

CENG 322

Deliverable 4

Team: The DJKM

Project :The Smart Lock

Team Members

- Dillon Permaul N01372657
- Janpreet Singh N01361405
- Kamaljit Mahal N01377647
- Meet Gajjar N01391319

Table of Contents

Project description.....	4
Members Info and Participation and github link.....	5
Sprint Goals	6
Members Breakdown of Tasks	7-8
Submission to Google Play	9
Daily stand-ups outcome.....	10-12
Project Review Meeting.....	13-18
C4 Models	19-20
Coding work progress.....	21
Runtime Permissions Implemented	21
Offline Functionality	21

Project Background and Description

The project is a home security smart lock that can be unlocked and locked using a mobile device and a RFID Card. This can be used in people's everyday lives as many people tend to lose their keys or the combinations to locks. This smart lock is very convenient and user friendly as all you need to unlock the lock is either your mobile device or an RFID Card.




App features Include:

- Lock and Unlock the door
- Displays Weather (temperature and humidity)
- Displays time and date
- Set the duration of locked and unlock time (Scheduled Times)
- Track the amount of times door has been locked and unlocked by user
- Detects Motion when a person is near the door

Hardware Used:

- Raspberry Pi 4
- RFID sensor module
- Servo Motor
- Motion Sensor
- Temperature sensor

Members Info and Participation

Name	ID	Signature	Effort
Meet Gajjar	N01391319		100% 1) Motion screen 2) Setting Screen
Kamaljit Mahal	N01377647		100%
Janpreet Singh	N01361405	J.S	100%
Dillon Permaul	N01372657		100%

GitHub Repository Link:

<https://github.com/dillonPermaul2657/TheSmartLock.git>

Sprint goals:

The goal of sprint 4 is to make sure everything we complete all deliverable tasks and they are fully functional during this sprint. In order to complete our plans from we worked on:

- Added a registration screen
- Added the data from registration screen to our database
- Updated review screen to add phone number and feedback to database
- Implement test case for our app using junit
- Add landscape layout to all screens
- Implement functionality for menu settings

Breakdown of Tasks

Meet Gajjar:

Epic: Complete the app with all functionality		Tasks	Subitems O...	Person	Status	Size	Start Date	End Date
Update Menu and motion screen		6	MG	MG	Done	Medium	Nov 20	Dec 4
Subitems		Owner	Status	Start Date	End Date	Size		
chnage background for help screen		MG	Done	Dec 1	Dec 4	Small		
chnage background for about screen		MG	Done	Dec 1	Dec 4	Small		
change layout of motion screen		MG	Done	Nov 25	Nov 28	Medium		
design buttons on/off		MG	Done	Nov 20	Dec 22	Small		
impliment notification for on button		MG	Done	Dec 1	Dec 3	Medium		
colorful Toast messge for on/off button		MG	Done	Dec 1	Dec 3	Small		
+ Add Subitem								

Dillon Permaul:

Epic: Complete the app with all functi...

Tasks

Subitems 0...

Person

Status

Size

Start Date

End Date

Update and Test Database

6

DP

DP

Done

Medium

Nov 29

Dec 5

Subitems

Owner

Status

Start Date

End Date

Size

Create a progress bar to use for a delay whe...

DP

Done

Nov 29

Dec 1

Medium

Add feedback and phone to database for revi...

DP

Done

Dec 2

Dec 4

Small

Add registration information to database

DP

Done

Dec 2

Dec 4

Medium

Implement progress bar for review

DP

Done

Dec 2

Dec 5

Small

Implement progress bar for registration

DP

Done

Dec 1

Dec 5

Small

Test database to ensure information is stored

DP

Done

Dec 1

Dec 5

Small

+ Add Subitem

Kamaljit Mahal:

Update Layout of all screens

6

KM

KM

Done

Medium

Nov 29

Dec 5

Subitems

Owner

Status

Start Date

End Date

Size

Fixed home layout in landscape mode

KM

Done

Nov 29

Dec 4

Medium

Added landscape layout for dashboard

KM

Done

Nov 29

Dec 4

Medium

Add landscape layout for review screen

KM

Done

Nov 30

Dec 4

Medium

Add landscape layout for notification

KM

Done

Nov 30

Dec 4

Medium

Add landscape layout for registration

KM

Done

Nov 30

Dec 4

Medium

Add landscape layout for about and help page

KM

Done

Nov 30

Dec 4

Medium

+ Add Subitem

Janpreet Singh:

Epic: Complete the app with all functi...

