

CENG-322

DELIVERABLE 3

Team name: F.R.I.E.N.D.S.& CO.

Project: Smart Parking

Members:

Ramesh Narayan Gaire – N01452430

Roshan Shrestha – N01457532

Rushi Bhandari – N01464259

Komal Bamotra – N01426087

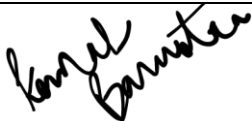



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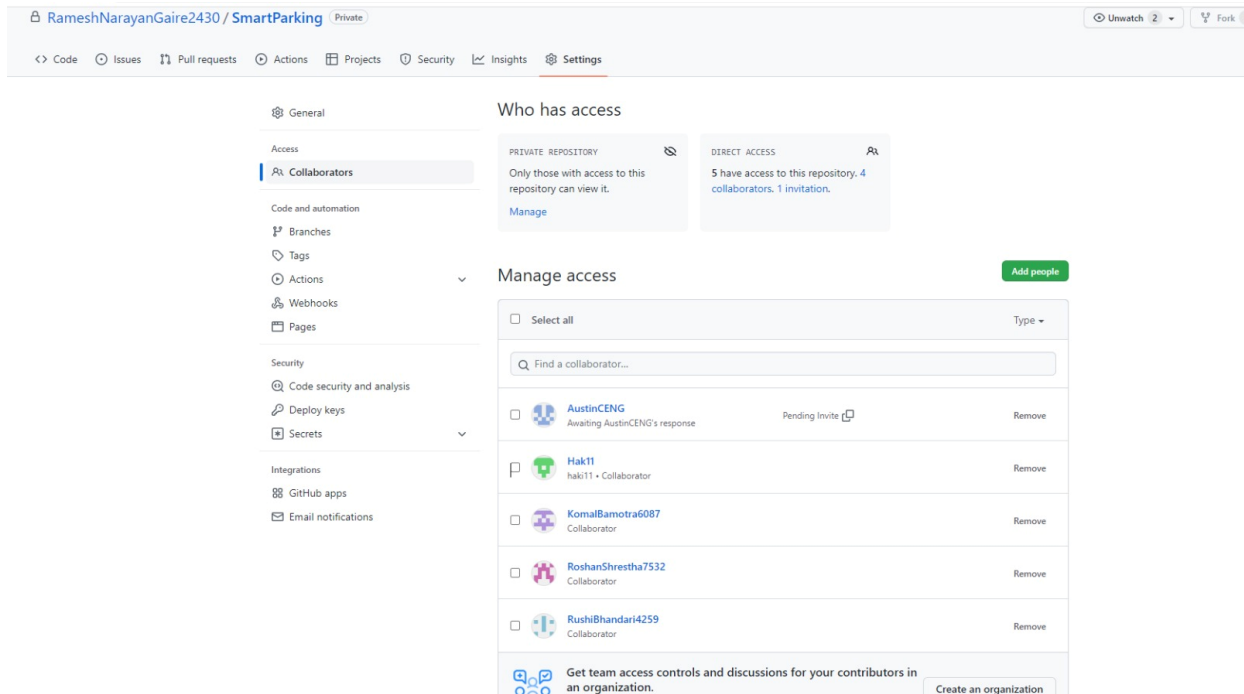
Brief description:

The application's name is Smart Parking. Basically, we have designed our application in a way that users can reserve their parking spot in much advance. This in turn will help the user to save their time to find the parking spots. Our main objective is to make parking convenient spaces for working-class individuals in crowded cities. Due to an increase in the number of cars being owned by city residents, parking is becoming an issue for everyone. The development of a smart parking application powered by the Internet of Things (IoT) provides parking managers and drivers with crucial information about available spots as well as related services like reservations of the spots.

Signatures:

Name	ID	Signature	Effort
Komal Bamotra	N01426087		100%
Ramesh Narayan Gaire	N01452430		100%
Roshan Shrestha	N01457532		100%
Rushi Bhandari	N01464259		100%

Screenshot of Invitation:



GitHub Repo link

<https://github.com/RameshNarayanGaire2430/SmartParking.git>

Login Information:

E-mail: narayanramesh22@gmail.com

Password: Ramesh22.

NOTE: You can register yourself as well

Sprint goals:

Sprint 1: 30th October 2022

Goal: To start the documentation and theory part of the deliverable 3 to get a clear picture on the project.

Sprint 2: 2nd November 2022

Goal: To include new ideas in the application into the project. Also, to ask professor for a suspended task.

Sprint 3: 5th November 2022

Goal: To complete the layout of the app, SharedPreferences and runtime permissions on the application till the next sprint.

