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Project Name : Password Wallet

Description

Application generates unique password for all your accounts, and allows you to access with your master password. Account data used to generate password. Version number is used to create multiple versions of password along with using account information.

Intended User

This application intended for any user who wish to generate unique password and can allows them to refer them based on need without storing them in cloud.

Passwords are not stored in local database. User is data and master key password used to access password generated. This allows secured Pass wallet to have them locally, without keeping them in cloud.

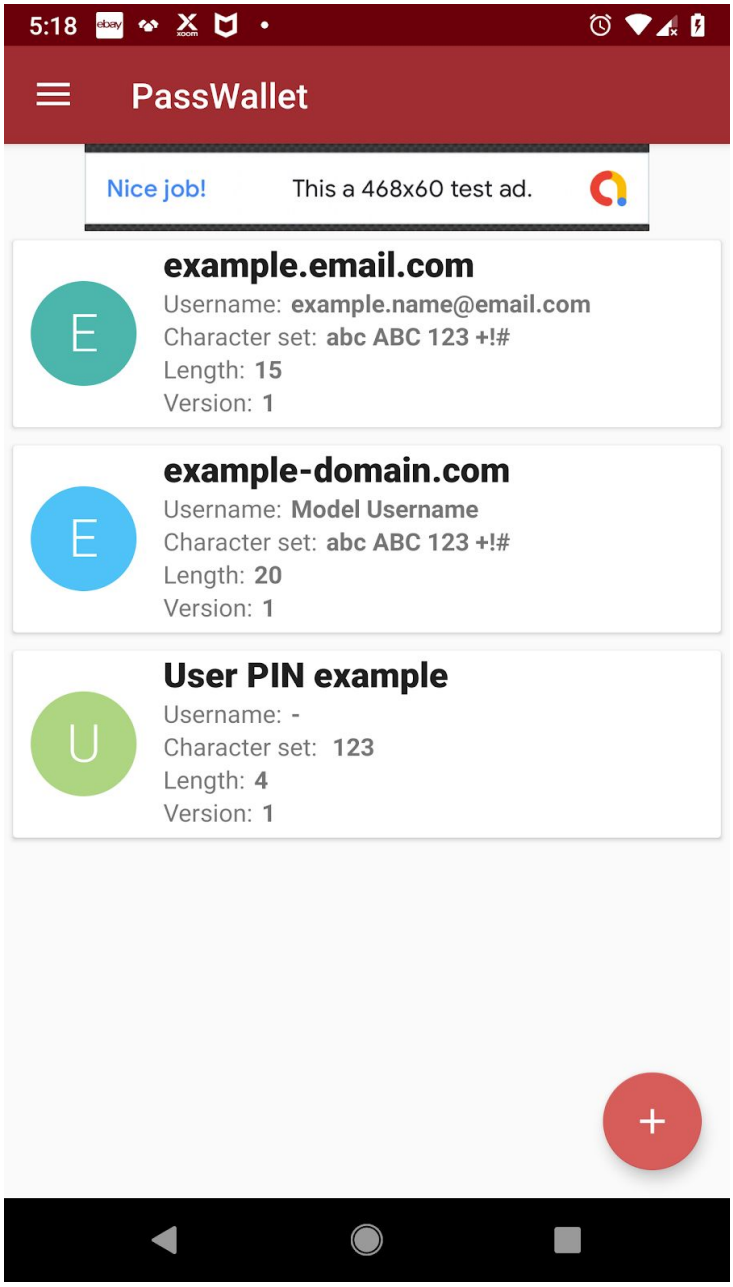
Features

List the main features of your app. For example:

- Allows to generate password
- Access to user domain password up on typing master password.
- Options to change length of password and update password versions.
- Allows users to update their password versions.
- About/settings screen to display various user preferences to control their pass wallet.
- There is a add banner on main banner, using google play services.
- Local database using room library, to persistent store simple data entity items like domain name, user preferred character set used to generate password, length and version.
- All database item will be accessed asynchronously, using AsyncTask.
- Follows Material design UI and comes with app action bar and a floating action button to add items to main page list view.
- Main page list view is sensitive to left swipe to remove item.
- Prevents taking from screenshot.