Tasks

Subitems 0...

Person

Status

Size

Start Date

Add Registration activity

5

Done

Large

Nov 24

Subitems

Owner

Status

Start Date

End Date

Size

Create registration java and xml file

Done

Nov 23

Nov 24

Medium

Add functionality to the activity with java code

Done

Nov 27

Dec 1

Large

Create fab button to take you to regi...

Edit

Done

Nov 25

Nov 26

Small

Add validation for email and password

Done

Dec 1

Dec 2

Medium

Create button with toast when user registers

Done

Dec 3

Dec 3

Small

+ Add Subitem

Submission to Google Play

Our Team will send an email with a link to the app

Google Play Console

Search Play Console

SmartLock

All apps

Dashboard

Inbox 4

Statistics

Publishing overview

Release

Releases overview

Production

Testing

Reach and devices

App bundle explorer

Setup

Grow

Releases overview

Add filter

Search releases

Latest releases

Release	Latest version	Track	Release status	Last updated	Countries / regions
1 (1.0)	1	Production	In review Full rollout	Dec 5, 2021 11:20 PM	176 of 176

Countries / regions

Country / region	Tracks
Albania	1 track Production
Algeria	1 track Production
Angola	1 track

Google Play Console

Search Play Console

SmartLock

All apps

Dashboard

Inbox 4

Statistics

Publishing overview

Release

Releases overview

Production

Testing

Reach and devices

App bundle explorer

Setup

-

Production

Create new release

Track summary

Active • Release 1 (1.0) In review • 177 countries / regions • 0 installs

Release dashboard Releases Countries / regions

Releases

1 (1.0)

In review • 1 version code

Hide summary

Version codes	1
Countries / regions	176
Supported Android devices	14,478

Go to device catalog

View release details

Google Play Console

Search Play Console

SmartLock

All apps

Dashboard

Inbox 4

Statistics

Publishing overview

Release

Releases overview

Production

Testing

Reach and devices

App bundle explorer

Setup

-

Production

1 (1.0)

Release summary

In review

View track

A Table records the daily stand-ups outcome
Tool used: invisionapp.com (Daily Standup Template)

Daily Standup

Sprint 4

November 26th 2021

Janpreet Singh

What did you work on yesterday?

Looked at comments from deliverable 3

What will you work on today?

Discuss what we need to to accomplish during sprint 4

Any blockers?

No blockers at the moment

Dillon Permaul

What did you work on yesterday?

Looked at comments from deliverable 3

What will you work on today?

Discuss what we need to to accomplish during sprint 4

Any blockers?

No blockers at the moment

Kamaljit Mahal

What did you work on yesterday?

Looked at comments from deliverable 3

What will you work on today?

Discuss what we need to to accomplish during sprint 4

Any blockers?

No blockers at the moment

Meet Gajjar

What did you work on yesterday?

Looked at comments from deliverable 3

What will you work on today?

Discuss what we need to to accomplish during sprint 4

Any blockers?

No blockers at the moment

Daily Standup

Sprint 4

November 29th 2021

Janpreet Singh

What did you work on yesterday?

Discuss what we need to to accomplish during sprint 4

What will you work on today?

Created new java and xml file for registration screen

Any blockers?

No blockers at the moment

Dillon Permaul

What did you work on yesterday?

Discuss what we need to to accomplish during sprint 4

What will you work on today?

Create a progress bar to create a delay when submitting review

Any blockers?

No blockers at the moment

Kamaljit Mahal

What did you work on yesterday?

Discuss what we need to to accomplish during sprint 4

What will you work on today?

Start work on C4 model Diagrams

Any blockers?

No blockers at the moment

Meet Gajjar

What did you work on yesterday?

Discuss what we need to to accomplish during sprint 4

What will you work on today?

Update Motion screen with creating new buttons and remove nullmsg

Any blockers?

No blockers at the moment

Daily Standup

Sprint 4

November 30th 2021

Janpreet Singh

What did you work on yesterday?

Created new java and xml file for registration screen

What will you work on today?

Continue working on implementing registration screen

Any blockers?

No blockers at the moment

Dillon Permaul

What did you work on yesterday?

Created a progress bar to create a delay when submitting review

What will you work on today?

