# CENG-322

# Deliverable 2

EzLot
Ezpark

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| Name | Id | Signature | Effort |
|---|---|---|---|
| **Akashdeep Singh** | **n01458137** | | **100** |
| **Prashanna kc** | **n01467778** | | **100** |
| **Enrique robles** | **n01302490** | | **0** |
| **Abdicasis Ali** | | | **0** |

## Project Scope and Goals

Project Scope

We need to create an app that is able to communicate with our hardware from CENG 317 by transmitting and receiving data. To do that will need 3 sensors

To do this we plan to use a Raspberry Pi alongside the firebase hosting service

We plan to have four activities

Activity 1:

The first activity will be our home screen and will contain the name of the project and a button that sends the users to the booking activity.

Activity one should take us around one day to complete

Activity 2:

The second activity will contain the information of the user such as their name e-mail address phone number car model license plate number and other miscellaneous information.

This activity will also be used by the users to select the location and time that they want to park their vehicle after the user has filled in all the information there will be a button located at the bottom of the activity that takes the user to the payment screen

patient collected in this page will be stored in the firebase hosting system

due to this being one of the larger scopes of our project it will take proximately 30 days to complete

Activity 3:

the third activity used to collect payment methods. This screen will ask the user for their name, credit card number Expiration date, and CVV this pleasure also asks the user if they want to save their card information if the user selects the box the card information will be sent to the firebase hosting system add stored there After the user has entered the card information they can use the button at the bottom to pay for parking after the payment is completed the user will be receiving a notification and an e-mail confirming that they have booked and paid for the parking.

the confirmation notification will contain the name of the person alongside the last four digits of the card and the duration of the parking that they have selected.

as this is the second largest aspect of our project this should approximately take us approximately 30 days to complete.

Activity 4:

Activity 4 will be used as a setting screen the users will be able to change the applications to horizontal mode, change to dark mode, change the language to French and enable or disable access to the information connected to their phone

Due to the content of activity for being reliant on the rest of the app this will be done at the end we estimate better time these features will take is approximately 1 week

We will know that the project is complete when the app can rarely user information to the smart parking lot and additionally when the app updates its parking availability due to the changes in the sensors locked in the parking lot.

Gola

The goal of the project is to create an app that is connected to a smart parking lot. the parking lot will contain sensors that relay information back to the app with this incoming information from the smart parking lot the app will dynamically change to display the number of parking spots available additionally the app will be able to affect the parking lot by allowing users to pre-book for parking or extend the duration of their stay remotely.

**Sensors:**

**Proximity sensor:**

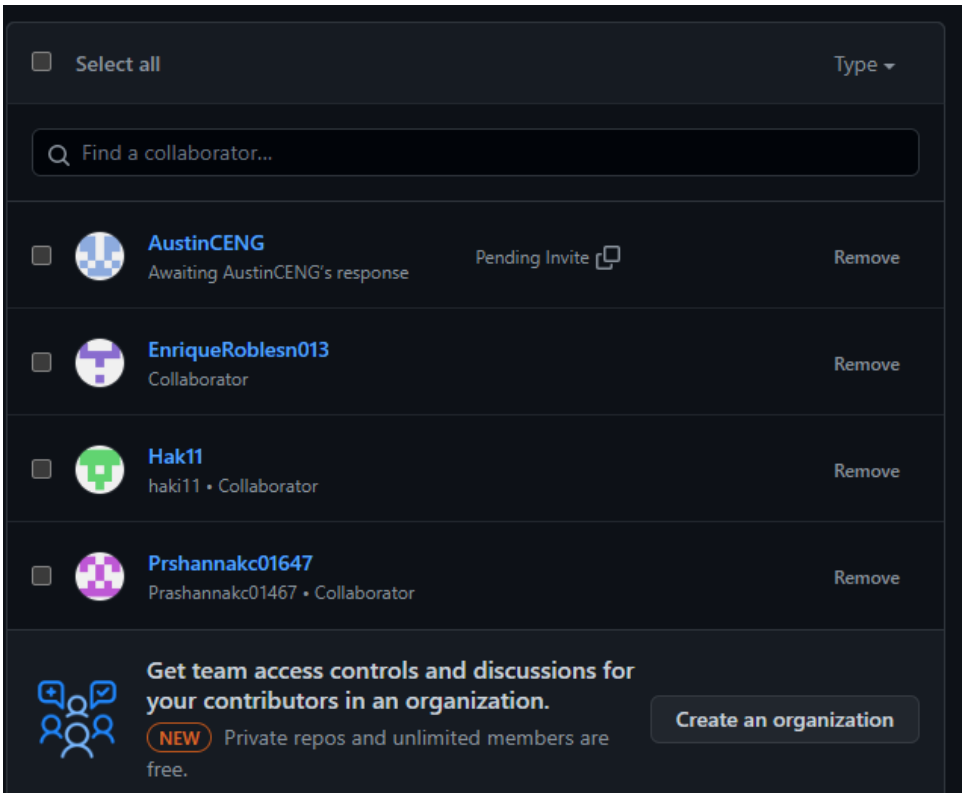
**The proximity sensor will be used to detect if a spot is occupied or not this information will then be related to the app through the firebase system If the proximity sensor detects an object within its range it will relate that the spot is occupied however if the sensor does not detect anything it will let the app know that there is a free spot available**