Sprint 4: 8th November 2022

Goal: To complete the “System Context Diagram” using app.diagrams.net and changing the functionality of screens on the application.

Sprint 5: 11th November 2022

Goal: To complete every single task of the application as decided in the sprints and organize the document for final submit.

Stories and Tasks- Part 1

Implement from cloud DB and completion of settings screen

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	Data read from DB	+	R	Done	Nov 5	Low	Small	
<input type="checkbox"/>	functionality of updating of data from DB ...	+	K	Waiting for review	Nov 5	Medium	Medium	
<input type="checkbox"/>	Firebase authentication error solving	+	R	Working on it	Nov 5	Critical ⚠	Large	
<input type="checkbox"/>	Updated design of settings screem	+	RS	Working on it	Nov 5	Medium	Medium	
<input type="checkbox"/>	Functionality of buttons on the settings s...	+	R R K	Waiting for review	Nov 5	High	Large	
<input type="checkbox"/>	+ Add Task							

Runtime permissions creation and locking screen layout

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	getting the code for the permissions	+	R	Done	Nov 4	Medium	Small	
<input type="checkbox"/>	Working on the functionality of the permi...	+	K	Working on it	Nov 4	High	Medium	
<input type="checkbox"/>	Implementing the portrait and landscape ...	+	R	Waiting for review	Nov 4	Medium	Large	
<input type="checkbox"/>	updating the code in fragments and mani...	+	RS	Working on it	Nov 4	High	Large	
<input type="checkbox"/>	checking the permissions are functional	+	R	Waiting for review	Nov 4	High	Medium	
<input type="checkbox"/>	+ Add Task							

Completion of menu implementation with functionality

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	Modularized UI components using fragm...	+	K	Working on it	Nov 2	High	Large	
<input type="checkbox"/>	Display the information on Help page	+	R	Working on it	Nov 2	High	Medium	
<input type="checkbox"/>	Display info on Contact us updated	+	R	Done	Nov 2	Low	Medium	
<input type="checkbox"/>	Display Settings page functionality	+	RS	Waiting for review	Nov 2	High	Medium	
<input type="checkbox"/>	code review and testing of the menu	+	R R RS	To be done	Nov 2	Critical ⚠	Large	
<input type="checkbox"/>	+ Add Task							

Documentation part of project

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	Updated the monday.com roadmap	+	R	Done	Oct 31	High	Medium	
<input type="checkbox"/>	Working on the Gantt chart	+	RS	Working on it	Nov 3	Critical ⚠	Large	
<input type="checkbox"/>	Dashboard of the stories and tasks	+	K	Done	Oct 31	High	Medium	
<input type="checkbox"/>	Daily stand-up outcome details	+	R	Done	Nov 11	Critical ⚠	Large	
<input type="checkbox"/>	Working on system context diagram	+	R R RS K	Working on it	Nov 4	High	Large	
<input type="checkbox"/>	+ Add Task							

Stories and Tasks- Part 2

Adding feedback page and help option in toolbar

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	Design of the feedback page	+	R	Done	Nov 9	Medium	Medium	
<input type="checkbox"/>	Working of the text and rating bar buttons	+	R	Done	Nov 9	High	Large	
<input type="checkbox"/>	Linking of the feedback page to the home...	+	RS	Done	Nov 9	High	Large	
...	> <input type="checkbox"/> Help option link to the suppor... ↗ Open	+	K	Done	Nov 9	Medium	Small	
<input type="checkbox"/>	code reviews and error solving	+	R RS	Waiting for review	Nov 9	High	Small	
<input type="checkbox"/>	+ Add Task							

Home screen and settings screen features added

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	Dashboard design update	+	K	Done	Nov 7	Medium	Medium	
<input type="checkbox"/>	Working of buttons on home screen	+	R	Done	Nov 7	Medium	Large	
<input type="checkbox"/>	Updating the "About Us" button to show i...	+	R	Done	Nov 7	Low	Small	
<input type="checkbox"/>	mode change in settings screen	+	K	Waiting for review	Nov 7	High	Medium	
<input type="checkbox"/>	Notification switch button in settings scr...	+	RS	Waiting for review	Nov 7	High	Medium	
<input type="checkbox"/>	+ Add Task							

