Rent Easy

Udacity Nanodegree-Capstone I
Android application

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[This document is created as part of android nanodegree capstone project I]

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DESCRIPTION

Rent Easy is centralized platform where you can select the products offered by our associate vendors for renting.From rental agreements to security deposit our streamlined process ensures a hassle-free renting experience.Rent Easy has many category verticals such Furniture, Vehicles, Premium designer clothes. We will deliver product to your doorsteps

INTENDED USER

This app will save people from

- The huge investments and effort in buying furniture and then reselling it later.
- The unstructured public transport
- Large expense in purchasing top class designers

FEATURES

App will have following features

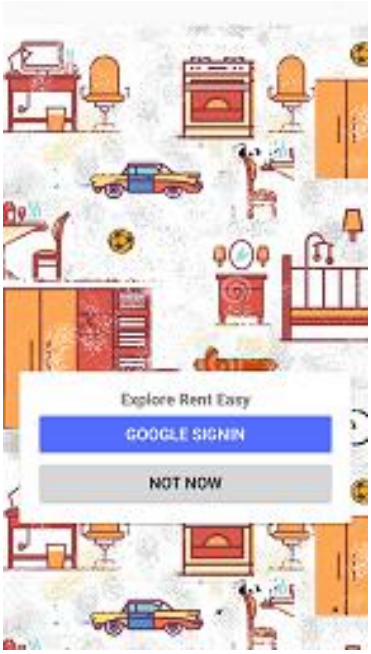
- View verified products listing in furniture , vehicles ,clothes
- View product details and rent pricing
- User can add product to favorites
- User can add items to cart
- User will pay deposit while ordering and pay rents monthly
- User can track the orders and pay rent amount

USER INTERFACE MOCKS

User interface mocks for the Rent Easy application is as follows

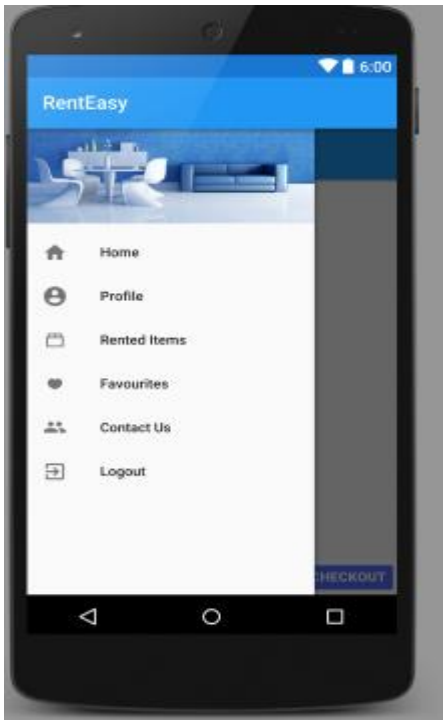
Login page screen

Login page screen will show user sign in option such as Google sign in and guest login