**NFC”**

**This sensor will be used to detect the nfc chip from a card or phone that can tell if the person is authorised to enter the parking lot or not. When the user will book a parking ticket. We will store it’s information in the firebase cloud storage and when user will tap it’s phone on the NFC sensor then, It will go through the cloud and check if that is permitted to go or not. This sensor will send the signal to servo sensor which will open the gate**.

**Link GitHub Repo. All members must contribute to the repo.**

**https://github.com/AkashSingh8137/ezpark.git**



**DoD criteria**

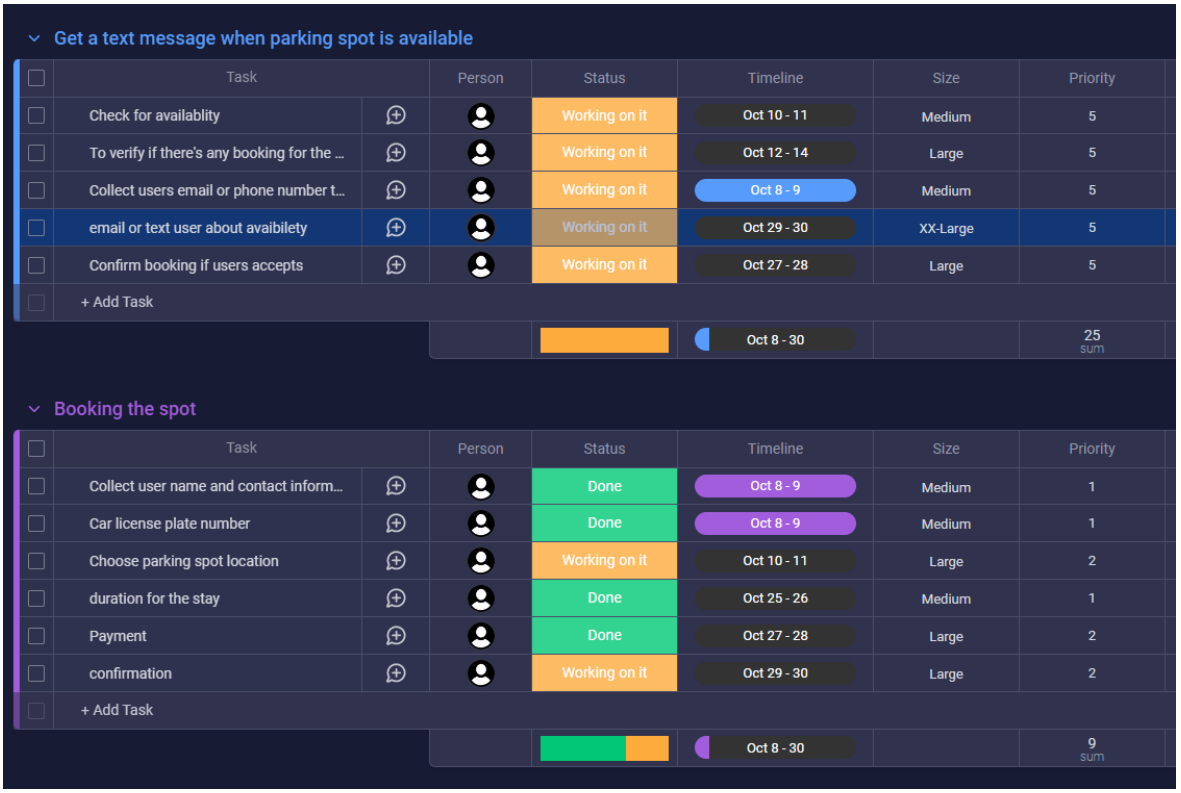
- **Home screen layout had been finalized and is done we added a background image alongside a text indicating the name of the app and team that created it additionally we also added a button that takes the user directly to the booking activity**
- **The splash screens had been added and appears before launching the app**
- **Back key dialog appears when the user processes the back button twice. ask the user if they are certain they want to exit the app followed by a prompt yes or no.**
- **The runtime permissions are done in the payment screen after the user has input the payment method alongside card information, they can click the checkbox that asks to save the card information after clicking the box The user gets a prompt requesting to access photos and media to store the receipt**
- **The bottom button navigation layout has been finalized and is implemented all the buttons lead to the appropriate action and the bottom button layout is present in all for activities**