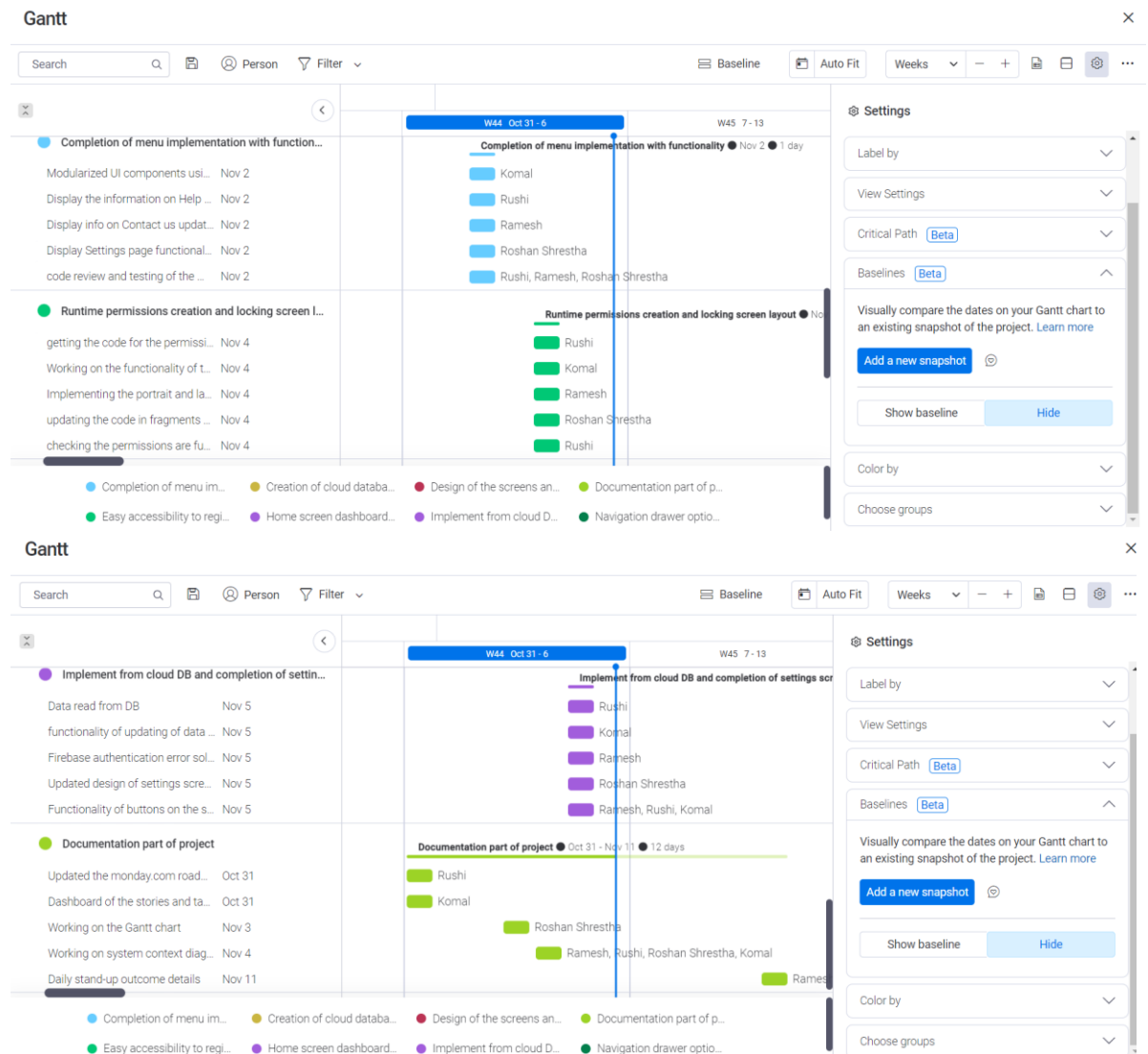
Additional features in login and registration screen

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	allowing user to login from different acco...	+	R	Working on it	Nov 10	High	Large	
<input type="checkbox"/>	implementing the "Remember Me" functi...	+	K	Waiting for review	Nov 10	Medium	Large	
<input type="checkbox"/>	Verifying the password and confirm pass...	+	RS	Working on it	Nov 10	High	Medium	
<input type="checkbox"/>	Solving the firebase authentication proble...	+	R	Stuck	Nov 10	Critical Δ	Large	
<input type="checkbox"/>	Code review and testing	+	R K	To be done	Nov 10	High	Medium	
<input type="checkbox"/>	+ Add Task							

