

# Deliverable 2

Smart Blind Add-on  
Blind Dev

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# Table of Contents

<b>Project Description</b>	<b>3</b>
<b>Member Info and Participation</b>	<b>3</b>
<b>Github Link and Screenshots</b>	<b>4</b>
<b>Stories</b>	<b>4</b>
<b>Business Model Canvas</b>	<b>5</b>
<b>Database</b>	<b>6</b>
Firebase Realtime Database Configuration	6
<b>Coding Progress</b>	<b>7</b>

## Project Description

The smart blind addon is a wirelessly controlled device that is to be mounted to a blind existing operation controls in order to control its operation wirelessly. The device needs two things to operate, the app that will display device data and control the device and a connection to a firebase database, in order to exchange data from the app to the device.

## Member Info and Participation

Name	ID	Signature	Effort
Amit Punit	n01203930		100%
Andrew Fraser	n01309442		100%
Chris Janelle Mutuc	n01314607		100%
Vyacheslav Perepelytsya	n01133953		100%

# Github Link and Screenshots

GitHub link: <https://github.com/AmitPunit3930/SmartBlindAddon.git>

ScreenShot of Invitation:

**Manage access** Add people

Select all Type ▾

Find a collaborator...

Collaborator	Role	Action
<b>ali-lab2020</b> Awaiting ali-lab2020's response	Pending Invite	Remove
<b>andrewFraser9442</b> Collaborator	Collaborator	Remove
<b>Chris Mutuc</b> ChrisMutuc4607 • Collaborator	Collaborator	Remove
<b>VyacheslavPerepelytsya3953</b> Collaborator	Collaborator	Remove

**Get team access controls and discussions for your contributors in an organization.** Create an organization

**NEW** Private repos and unlimited members are free.

## Stories

Link to viewable page (with full DoD information):

<https://view.monday.com/2789650579-eb326b7976f0c1eeeba35b004f81cfa4?r=use1>

(Screenshot is of a lot of information so zoom in might be required to see details)

Stories						Tasks	Person	Status	Date	Text
New User Registration								Working...	Jun ..	Done status is reac...
Subitems		Owner	Status	Date						
Add a "New User" button on login screen			Working on it	Jun 17						
Add User 'Email' and 'Password' fields			Working on it	Jun 17						
Configure the Firebase User Authentication Server			Working on it	Jun 17						
Add code to save the user email and password to the Firebase Server			Working on it	Jun 18						
Test creation of a new user on Firebase and correct errors			Working on it	Jun 19						

User Login						Tasks	Person	Status	Date	Text
User Login								Working...	Jun ..	Done status is achi...
Subitems		Owner	Status	Date						
Create fragment that is triggered when the app is open or the menu item is pressed			Working on it	Jun 20						
Add two fields to enter email and password			Working on it	Jun 20						
Configure firebase to allow users to connect via email and password and google account			Working on it	Jun 21						
Implement google login feature in app			Working on it	Jun 22						
Verify that user is correctly logged in to app and correct errors			Working on it	Jun 22						
+ Add Subitem										

Add blind						Working...	Jun ...	Done status achiev...
Subitems	Owner	Status	Date					
Add EditTextFields for the blind location, blind key and the height of the window		Working on it	Jun 24					
Add Button to display form in the manage blinds fragment		Working on it	Jun 24					
Add Button to submit the data		Working on it	Jun 24					
Implement code for transferring user blind data to the firebase database		Working on it	Jun 25					
Verify that the correct data is created on the database end and correct errors that occur		Working on it	Jun 26					

Operate Blind						Working...	Jun ...	Done status achiev...
Subitems	Owner	Status	Date					
Add two buttons to the homepage fragments, one labelled 'Open' and the other 'Close'		Working on it	Jun 27					
Program "Open" button to send the command to open the blind to the firebase database		Working on it	Jun 28					
Program "Close" button to send the command to close the blind to the firebase database		Working on it	Jun 28					
Write test code on Raspberry PI 4 to confirm functionality		Working on it	Jun 29					
Test code and correct any encountered errors.		Working on it	Jun 30					