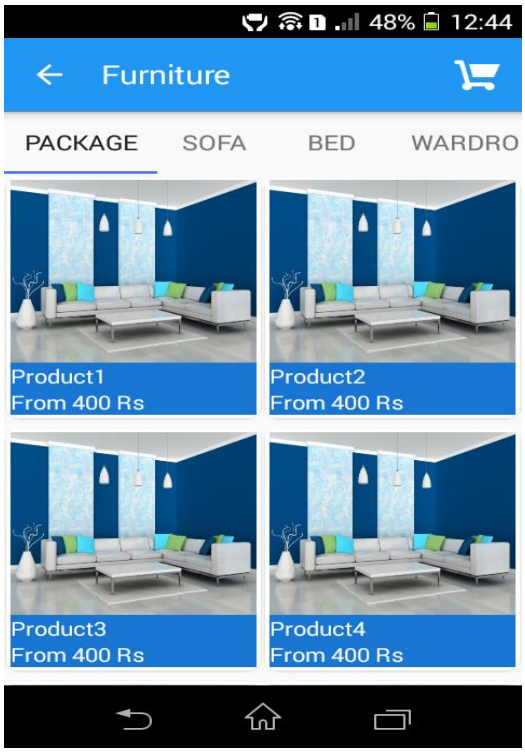


Main categories screen

Main Screen of the app will show Rent Easy Verticals and side menu bar

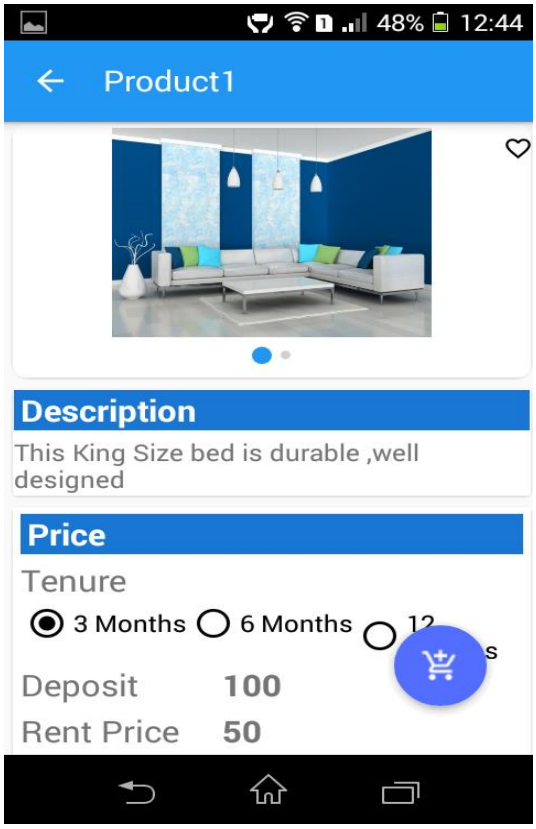


Products grid screen



Product detail screen

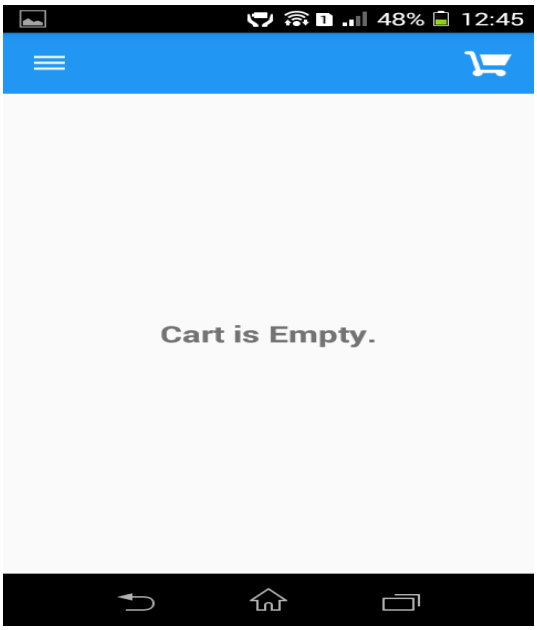
This Screen will show product details such as name, description, image slides, tenure, add to favorites and add to cart functionality



Cart screen

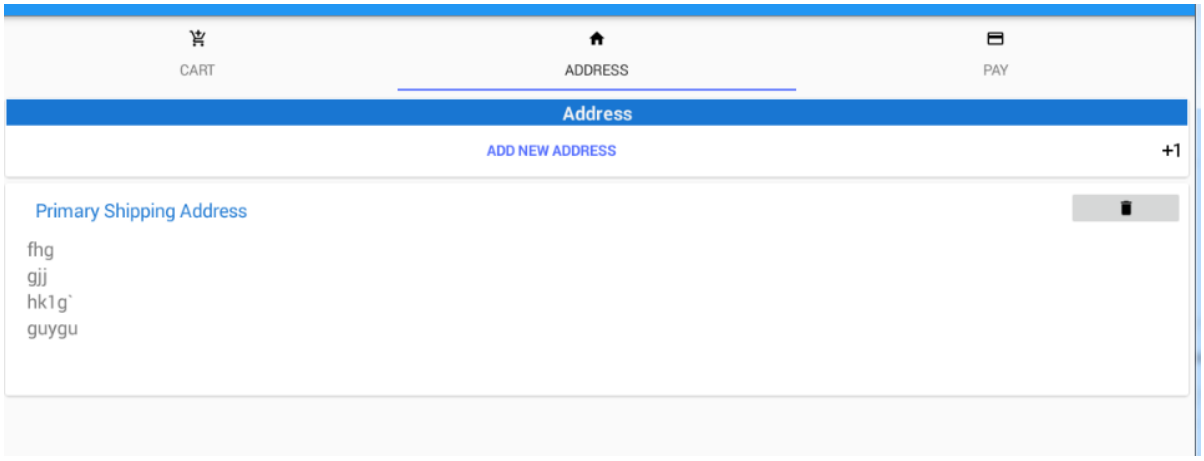
On Clicking Cart icon from toolbar user will navigated to carts screen where

- One will see products added to cart.
- User can remove product from the cart.