Implemented the progress bar when submitting review

Any blockers?

No blockers at the moment

Kamaljit Mahal

What did you work on yesterday?

Start work on C4 model Diagrams

What will you work on today?

Remove commented out code through out the java files

Any blockers?

No blockers at the moment

Meet Gajjar

What did you work on yesterday?

Updated Motion screen with creating new buttons and remove nullmsg

What will you work on today?

Continue updating Motion screen and update monday sprint board

Any blockers?

No blockers at the moment

Daily Standup

Sprint 4

December 2nd 2021

Janpreet Singh

What did you work on yesterday?

Continued working on implementing registration screen

What will you work on today?

Create a fab button to take you to registration screen

Any blockers?

No blockers at the moment

Dillon Permaul

What did you work on yesterday?

Created a progress bar to create a delay when submitting review

What will you work on today?

Update the review screen to include phone number and feedback to be sent to the database

Any blockers?

No blockers at the moment

Kamaljit Mahal

What did you work on yesterday?

Removed commented out code through out the java files

What will you work on today?

Fix layout of home fragment in landscape view

Any blockers?

No blockers at the moment

Meet Gajjar

What did you work on yesterday?

Continued updating Motion screen and update monday sprint board

What will you work on today?

update monday sprint board and start test cases

Any blockers?

No blockers at the moment

Daily Standup

Sprint 4

December 3rd 2021

Janpreet Singh

What did you work on yesterday?

Created a fab button to take you to registration screen

What will you work on today?

Update registration screen and add functionality to it

Any blockers?

No blockers at the moment

Dillon Permaul

What did you work on yesterday?

Updated the review screen to include phone number and feedback to be sent to the database

What will you work on today?

Add registration information to database and add progress bar when submitting registration

Any blockers?

No blockers at the moment

Kamaljit Mahal

What did you work on yesterday?

Fix layout of home fragment in landscape view

What will you work on today?

Fix layout of any fragments and look for hardcoded text

Any blockers?

No blockers at the moment

Meet Gajjar

What did you work on yesterday?

updated monday sprint board and start test cases

What will you work on today?

Write test cases for mian activity

Any blockers?

No blockers at the moment

Project Review Meeting

Tool used: invisionapp.com (Retrospective Template)

TheDJKM

Project Review

Participants

Haki Sharifi, Dillon Permaul, Kamaljt Mahal, Janpreet Singh, Meet Gajjar

Performance review

	Planned	Actual	Variance
Schedule	06 December 2021	05 December 2021	1 day
Budget	\$50	\$37 (Google Play)	\$13
Quality	Deliverable 1 - 100 Deliverable 2 - 100 Deliverable 3 - 100 Deliverable 4 - 100 Total - 400	Deliverable 1 - 70 Deliverable 2 - 78 Deliverable 3 - 65 Deliverable 4 - 80 Total - 293	Deliverable 1 - 30 Deliverable 2 - 22 Deliverable 3 - 35 Deliverable 4 - 20 Total - 107

Time management

Every team member managed their time wisely, by planning ahead, setting clear priorities, minimizing their interruptions and focusing on one task at a time. Yes, there were times when everything was done last minute due to schedule interruptions but we ensured that it didn't affect our products performance in any way.

Did the project remain on schedule?

Set a soft deadline of 8 days before the end. Went one week over schedule, but finished well before the hard deadline of 6 December 2021 .

What helped the project remain on schedule?

Had very well managed deadlines for each section and stuck to them. Met each of those deadlines, the few extra days were spent making changes per our feedback and finalizing some pieces that had bugs show up in testing.

What prevented the project from remaining on schedule?

Very aggressive timeline. Didn't allow enough time for feedback and changes, and important changes/small bugs were too overwhelming to fix in the few extra days allotted.

What strategies were used to help the project stay on schedule?

Had daily communication with teammates as well as weekly check-ins about progress related to expectation.

What were the major goals & objectives of this project?

Goal was to build and code a successful android app to control the hardware for our capstone project..

Did the project deliverables align with these goals and objectives?

Yes. Had in-person and online planning meetings with teammates to explain our app and goals. Teammates were responsible for different processes, joining meetings and giving input to the rest of the team.

Did project outcomes help meet the goals and objectives?

It did.

Was the functionality promised as part of this project delivered at the end of the project?

Yes

What was not delivered and what might have caused this?