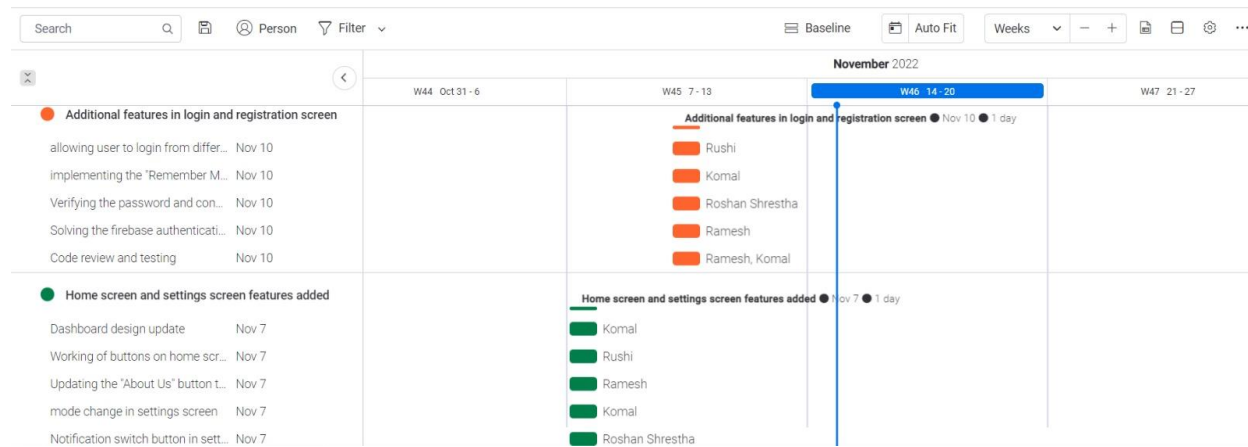
Error solving and working of fragments in application

<input type="checkbox"/>	Task		Person	Status	End Date	Priority	Size	+
<input type="checkbox"/>	Login and registration screens test	+	R	Stuck	Nov 12	Critical Δ	Large	
...	> <input type="checkbox"/> home screen buttons test ↗ Open	+	R	Done	Nov 12	High	Large	
<input type="checkbox"/>	Booking screen and booking details scre...	+	K	Done	Nov 12	High	Large	
<input type="checkbox"/>	Customer support and feedback screen t...	+	RS	Done	Nov 12	High	Large	
<input type="checkbox"/>	Logout screen and settings screen test	+	K R	Working on it	Nov 12	Medium	Medium	
<input type="checkbox"/>	+ Add Task							

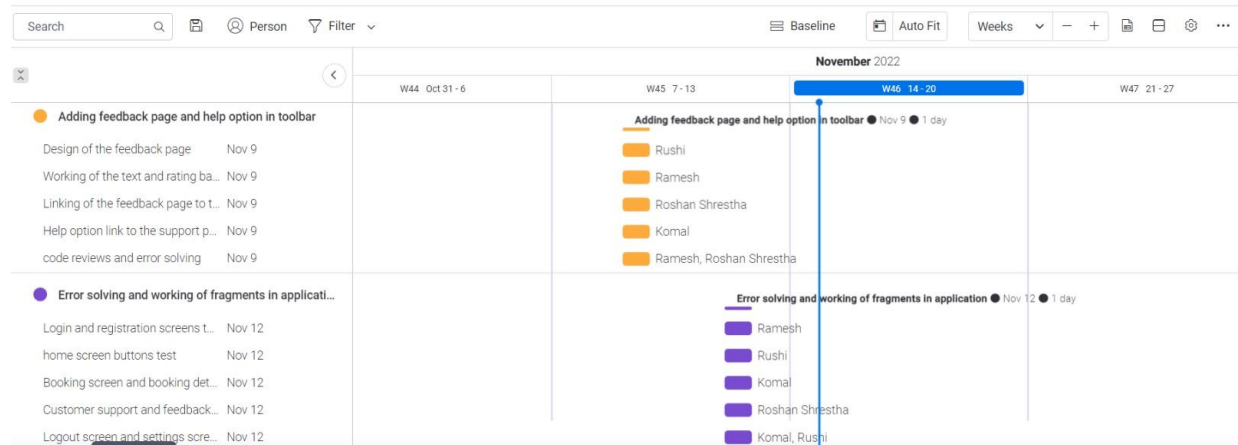
Dashboard:



