

# 4everHome

SC2006 Software Engineering Project

## Project Description

4EverHome is a mobile application which seeks to assist users in the purchase of properties in Singapore. The mobile app aims to seamlessly bridge the gap between different parties such as consumers, realtors, financial institutions and interior designers to facilitate the purchase of a property.



4EverHome's functions can be broadly categorised into 2 main purposes. 4EverHome aids users in finding their ideal home by taking into account factors such as types of residence, price range, and preferred location. Users can view suggested properties based on their preferences and make their decision to purchase the property. 4EverHome connects users to external agents such as loan agents, realtors and interior designers, which are often difficult and time-consuming to source. Through the usage of this app, users can choose which services they can engage with during the purchase of their property. 4everHome aims to bring convenience for the users and provide seamless user experiences for them.

## Key Features

1. User Authentication

- Existing users will be able to login using their registered email address and password. New users can sign up an account using the register page.

Login	Register
 <p>Welcome 4EverHomes</p> <input type="text" value="Email Address"/> <input type="password" value="Password"/> <a href="#">Forgot Password?</a> <a href="#" style="background-color: #00AEEF; color: white; padding: 5px 10px;">Login</a> <p><a href="#">Don't have an account?</a></p> <p><a href="#">Create Account</a></p>	<p style="text-align: center;"><a href="#"> Sign Up Page</a></p>  <p style="text-align: center;">Let's get you started</p> <input type="text" value="Email Address"/> <input type="password" value="Password"/> <input type="password" value="Confirm Password"/> <input type="text" value="Display Name"/> <p style="text-align: center;"><a href="#" style="background-color: #00AEEF; color: white; padding: 5px 10px;">Register</a></p>

## 2. Search for available listings

- Users can choose to either search for listings by text search or by filters.

Search Listing by Name	Search Listing by Filters	Recommended Listings	Select Listing
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### 3. View details for a selected listing

- After selecting a particular listing on the google map, users can find out more about it.

View Nearby Amenities	View Budget Estimation	Loan Calculation	View Loan Estimation																						
<p><b>Nearby Amenities</b></p> <p><b>Woodfalls</b></p> <p><b>DESCRIPTION</b></p> <p>Nestled in the heart of a tranquil and verdant landscape, Woodfalls offers a serene living experience that seamlessly blends modern convenience with natural beauty. This exclusive residential development is designed for those who seek a quiet and peaceful retreat from the hustle and bustle of city life.</p>	<p><b>Budget Estimation</b></p> <p><b>Woodfalls</b></p> <p><b>Property Price:</b> S\$ 650,000 *This is an estimation. Exact total cost may vary.</p> <table border="1"> <tr><td>Down Payment (\$\$)</td><td>100000</td></tr> <tr><td>Stamp Duty Fee</td><td>\$14,100</td></tr> <tr><td>Option Fee</td><td>\$2,000</td></tr> <tr><td>Legal Fee</td><td>\$435</td></tr> <tr><td>Valuation Fee</td><td>\$120</td></tr> <tr><td>Insurance Fee</td><td>\$220</td></tr> <tr><td>Buyer's Agent Fee</td><td>S\$6,500</td></tr> </table> <p><b>Total Upfront Payments</b> S\$120,875</p> <p><b>Back to your listing</b></p>	Down Payment (\$\$)	100000	Stamp Duty Fee	\$14,100	Option Fee	\$2,000	Legal Fee	\$435	Valuation Fee	\$120	Insurance Fee	\$220	Buyer's Agent Fee	S\$6,500	<p><b>Calculate Loan</b></p> <p><b>Woodfalls</b></p> <p><b>Property Price:</b> S\$ 650,000</p> <table border="1"> <tr><td>Down Payment (\$\$)</td><td>100000</td></tr> <tr><td>Loan Amount (\$\$)</td><td>550000.0</td></tr> <tr><td>Annual Interest Rate (%)</td><td>2.5</td></tr> <tr><td>Loan Tenure (Years)</td><td>30.0</td></tr> </table> <p><b>Calculate now</b></p>	Down Payment (\$\$)	100000	Loan Amount (\$\$)	550000.0	Annual Interest Rate (%)	2.5	Loan Tenure (Years)	30.0	<p><b>Loan Estimates</b></p> <p><b>Woodfalls</b></p> <p><b>Property Price:</b> S\$650,000 <b>Loan Amount:</b> S\$550,000 <b>Interest Rate:</b> 2.5% <b>Loan Tenure:</b> 30.0 years</p> <p>Here are your estimated loan details:</p> <p>Estimated Monthly Installment S\$2,173.16</p> <p>Estimated Total Interest Payable S\$232,339.38</p> <p>Estimated Total Payable S\$882,339.38</p> <p><b>Make purchase</b></p>
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#### 4. Liaise with external agents

- After confirming the purchase of a listing, the user can connect with loan agents, realtors and interior designers for their relevant services.