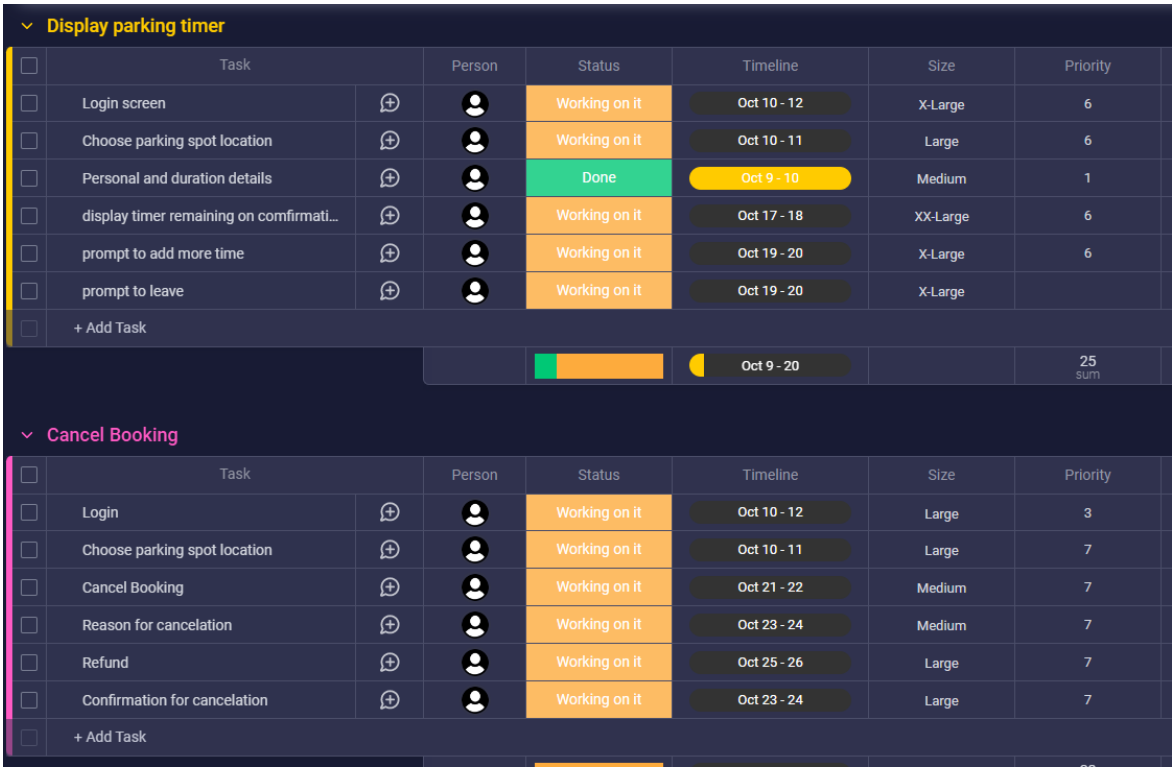
**Stories and tasks**

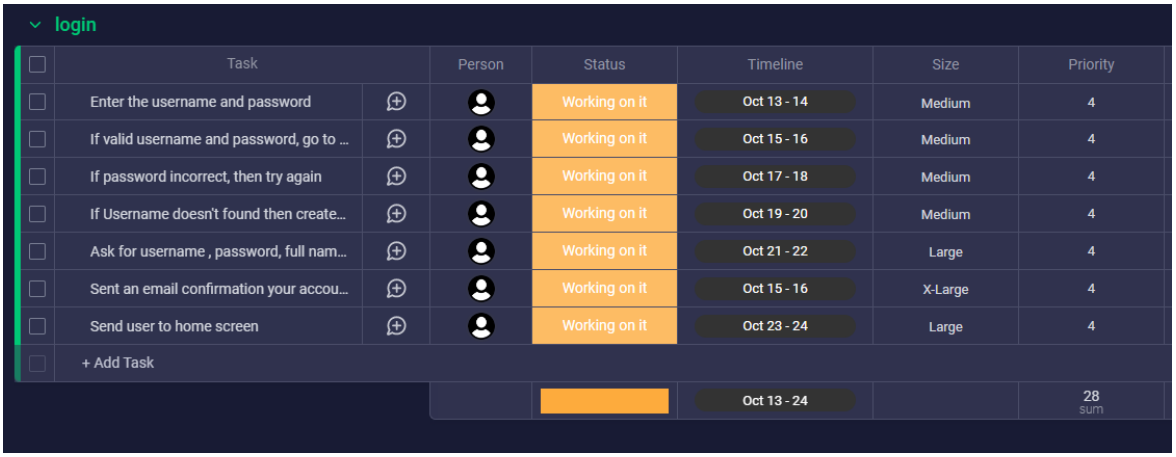