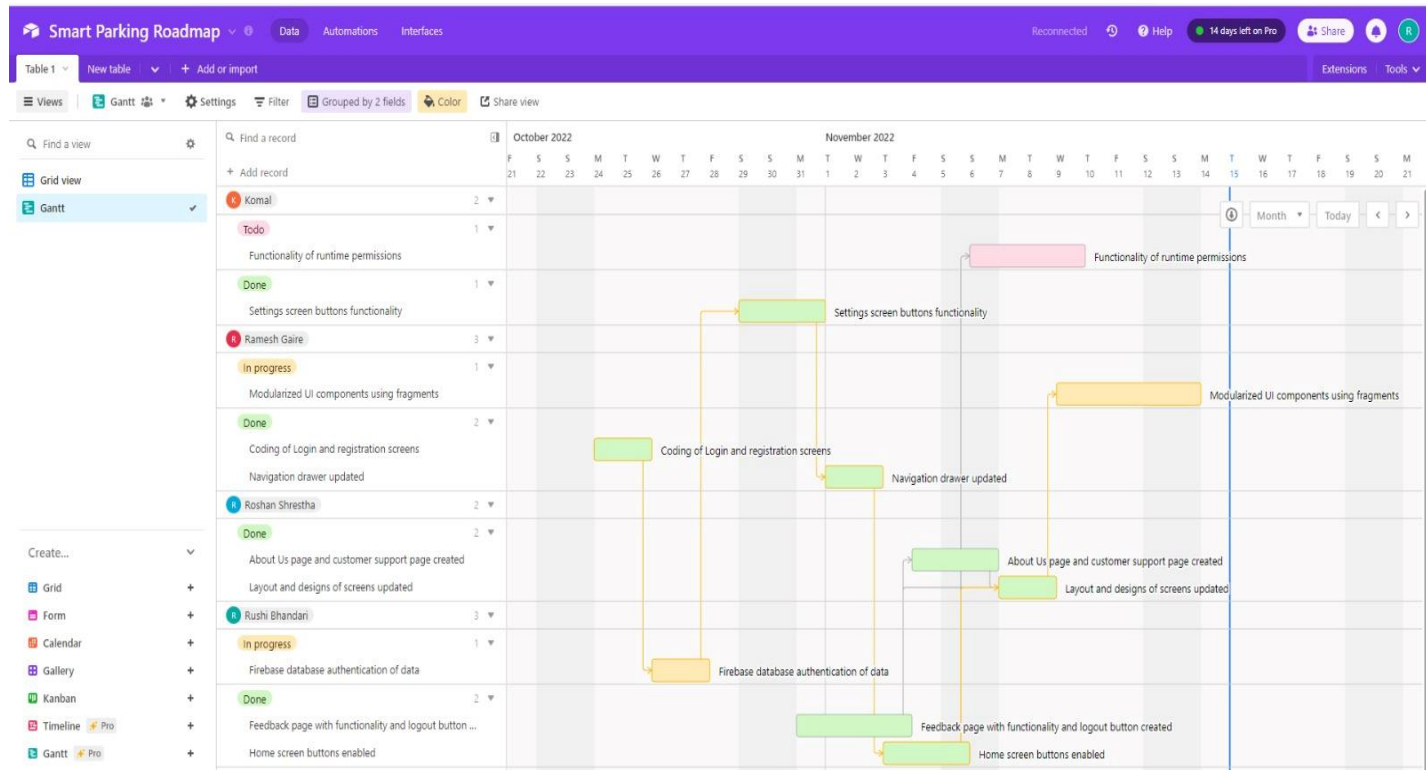
Gantt



Gantt



Gantt Chart:



Daily Stand-Ups

- Daily Stand-up 2's Outcome screenshot:

Daily Standup 2 (29 OCT)
Add to space

RS KB RG RB Present

Daily Standup

Gather teams to collect and share updates in a simple stand-up format.

Daily Stand-up 2

29 October 2022

Ramesh Narayan Gaire	Rushi Bhandari	Komal Bamotra	Roshan Shrestha
What did you work on YESTERDAY? Demonstrated the AlertDialog and Snackbar message into the application.	What did you work on YESTERDAY? Completed the firebase and added the dependencies.	What did you work on YESTERDAY? Completed design and layout of home dashboard and booking screens.	What did you work on YESTERDAY? Completed the design and layout of customer support, booking and feedback screens.
What will you do TODAY? Will complete the functionality of menu.	What will you do TODAY? Will work on the contact us button on the application.	What will you do TODAY? Will work on the splash screen of the application.	What will you do TODAY? Will complete the assigned work of code research of registration screen.
Any BLOCKERS? Error in the login application which needs to be solved immediately.	Any BLOCKERS? No blockers at the moment.	Any BLOCKERS? No blockers at the moment.	Any BLOCKERS? No blockers at the moment.

- Daily Stand-up 6's Outcome screenshot:

Daily Standup 6 (02 NOV)
Add to space

KB RG RS RB Present

Daily Standup

Gather teams to collect and share updates in a simple stand-up format.

Daily Stand-up 6

02 November 2022

Ramesh Narayan Gaire	Rushi Bhandari	Komal Bamotra	Roshan Shrestha
What did you work on YESTERDAY? Completed the toast messages on different buttons.	What did you work on YESTERDAY? Finished the linking of buttons on dashboard to the options in navigation toolbar.	What did you work on YESTERDAY? Worked on the orientation of the screens on the application.	What did you work on YESTERDAY? Updated the French xml file and layout of the logout page.
What will you do TODAY? Will work on the configuration setting and SharedPreferences to store the data.	What will you do TODAY? Will complete the "About us" page layout and functionality.	What will you do TODAY? Will complete the feedback screen settings.	What will you do TODAY? Will try to complete the system content diagram and runtime permissions.
Any BLOCKERS? No blockers at the moment.	Any BLOCKERS? No blockers at the moment.	Any BLOCKERS? Some errors in settings screen with notification button.	Any BLOCKERS? No blockers at the moment.