Loan Application	Realtor Application	Interior Designer Application																														
<p>← <b>Loan Application</b></p> <p>Choose one of the available company</p> <p> <input type="radio"/> American Express  <input type="radio"/> Bank Of China  <input type="radio"/> DBS  <input type="radio"/> HDB  <input type="radio"/> HSBC  <input type="radio"/> OCBC  <input type="radio"/> Standard Chartered  <input type="radio"/> UOB       </p> <p>Loan Amount: \$\$</p> <p>Mortgage Term: Year</p> <p>STEP 1/3</p> <p><b>Confirm Loan</b></p>	<p>← <b>Realtor Application</b></p> <p>Choose your preferred realtor service</p> <p>  Search...  </p> <table> <tbody> <tr> <td></td> <td><b>Chen Yiz</b> Rating: 1.0 ERA</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Gerardz</b> Rating: 5.0 Property Guru</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Jin Kaiz</b> Rating: 5.0 De Style Interior PTE LTD</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Meng Kiatz</b> Rating: 4.9 Propnex</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Samsonz</b> Rating: 3.2 LivSpace</td> <td>&gt;</td> </tr> </tbody> </table> <p>STEP 2/3</p>		<b>Chen Yiz</b> Rating: 1.0 ERA	>		<b>Gerardz</b> Rating: 5.0 Property Guru	>		<b>Jin Kaiz</b> Rating: 5.0 De Style Interior PTE LTD	>		<b>Meng Kiatz</b> Rating: 4.9 Propnex	>		<b>Samsonz</b> Rating: 3.2 LivSpace	>	<p>← <b>ID Application</b></p> <p>Choose your preferred interior designer</p> <p>  Search...  </p> <table> <tbody> <tr> <td></td> <td><b>Barney Stinson</b> Rating: 5.0 How I met your House inc.</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Bob Tan</b> Rating: 4.2 Home Trust</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Christina Lee</b> Rating: 3.3 Houzz</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Felix Baumgart</b> Rating: 2.0 House Jumper</td> <td>&gt;</td> </tr> <tr> <td></td> <td><b>Kris Chokalov</b> Rating: 1.0 Good Houses Inc.</td> <td>&gt;</td> </tr> </tbody> </table> <p>STEP 3/3</p>		<b>Barney Stinson</b> Rating: 5.0 How I met your House inc.	>		<b>Bob Tan</b> Rating: 4.2 Home Trust	>		<b>Christina Lee</b> Rating: 3.3 Houzz	>		<b>Felix Baumgart</b> Rating: 2.0 House Jumper	>		<b>Kris Chokalov</b> Rating: 1.0 Good Houses Inc.	>
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#### 5. Send email confirmation

- Users can subsequently view a summary of their applications and send a confirmation email to themselves.

Summary



## Summary

### Woodfalls



783A Woodlands Rise  
731783

#### Listing Details

Type	4BR
Floor Number	14
Unit Number	4678
Lease Duration	99
Waiting Time	23

#### Loan

Loan Agent	Kelly Kapoor
Company	Bank Of China
Loan Amount	1000000.0
Mortgage Term	30

#### Realtor

Realtor Agent	Jin Kaiz
Company	De Style Interior PTE LTD

#### Interior Designer

ID Agent	Bob Tan
Company	Home Trust

[Send Confirmation](#)

## Technologies

Project is created with:

- [Flutter](#)
- [Cloud Firestore](#)
- [Dart](#)
- [Google Place API](#)
- [SendGrid Email API](#)

## Setup Instructions

- Download [Visual Studio Code](#)
- Download the Dart and Flutter VSCode extensions
- Download [Android Studio](#) and [Android Toolchain](#)
- Download [Flutter SDK](#)
- Locate the path to bin folder and add path to environmental variable PATHS
- Open forever\_home folder in VS Code
- Run 'flutter pub get'

- Run 'flutter packages pub run build\_runner build --delete-conflicting-outputs' on VS Code terminal
- Change directory to forever\_home in VS Code terminal
- Run 'flutter build apk --split-per-abi' in the VS Code terminal
- Locate APK files under forever\_home/build/app/outputs
- Install APK into android test devices
- Note that a stable internet connection is required to run the mobile application.

Test device used:

- Operating System: Android
- Version: Android 11 Red Velvet Cake
- Model: Samsung Galaxy S10+

## Contributors

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Profile	Name	School
	Lye Jin Kai	Nanyang Technological University (NTU)
	Tng Meng Kiat	Nanyang Technological University (NTU)
	Gerard Sin	Nanyang Technological University (NTU)
	Ong Qi Xuan Samson	Nanyang Technological University (NTU)
	Chen Yi	Nanyang Technological University (NTU)