**Link for the Monday Dashboard:-**

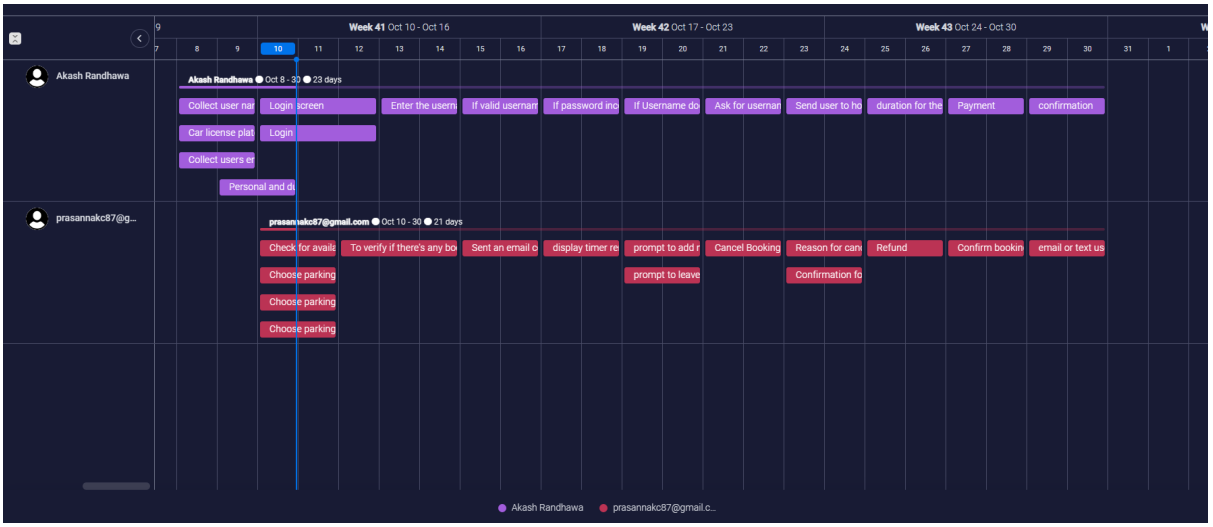
**https://imakashrandhawa.monday.com/boards/3345996163/**