- Daily Stand-up 13 Outcome screenshot:

Daily Standup 13 (09 NOV)
Add to space

... KB RG RS **RB** Present

Daily Standup

Gather teams to collect and share updates in a simple stand-up format.

Daily Stand-up 13

09 November 2022

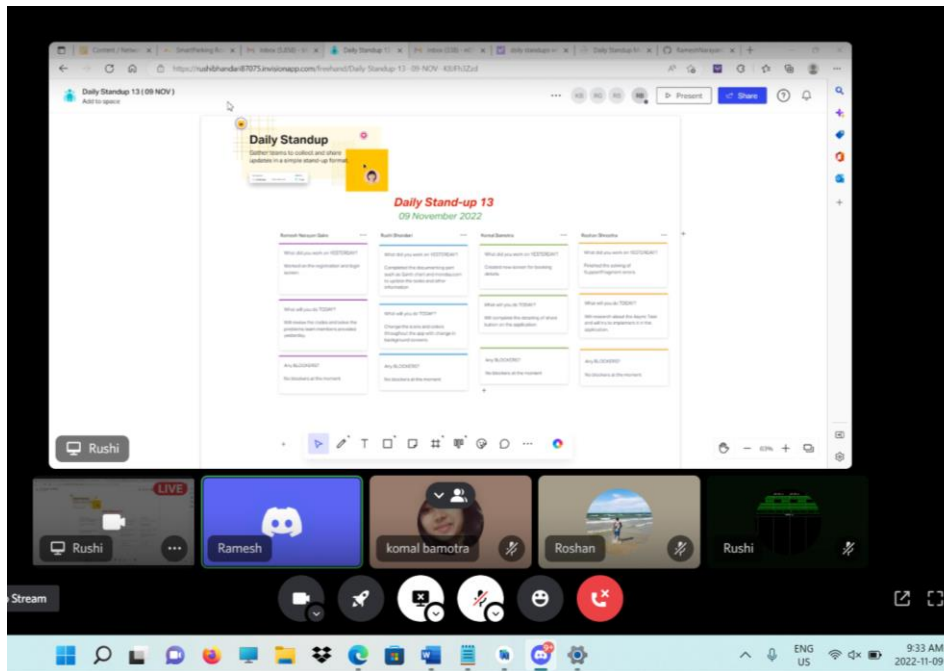
Ramesh Narayan Gaire	Rushi Bhandari	Komal Bamotra	Roshan Shrestha
What did you work on YESTERDAY? Worked on the registration and login screen.	What did you work on YESTERDAY? Completed the documenting part such as Gantt chart and monday.com to update the tasks and other information	What did you work on YESTERDAY? Created new screen for booking details.	What did you work on YESTERDAY? Finished the solving of SupportFragment errors.
What will you do TODAY? Will review the codes and solve the problems team members provided yesterday.	What will you do TODAY? Change the icons and colors throughout the app with change in background screens.	What will you do TODAY? Will complete the detailing of share button on the application	What will you do TODAY? Will research about the Async Task and will try to implement it in the application.
Any BLOCKERS? No blockers at the moment	Any BLOCKERS? No blockers at the moment	Any BLOCKERS? No blockers at the moment	Any BLOCKERS? No blockers at the moment

+

The screenshot captures a live stream of a Java Android development session. The main content area is an IDE window showing the implementation of a `SettingFragment` class, which extends `PreferenceActivity`. The code includes methods for saving and loading instance state, and a `load_setting()` method. The terminal window at the bottom displays a `lang.RuntimeException` error, indicating an issue with instantiating the `ComponentInfo` class.