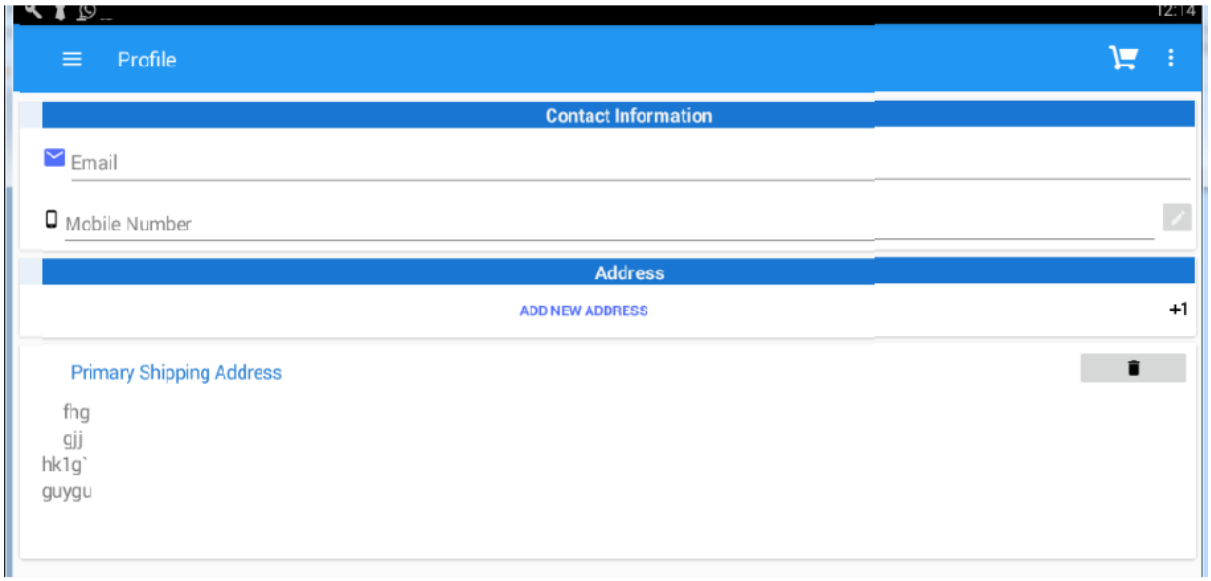
Checkout screen

Checkout screen is three step screen and steps are



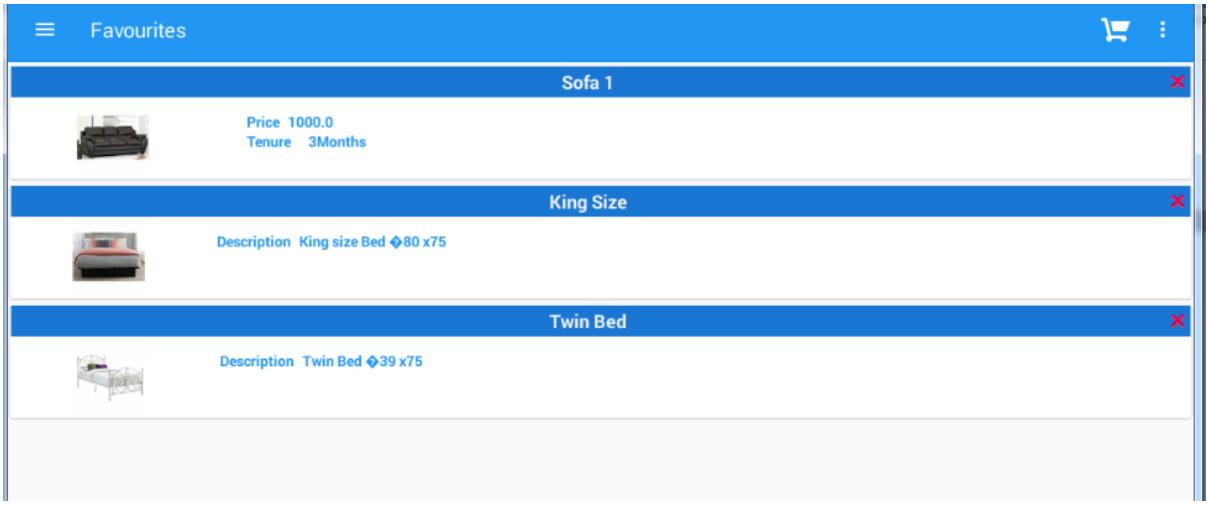
Profile screen

Profile screen shows user contact info and user can add or delete shipping address.



