Screen Shots

Mortgage Calculator

MONTHLY PAYMENTS FORM   SAVED PREFERENCES

Property Type : university
Street Address: sjsu
City: San Jose
Loan Amount: 999900.0
APR: 10
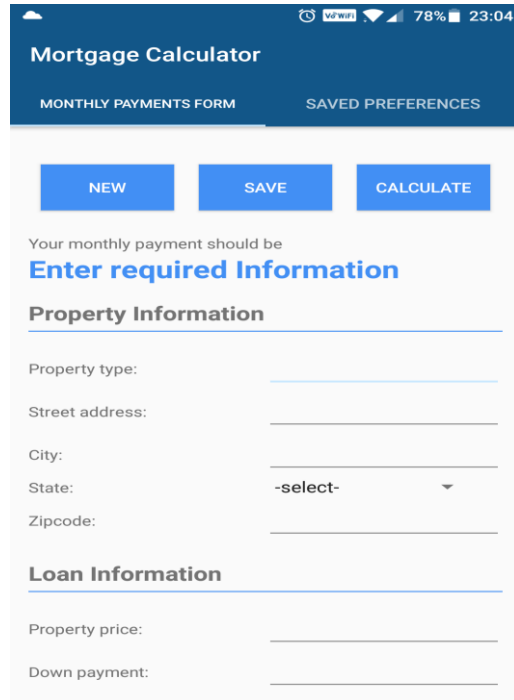Monthly payment: 10744.9766

DELETE   EDIT

Mortgage Calculator

MONTHLY PAYMENTS FORM   SAVED PREFERENCES

NEW   SAVE   CALCULATE

Your monthly payment should be

Enter required Information

Property Information

Property type:	university
Street address:	sjsu
City:	San Jose
State:	CA California ▾
Zipcode:	95192

Loan Information

| Property price: | 1000000 |
| Down payment: | 100 |
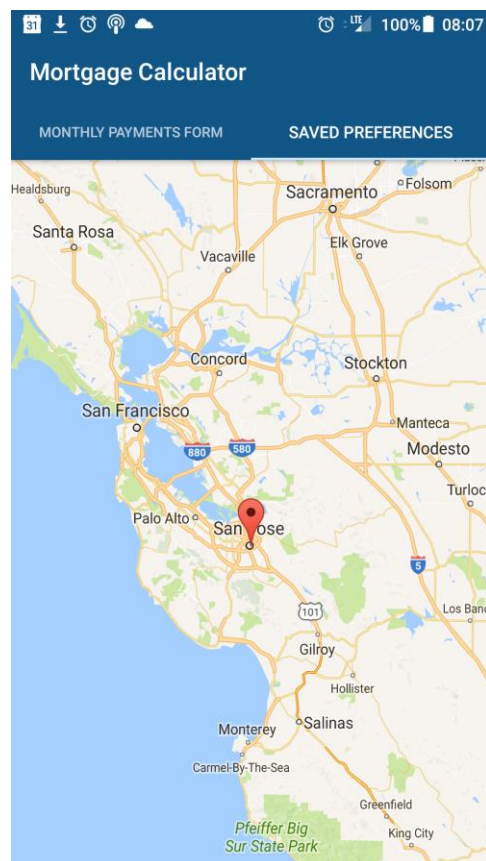
Introduction

This is a group project to implement a mortgage calculator as a native Android app. Each group allows up to two persons.

UI: Main Views

1. Calculation View: allows user to provide property and loan data, do the calculation, and optionally save it.
2. Map View: shows all saved mortgage calculations on the Map.

The navigation between the two views must be implemented through

(1) Navigation Drawer, or

(2) Swipe Views with Tabs.

The default view, when the app starts for the first time, must be the Calculation View.

Mortgage monthly payment calculation

1. Input:
    a. Property Info
        i.   Property Type: House, Townhouse, or Condo
        ii.   Street Address
        iii. City
        iv.   State (**Provide a list of States for user to select**)
        v.   Zipcode
    b. Loan Info
        i.   Property price
        ii.   Down payment
        iii. Annual Percentage Rate (APR)
        iv.   Terms(number of years to pay, either 15 or 30 years)

   The loan amount will be the property price less the down payment. The property info is optional unless the user wants to save the calculation.
2. Output:
    a. Monthly payment
3. Formula:
    a. http://www.wikihow.com/Calculate-Mortgage-Payments
    b. Google has built a mortgage calculator into the search engine, you can simply google "**mortgage calculator**" to verify the answer against your calculator's answer. https://www.google.com/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=mortgage+calculatior

Start a new mortgage calculation:

1. A New button must be provided for the user to start a new mortgage calculation. The current input, if there is any, will be cleared so that it is a fresh start for a new mortgage.

<u>Save a mortgage:</u>
1. User must have an option to save a mortgage calculation. The app must validate the address, and persist all the input and the output from feature 1. If the address is invalid, the user cannot save the calculation.
2. Saved data must be persisted in Shared Preferences, Internal Storage, or SQLite Databases.

<u>Browse mortgage:</u>
1. App must render all saved mortgage calculations as markers through the Google Maps Android API.
2. User must be able to navigate through the map and browse mortgage markers.
3. A dialog with the following information must show up when user tap on a specific marker. While the dialog must not cover the whole map, it contains the following info:
    a. Property Type: House / Apartment
    b. Street Address
    c. City
    d. Loan amount
    e. APR
    f. Monthly payment
    g. A **Delete** button allow user to remove this mortgage calculation, it must be removed from both **Map** and the local **database**.
    h. An **Edit** button to bring the user to the Calculation view to make changes.

<u>Device & screen size</u>
We are going to check the assignments on a Nexus 6 emulator. View layout optimization for tablets and rotation is not required, but the content needs to be clearly viewable in any case and you app should not crash.

<u>Error handling</u>
Your app must have proper error handling for missing **required** fields or **invalid data type**. **Example: APR** is mandatory for calculation, and **Address** is mandatory for showing up on the Map.

<u>Grading</u>
The project is worth 7 points. The distribution is:
    (1) Basic feature correctness: 5 points
    (2) User interface and experience design: 1 point
    (3) Robustness: 1 point

<u>Submission instruction:</u> You will get a **PENALTY** for failing to follow the instruction
1. Submit **1 zip** file contains:
    a. README.txt with team member information
    b. Screenshots for each views.

      c. The whole project folder (The default folder structure must be retained) excluding libs and compiled class file

      d. The app itself as an apk file

2. Submission comment:

      a. Write your team member information at the comments field on canvas.