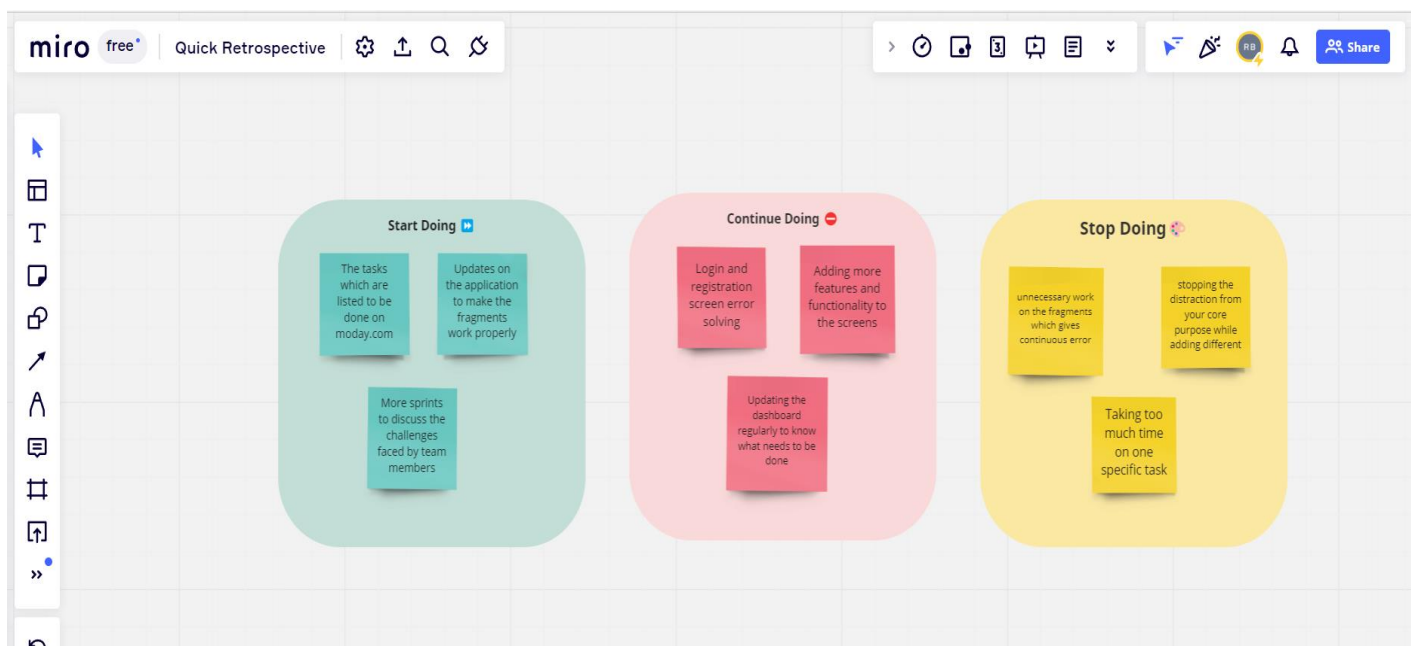
The stream interface includes a top bar with the title "Study Room 1", the streamer's name "Rushi Playing Netflix", and a "720p 30FPS LIVE" status. The bottom section features a "Rushi" video feed, a "Ramesh" chat window, and a list of other viewers: "komal bamotra" and "Roshan". The system clock at the bottom right shows 9:36 AM on 2022-10-29.

