2018   ☑
Due: 26 Sept, 2018

Sort ___

◯   Opens Accordion Style
→ | Sort by: — |

Retrieved from datamodel:
    - titles, deadlines, completed date, completed bool, completion percentage
* Note: No task deletion allowed, as other users would wonder where it went. Instead, a task can be cancelled → | Title Cancelled Due ☑ |
Cancelled grouped together under completed on view red → hue
sorted by date completed/cancelled

This page shows pre-existing checklist, the page which shows pre-existing task will be entirely same

Adding New Checklist and Task

• New Checklist View

Purpose: Create a new checklist and define basic information,
that being the title, due date, a description, and any other
participants if applicable

Returns to
main view
with no change
to the
datamodel

← New Checklist Submit → Returns to main
view and new
checklist will be
displayed

Title [text field]

Description

[text view]

Due Date [date picker]

Participants ⊕ : • Name 1
• Name 2

Tap to add
a username,
brings up a
textbox,
eg. [Enter username:]

over the view

This page allows user to add new checklist. The user will be able to use the same page when adding new task with minor modifications.
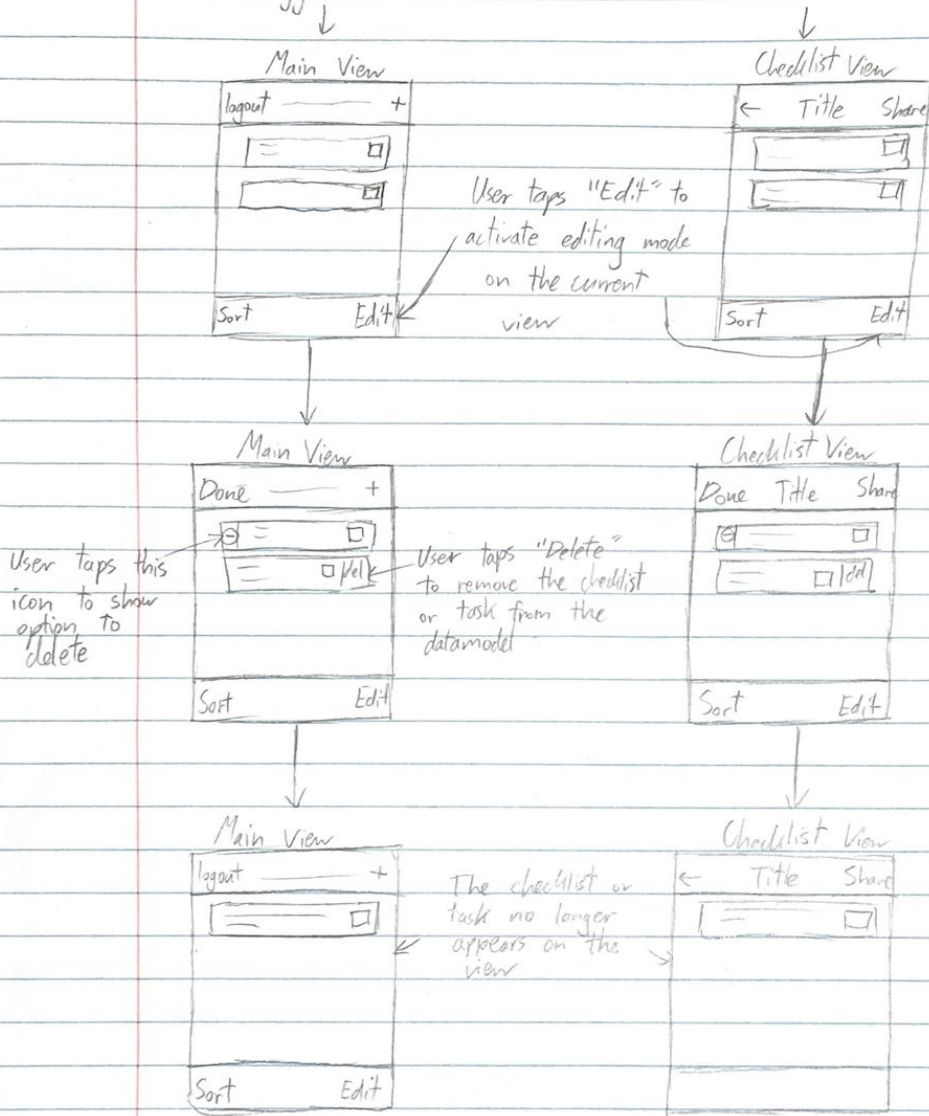
User Cases -

- Use case:
  - User wants to delete a checklist/task
- Prior condition:
  - User logged in and checklist/task exists

Main View

Checklist View

logout	+
	□
	□

← Title Share

| | □ |
| | □ |

User taps "Edit" to activate editing mode on the current view

Sort   Edit

Sort   Edit

Main View

Checklist View

Done	+
⊖	□
	□ Del

Done   Title   Share

| ⊖ | □ |
| | □ Del |

User taps this icon to show option to delete

User taps "Delete" to remove the checklist or task from the datamodel

Sort   Edit

Sort   Edit

Main View

Checklist View

| logout | + |
| | □ |

← Title Share

| | □ |

The checklist or task no longer appears on the view

Sort   Edit

· Use case:
    User wants to create a checklist
· Prior condition:
    User has an account and is logged in
                  ↓

Main View

logout Your Checklists +
☐ ☐
Sort   Edit

← User taps "+" to create a checklist, navigates to checklist creation view

↓

Checklist Creation View

· User enters all relevant information, in this case they do not add additional participants at this time

← New Checklist Save
Title ☐
Description
☐
Due Date: ☐
Participants: None

← User taps "Save" to enter all given details into datamodel, returns to main view

↓

Main View

logout Your Checklists +
☐ ☐
☐

← New checklist is listed, positioned by emergence of due date

· Use case:
· User wants to share the entire checklist
· Prior condition:
· The present user is logged in and the user they wish to add exists, checklist exists
↓

Main View

User taps on checklist box, navigates to that checklists' view

Sort   Edit

↓

Checklist View

← Title   Share → User taps "share", a lightbox appears over the same view

Sort   Edit

↓

Checklist View

← Title   Share

x Add:
Participants: → User adds participants in text field

→ Participant list expands to reflect new participants

Tapping "x" closes the lightbox, saving any changes, returning to the original view

Sort   Edit