N/A

Were all the requirements met upon project completion?

Yes.

If requirements were not met, what caused this?

N/A

Does the system work as intended?

It does. We attempted to make some late adjustments per feedback received. A few of those were not able to be completed, but these were extra items not captured in original scope.

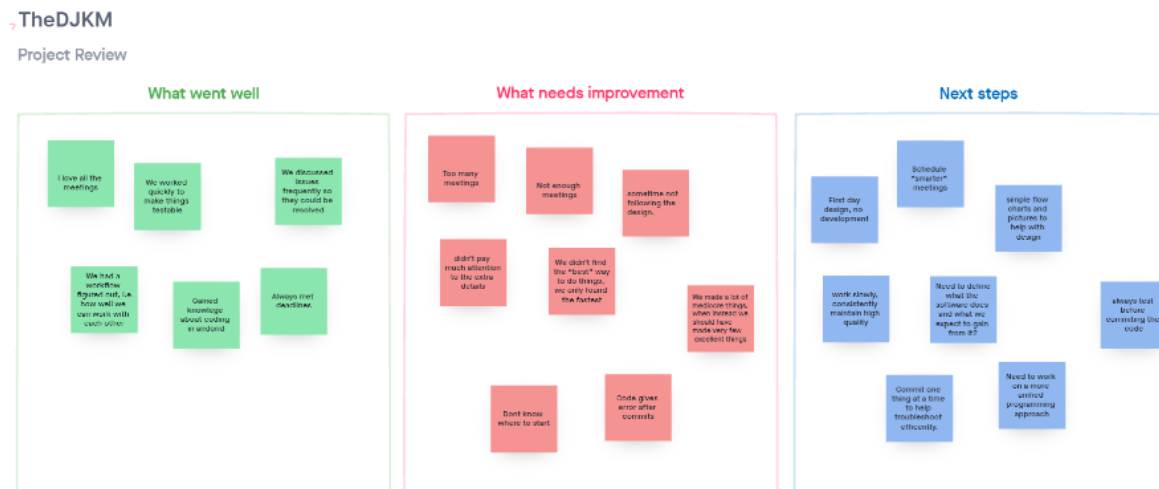
Suggestions for Instructor For the Future

Having a longer timeline to complete the project would have helped everyone involved, but given the circumstances I don't know that there was much that could have been improved upon.

The deliverable document can be better organized as sometimes you will have to read over the document multiple times and while working on the deliverable we still might miss important tasks to complete.

Overall, Thank You Prof Haki for a great semester and helping us further our knowledge of creating applications for android and preparing us for the future with your teachings of Project Management Methodology.