**I have already sent mail for the invitation to the dashboard.**


Get a text message when parking spot is available
Task
Person
Status
Timeline
Size
Priority
Check for availablity
Working on it
Oct 10 - 11
Medium
5
To verify if there's any booking for the ...
Working on it
Oct 12 - 14
Large
5
Collect users email or phone number t...
Working on it
Oct 8 - 9
Medium
5
email or text user about avaibilety
Working on it
Oct 29 - 30
XX-Large
5
Confirm booking if users accepts
Working on it
Oct 27 - 28
Large
5
+ Add Task
Oct 8 - 30
25
sum
Booking the spot
Task
Person
Status
Timeline
Size
Priority
Collect user name and contact inform...
Done
Oct 8 - 9
Medium
1
Car license plate number
Done
Oct 8 - 9
Medium
1
Choose parking spot location
Working on it
Oct 10 - 11
Large
2
duration for the stay
Done
Oct 25 - 26
Medium
1
Payment
Done
Oct 27 - 28
Large
2
confirmation
Working on it
Oct 29 - 30
Large
2
+ Add Task
Oct 8 - 30
9
sum


Display parking timer
Task
Person
Status
Timeline
Size
Priority
Login screen
Working on it
Oct 10 - 12
X-Large
6
Choose parking spot location
Working on it
Oct 10 - 11
Large
6
Personal and duration details
Done
Oct 9 - 10
Medium
1
display timer remaining on comfirmati...
Working on it
Oct 17 - 18
XX-Large
6
prompt to add more time
Working on it
Oct 19 - 20
X-Large
6
prompt to leave
Working on it
Oct 19 - 20
X-Large
+ Add Task
Oct 9 - 20
25
sum
Cancel Booking
Task
Person
Status
Timeline
Size
Priority
Login
Working on it
Oct 10 - 12
Large
3
Choose parking spot location
Working on it
Oct 10 - 11
Large
7
Cancel Booking
Working on it
Oct 21 - 22
Medium
7
Reason for cancelation
Working on it
Oct 23 - 24
Medium
7
Refund
Working on it
Oct 25 - 26
Large
7
Confirmation for cancelation
Working on it
Oct 23 - 24
Large
7
+ Add Task




## Business Model Canvas:

# The Business Model Canvas

Designed for: **EZPARK** | Designed by: **EZLOT** | Date: **7/10/2022**

### Key Partners
- Drivers
- Parking lot owners
- Financial Investors
- Government
- College and universities
- Condo owner
- Hotel's
- Tourists

### Key Activities
- Keep prices competitive
- Expand to more cities and countries
- Maintain a platform
- Collect and analyse data

### Key Resources
- Apps for drivers
- Network effects between drivers and parking lot reception
- Developers and other staff

### Value Propositions
- Simple and fast booking process
- Variety of parking location to choose from
- Cashless Payments
- Rating system
- Competitive pricing match
- Remote parking management.

### Customer Relationships
- Self- service
- 24/7 Customer Service
- Relationship with parking lot owners

### Channels
- Paid ads through apps with high ratings
- Word of mouth
- Social Media ads
- App stores through high ratings

### Customer Segments
- People preferring mobile payments
- Easy method to find cheap parking in crowded city.
- Foreign and business travellers
- Hiring programmers and customer service team.