Favorites screen

Favorites screen shows user products which are marked favorites from product detail screen. User can remove product from favorite list and view details.



Rented Items screen

User can see and track orders of the product.
Order screen will be same as favorites, and on clicking it will show detail of the order

KEY CONSIDERATIONS

Data persistence strategy

Data persistence will be done using following ways

1. Shared Preference
2. Database
3. Firebase Real time database
    - Current Cart and Favorites product will be stored in “Shared Preference”
    - Addresses will be stored in local database
    - Products will be retrieved from the remote database

Corner cases

- Bottom checkout strip should be updated if user adds or remove product from the cart
- User can update product tenure from the cart
- Cart will be maintained locally
- For placing successful order user must logged in via Google sign in

Third party libraries

- Butter knife - Helps to remove boilerplate code of finding id’s and adding listeners
- Picasso -Helps to load hassle free image loading
- Dagger2 -Helps for injecting dependency injection and will help to make testing easy
- Gson - Helps to easily convert json to java object and vice versa

Google play services

1.Firebase Authentication
2.Firebase Real time database
3.Firebase Storage

Firebase (BAAS) will allow rapid development of app. Firebase brings app in live with zero server side coding.

REQUIRED TASKS

With the help of the UI mock ups multiple task are identified as follows

Task 1: Project Setup

1. Configure libraries
2. Define project structure and skeleton of the project

Task 2: Implement UI for Landing Page

1. Create Splash Screen Activity
2. If user is already logged in route him to Main Activity other wise Login Activity
3. Implement Drawer Layout
4. Create Skeleton of fragments to be called on clicking menu
5. Create Fragment for Category List
6. Category List will show category images with name
7. On Selecting Category User will see sub categories

Task 3: Implement UI for the Sub Categories

1. Get Sub Categories from the server and show in tabs
2. Implement View Pager functionality
3. Implement Grid View showing products
4. On clicking product user should redirect to Product detail Page

Task 4: Implement UI for Product Detail

1. Create Product Detail Activity and Product Detail Fragment
2. Implement CRUD operation for the Cart to add product
3. Notify functionality if product is not available
4. Implement Add to Favorites and Remove From Favorites
5. Implement View Pager to show gallery
6. Implement Radio Group to show available options

Task 5: Implement UI for Cart

1. Create Fragment for the listing cart items
2. On clicking cart item user can view details of product
3. User can update tenure and new cart amount should be reflected in app

Task 6: Implement UI for Favorites

1. Create Favorites Fragment
2. Show Favorites items in list using RecycleView
3. Implement remove Product form Favorites functionality
4. Implement View Product Detail on clicking product

Task 7: Implement UI for Profile

1. Create Profile Fragment
2. Add and Remove Address Functionality(Store user input in Database)
3. Show Addresses in List view

Task 8: Implement UI for Checkout Screen

1. Implementation of view Pager showing three tabs
2. Cart tab shows all the cart items
3. Address Fragment to show address and add new
4. Checkout fragment to place order
5. On successful payment user will see success message

Task 9: Implement UI for Login Screen and Log out Functionality

1. Create Login Activity showing two option Google sign in and anonymous sign in
2. On anonymous sign in show sign in with Google in toolbar extended menu
3. On Google Sign in show log out menu in extended menu
4. If user logged in as anonymous one will not able to checkout unless logged in with Google

Task 10: Integrate With Firebase

Rent easy app will be supported by Firebase database. Following repository will be created on Firebase and implement corresponding code at android side

1. Create Products category Repository
2. Create Products Repository
3. Create Orders Repository
4. Create Hot Deals Repository

Task 11: Implement UI for Rented Items

1. Rented Items screen will show ordered items
2. On Clicking show Rented Item Details Fragment

Task 12: Implement UI for About

1. Simple layout showing name of the app and developer name and show

Task 13: Implement Widgets

1. Small widget This widget will launch the app
2. List Widget showing hot deals -This widget will show hot deals of the app and on clicking on list item user will redirected to landing page of the app

Task 14: Tablet Support

1. Design Layout for the tablets
2. Adding ability to code base to support tablet multi pane view