Project review meeting in inversion app



Project Review

What went well

I love all the meetings

We worked quickly to make things testable

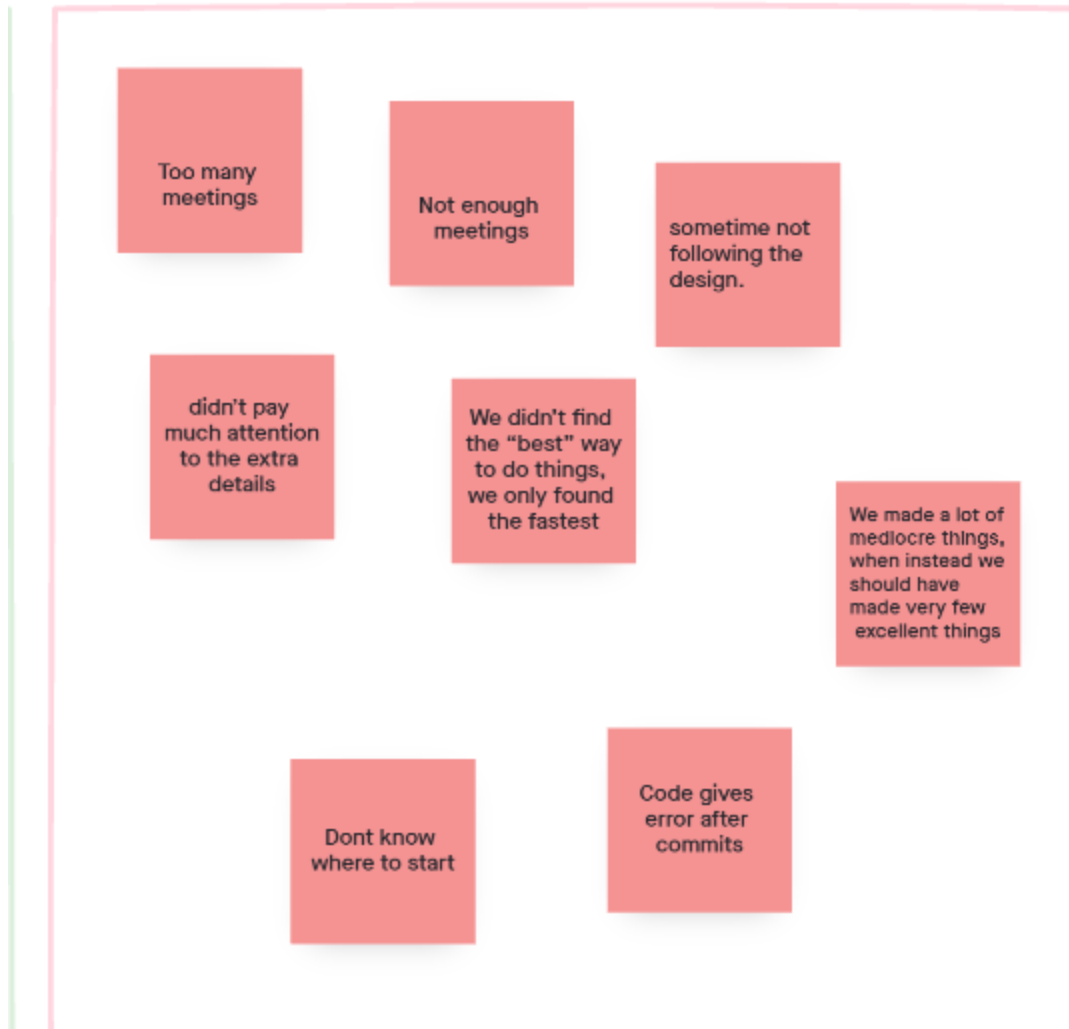
We discussed issues frequently so they could be resolved

We had a workflow figured out, i.e how well we can work with each other

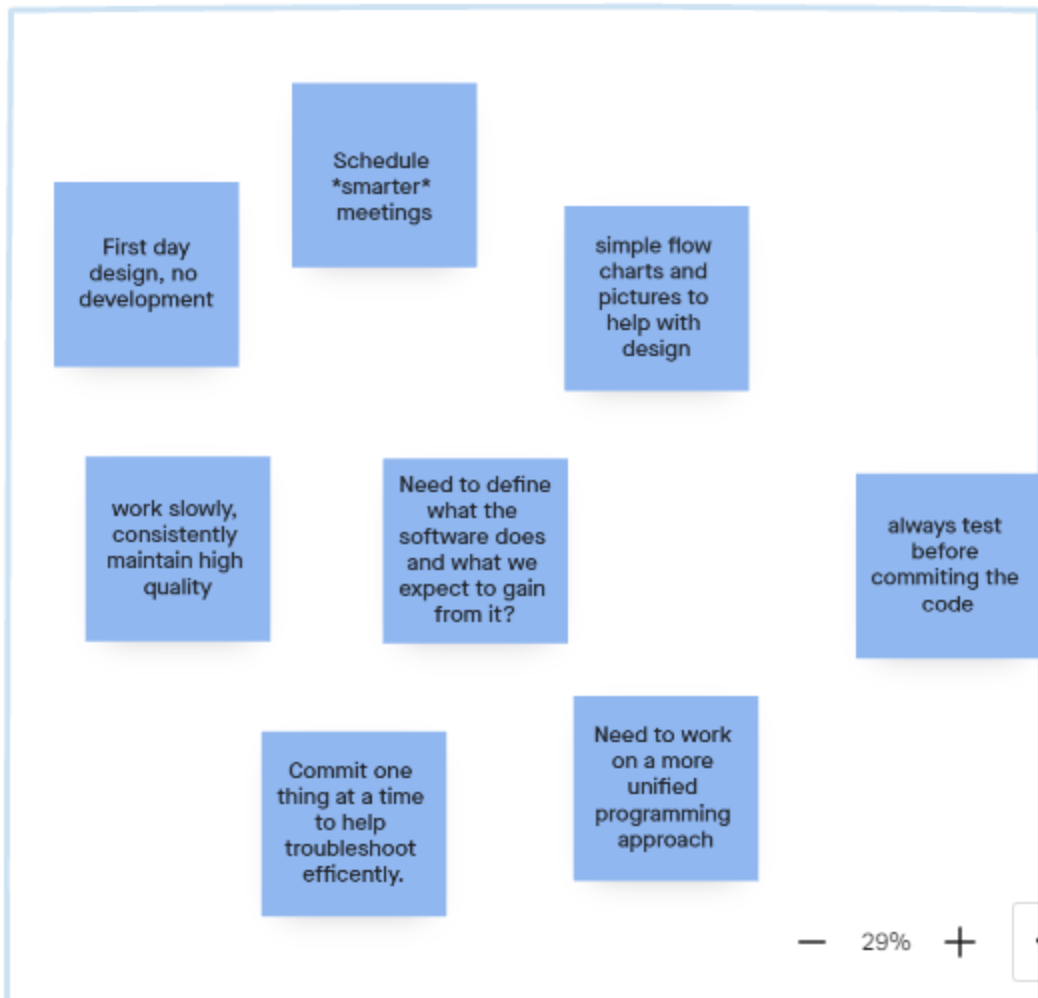
Gained knowledge about coding in android