### Cost Structure
- Advertisements
- Research and developments
- Transaction fees
- Database and server management
- Customer Service

### Revenue Streams
- Percentage of parking fee
- Monthly subscriptions by parking lots
- Running ad on our app
- Booking and cancelation fees

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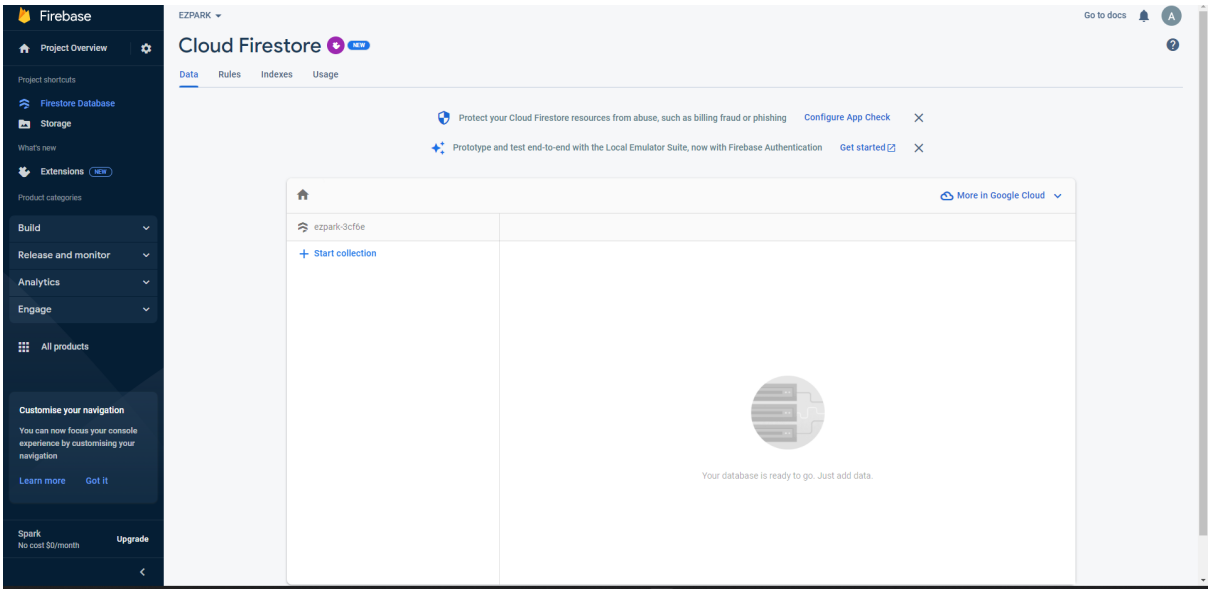
**DesigneD by:** Strategyzer AG
*The makers of Business Model Generation and Strategyzer*

Strategyzer
strategyzer.com

## DataBase

## Type of DataBase:-

## Cloud FireStore



## Daily- Standups

| | Oct 6 | Oct 7 | Oct 9 | Oct 10 |
|---|---|---|---|---|
| What did we do yesterday | | Prashanna:- You researched on database and worked on splash screen<br>Akash:- I have made the rough sketch for both parts of deliverable and did research and found a website to create a animated splash screen | We made the Business Model Canvas. We are doing the Daily Stand-ups.<br>Prashanna: I am working on Splash Screen<br>Akashdeep Singh: I have changed the Home Screen Button. Add the new Configuration/setting Tab | Prashanna:I have done the splash Screen<br>Akashdeep Singh:I have completed the Back-key dialog,payment Screen and did the run-time permission |
| What we are going to do today | Prashanna :-I decided to do research on the database<br>Akash:- i decided to make rough sketch on what we need to do in deliverable 2 and app features<br>We both decided to meet on Oct 7 for the next meeting | We planned to work on stories and tasks on Monday. Secondly, We build the Business canvas model and We worked on Miro . . Prashanna :- I have decided to create a database and connect the app to it. and for the app , i'll be doing splash screen<br>Akashdeep :- I'll be working on the application.I have decided to Run time permission, snackbar ,and back key dialog and 2 features for setting screen | Prashanna: I'll Complete the Splash Screen and Work on landscape Mode.<br>Akashdeep Singh: I'll make the all 4 screens and make run-time permission. | Prashanna: I'll be working Landscape Mode.<br><br>Akashdeep Singh: I'll make the snackbar and complete the Home and Settings screen |
| Issue | | Issues on the firebase database | | The main issue we are facing is that we are just 2 members and there's alot to do. |