CENG-322

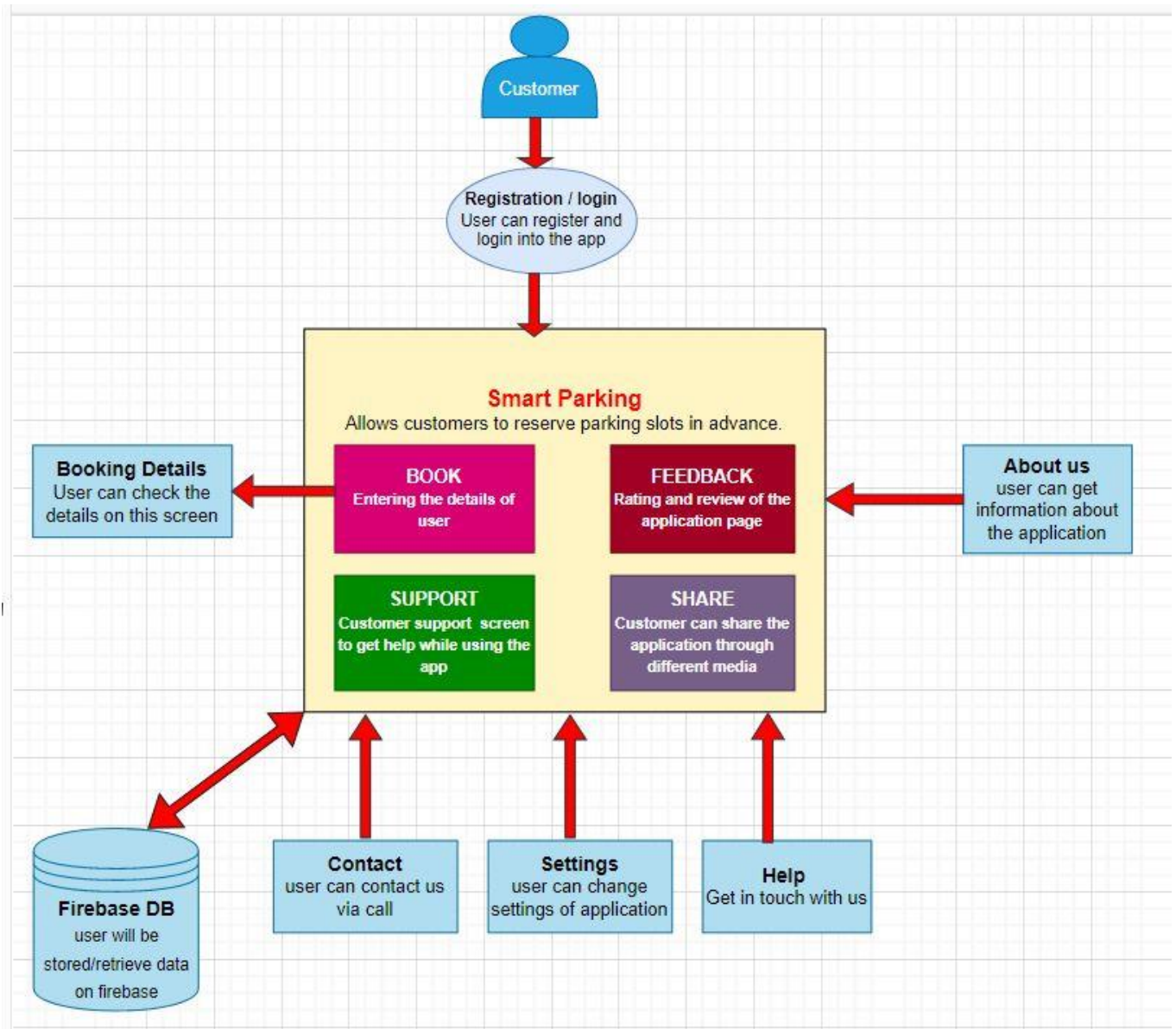


Who missed the meeting, marks will be deducted for missing the retro?
No team member missed the meeting once. All were punctual about the stand-ups

Sprint Retrospective:



C4 Model – System Context Diagram:



Design principles:

We used below listed design principles:

- KISS (Keep It Simple, Stupid): This principle suggests Unnecessary complexity in the coding of the application be avoided. As simplicity guarantees the greatest levels of user acceptance and interaction. KISS

is used in a variety of disciplines, such as interface design, product design, and software development.

- Next, we used the DRY principle in which DRY stands for "Don't Repeat Yourself," a basic principle of software development aimed at reducing repetition of information. The DRY principle is stated as, "Every piece of knowledge or logic must have a single, unambiguous representation within a system." We call the information for data used in booking of the spot, so we do not repeat the code in each class.
- Single responsibility principle is used as well in our code. It signifies that Each software module should have one and only one reason to change.

Design patterns:

We used design patterns such as:

- We have used OOP in our code. Object-oriented programming (OOP) is a programming paradigm based on the concept of objects, may contain data, in the form of attributes, and code, in the form of methods.
- We also used builder pattern which proceeds step-by-step and lets us specify the parts of AlertDialog that we need to specify. We used in MainActivity java class.

Coding work progress:

Since deliverable 2, we added many functionalities and new options for users for a better experience:

- Home screen dashboard designed with ease of accessibility of buttons
- Settings screen is created for the users to change the orientation of the app, the mode of the app and option for enable/disable notifications of the application

- Feedback screen is created for the users to add the rating and review of the application which will be stored on firebase.
- Customer support fragment is designed for users to get the help anytime when they have any doubts of the app.
- “About Us” screen is made to get any information regarding the application.
- Share screen is designed for users to share the application to friends and family.

Runtime permission:

We have invoked Calling runtime permission in our app for the users to call us when they face any problems with the application. The method which we used is `makePhoneCall()` and `checkSelfPermission(getContext())` to make the call permission possible for the user by clicking the Contact option from the menu item in overflow.

Customer Review Screen stored in the DB:

The image displays the Firebase Realtime Database interface and a mobile application emulator. The top section shows the Firebase console for a project named 'Smart Parking'. The 'Realtime Database' tab is selected, showing the database URL: `https://smart-parking-869f0-default-rtdb.firebaseio.com/`. The database structure is visible, showing a 'Feedback' node with a 'Customer Review' field containing the text 'Perfecto!!!' and a 'Rating' field containing the value '5'.

The bottom section shows a mobile application emulator running on a Pixel 5 device. The app's interface is titled 'Smart Parking' and features a 'Rate and Review' section. It displays five green stars, a text input field containing 'Perfecto!!!', and a blue 'SEND' button.