Always met deadlines

What needs improvement

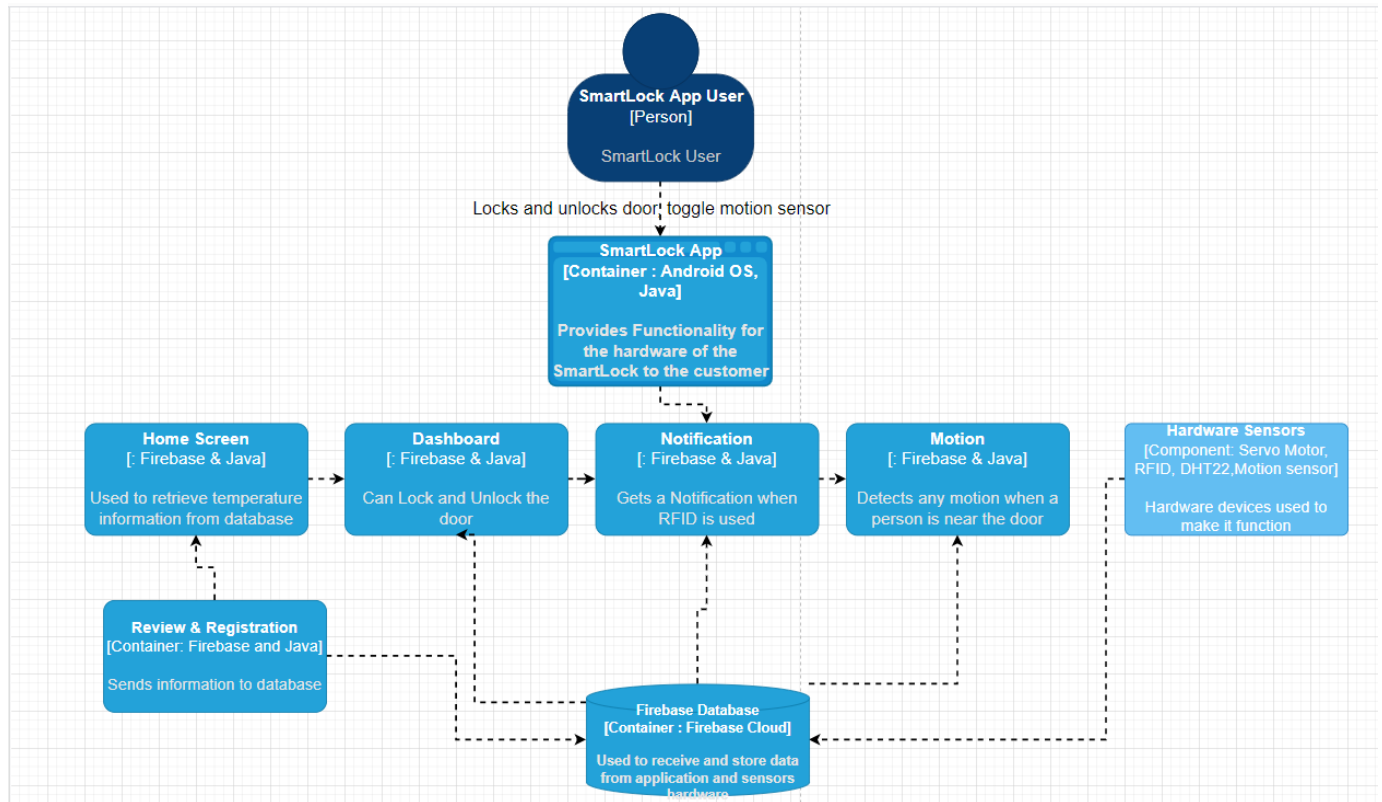


Next steps



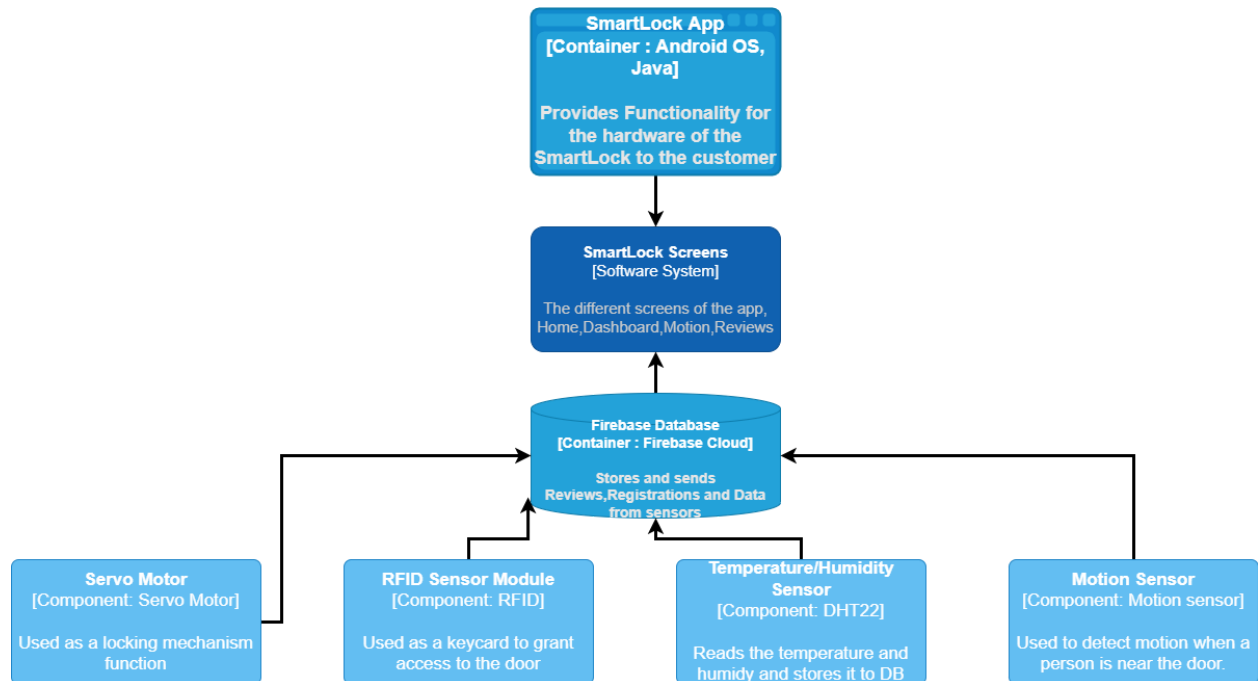
C4 Model of Container Diagram

Tool used: <https://app.diagrams.net/>



C4 Model of Component Diagram

Tool used: <https://app.diagrams.net/>



Coding work progress since deliverable 3:

- Create a registration activity
- Add a fab button to take you registration screen
- Created and implemented a progress bar for delay when submitting review and registration to database
- Update motion fragment
- Got rid of commented out code which was not used
- Add registration information to database
- Updated database for review screen
- Added hardcoded text to strings.xml and translated them to french
- Added snackbar missing from deliverable 3
- Attempted to create a notification on notification screen
- Write test cases for the app
- Implemented functionality for app settings

Runtime Permissions Implemented:

In our app we implemented the run time permissions of allowing access to system files. In the future this will be useful to create log files when motion is detected or the door had been unlocked,

Offline Functionality Implemented:

In our app we have implemented the offline features of the Help page where users can find contact information if they need help and also, an About page where they can learn about the SmartLock and the features and functionality of it.