Support System & Contact Form						Working...	Jun ...	Done status is reac...
Subitems	Owner	Status	Date					
Add EditTextFields to enter the users name, phone number, email and description of the issue they're having		Working on it	Jun 27					
Add verification functionality to verify user entered necessary information and detect spam/common issues		Working on it	Jun 28					
Add Button to submit the data		Working on it	Jun 28					
Add FAQ and common issues functionality to resolve common issues for better user experience		Working on it	Jun 29					
Implement code to transfer/receive the necessary information on the firebase database for tech support to r...		Working on it	Jun 30					

## Business Model Canvas

<b>Key Partners</b>  *Investors *Developers *Retail Partners *Manufacturers	<b>Key Activities</b>  *Competitive Prices *Collect Data *Smart Home Accessories *DIY nature of the device	<b>Value Propositions</b>  *add smart capabilities to existing blinds *easy to get temperature data for different rooms *cheaper to add automatic function to blinds	<b>Customer Relationships</b>  *self-service *customer service provided thru email	<b>Customer Segments</b>  *DIY customer *Homeowners and Renters *Hotel or Motel owner and managers *LandLords
	<b>Key Resources</b>  *Gather data *low-cost parts		<b>Channels</b>  *paid and free advertisement *infomercials *Retail displays	

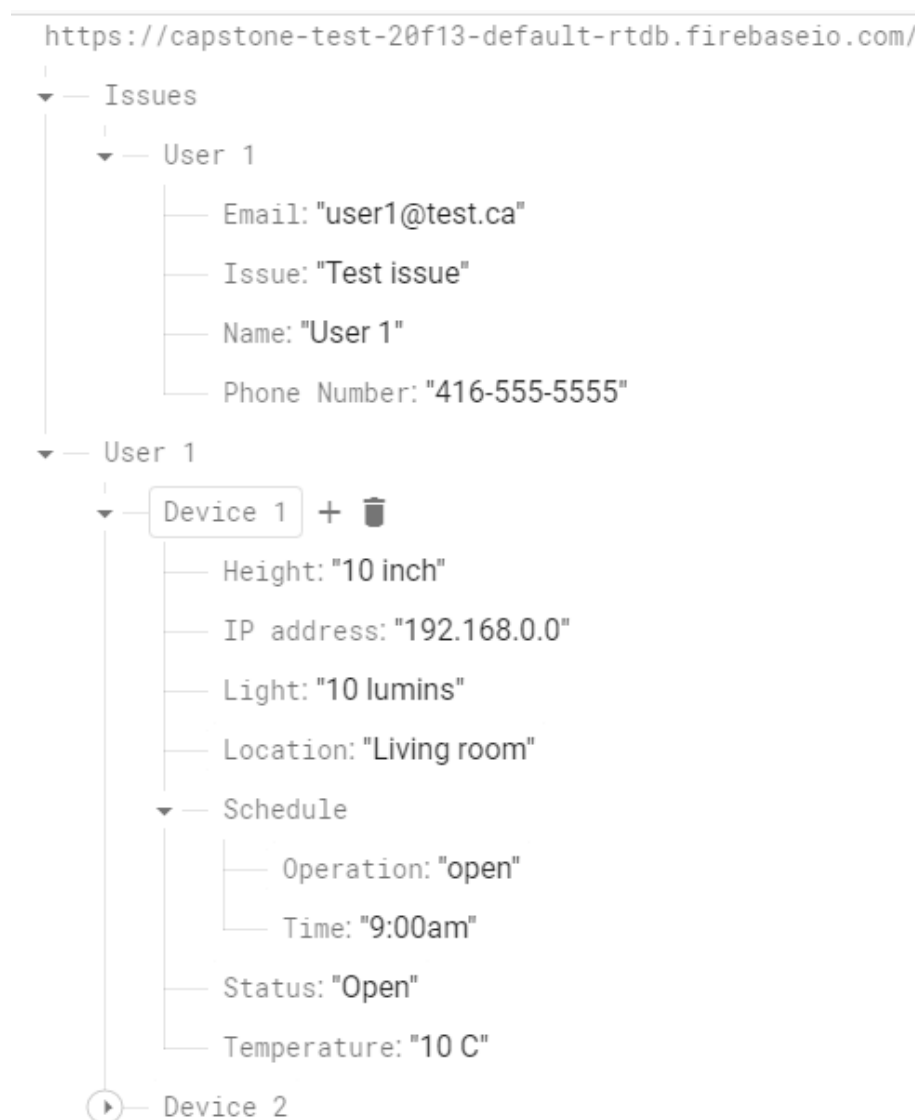
<b>Cost Structure</b>  *Materials cost of Device *Database host cost	<b>Revenue Streams</b>  *Cost of device *selling data to third parties with users
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*Research and Development	permission
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## Database

The cloud database that will be used is the Firebase realtime database. This database is used because of its built-in feature that the app can use like user authentication. Also, the real-time feature of the database makes it ideal to use the database to send commands to the device to accomplish its function. Below is an example of how the Firebase database is configured.

### Firebase Realtime Database Configuration



\*Device 2 is configured the same as Device 1

## Coding Progress

Developer	Development Progress	Date added
Amit Punit	<ul style="list-style-type: none"> <li>Added the manage blinds, and schedule blinds fragments</li> </ul>	June 7th, 2022
Chris Mutuc	<ul style="list-style-type: none"> <li>Implementation of runtime service.</li> <li>Changed background colour for each screen.</li> <li>Implemented menu items</li> </ul>	June 8, 2022
Chris Mutuc	<ul style="list-style-type: none"> <li>Implemented Splash screen.</li> </ul>	June 9, 2022
Andrew Fraser	<ul style="list-style-type: none"> <li>Created template for login screen as well as java class</li> <li>Imported image for the login screen and set it as background</li> <li>If login is successful, the main activity is started</li> <li>Updated AndroidManifest.xml to accept loginActivity</li> </ul>	June 9, 2022
Amit Punit	<ul style="list-style-type: none"> <li>Added the necessary input fields for the manage blinds screen</li> </ul>	June 9th, 2022
Chris Mutuc	<ul style="list-style-type: none"> <li>Added more functionality for the Splash Screen</li> </ul>	June 9th, 2022
Amit Punit	<ul style="list-style-type: none"> <li>Added back press dialog to main</li> </ul>	June 10th, 2022

	activity <ul style="list-style-type: none"> <li>• Login page opens when menu item pressed</li> </ul>	
Vyacheslav Perepelytsya	<ul style="list-style-type: none"> <li>• Updated the menu code, added 'break;' so that there is no overflow glitch</li> <li>• Added separate placeholder functionality for settings menu item</li> </ul>	June 10th, 2022
Amit Punit	<ul style="list-style-type: none"> <li>• added google sign-in button to login screen</li> <li>• Added landscape layout for app</li> <li>• Change layouts to other fragments to make them useable</li> <li>• Added image to troubleshooting fragment</li> <li>• Added layout to the schedule fragment</li> </ul>	June 11th, 2022
Vyacheslav Perepelytsya	<ul style="list-style-type: none"> <li>• Created, designed and filled the settings activity with features, including a separate design in the landscape layout, as well as created a functional java class of the settings screen</li> <li>• Added the Settings Activity to AndroidManifest.xml</li> <li>• Programmed Apply button in settings to go back to main activity</li> <li>• Made the settings menu item stand out with both icon and text shown all the time, added appropriate icon mipmap</li> <li>• Inserted a wrench</li> </ul>	June 11th, 2022



	<p>image with resizable properties into settings</p> <ul style="list-style-type: none"><li>• Translated all of strings.xml to french and filled the french strings.xml version</li></ul>	
Chris Mutuc	<ul style="list-style-type: none"><li>• Added text style on every fragment layout</li></ul>	June 11th,2022