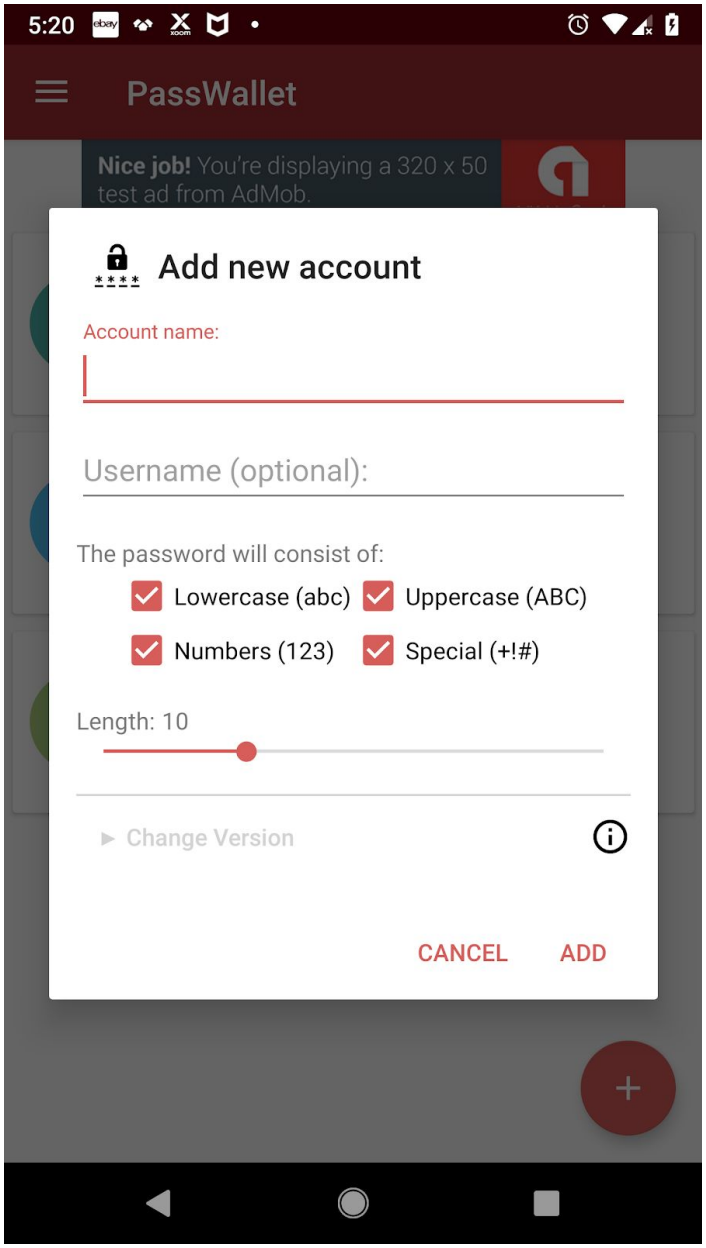
User Interface Mocks

Screen 1



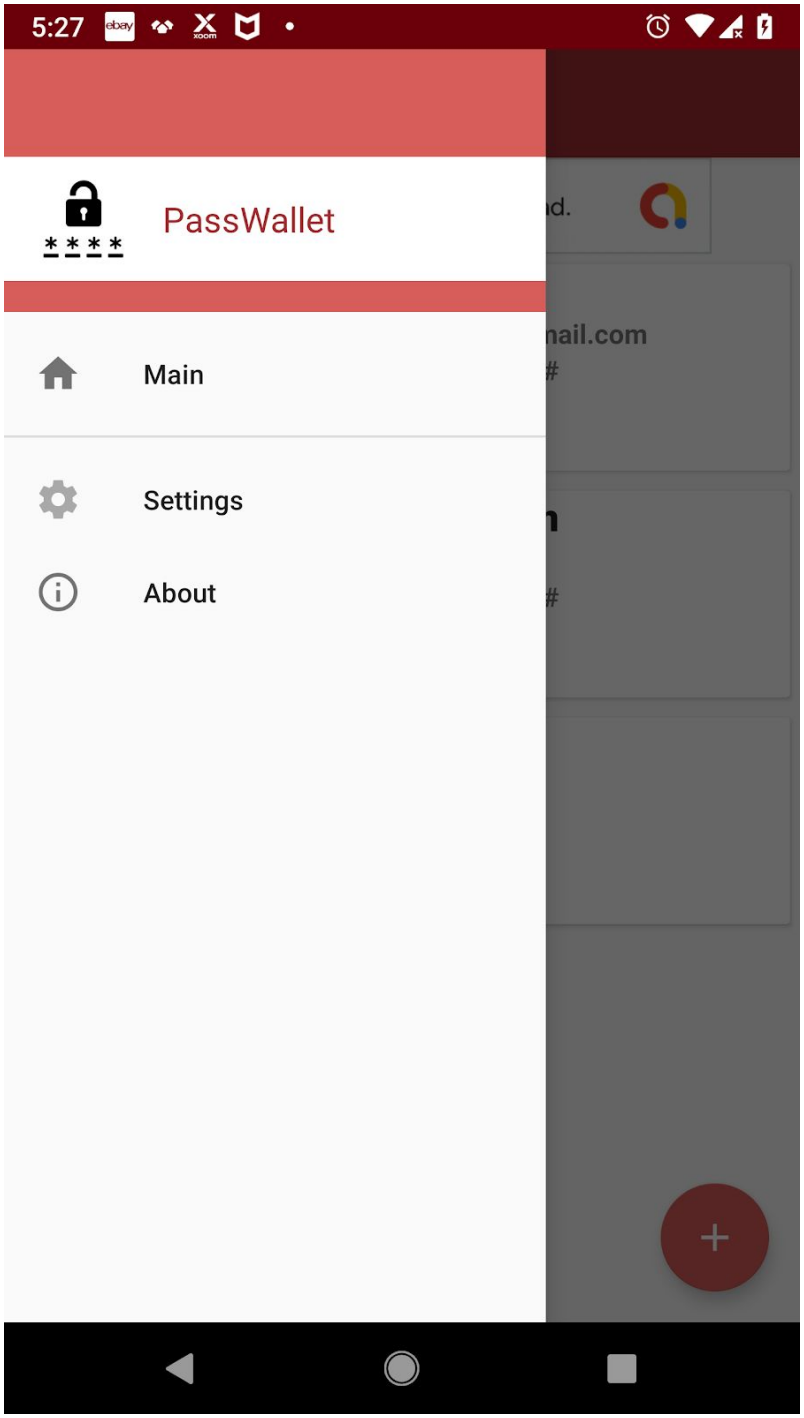
About screen is main screen, which allows user to go through all stored accounts.
This screen allows user to add new account by tapping on floating action button.

Screen 2



Above screen is to add new account to user account.

Screen 3



Above screen about displaying drawer item. Main screen option allows to navigate to main Page. Settings Option to navigate to settings page. About page displays user about application features. It can be simple text view page.

Key Considerations

How will your app handle data persistence?

Data persistence is implemented using room library, which stores id, position id, domain name, user name, length of password generated and character set chosen at the time of generating password. Generated passwords never be saved into database.

Libraries Used:

implementation **'com.amulyakhare:com.amulyakhare.textdrawable:1.0.1'** - Third party Library is used as Color generator, to display random color for each item image in main list view.

implementation **'com.google.android.gms:play-services-ads:17.0.0'** - Google play services library to have ads in application.

implementation "android.arch.persistence.room:runtime:1.1.1" - To implement data persistence.

Also Android support appcompat libraries

Google Play Services:

Main play services library that we use google ads library which allows us to display ads in our application. Add a simple banner item on main top of main list item, and initialize it from main activity to load adds.

Other external services :

Color generation is used to set background color in Image item view in main list view.

Password generation:

Password generation logic implemented using PKDF2 and Bcrypt. These can be pulled from github and reused in our project. PKDF2 and Bcrypt algorithms uses master password as secret. The seeds can be used from account data.

Next Steps: Required Tasks

Task 1: Project Setup

Make sure We follow up below project configuration settings.

- Project is configured using stable and latest Gradle releases.
- Import google() and jcenter() repositories.
- Configure our project to
    - Compilation sdk version 27
    - Min sdk version 15
    - Target sdk version 27
    - Application Name : Pass Wallet

Task 2: Implement UI for Each Activity and Fragment

- Implement UI for MainActivity.
    - Implementation of BaseActivity.
    - Implement layout for BaseActivity and MainActivity.
    - BaseActivity inherits AppCompat behaviour.
    - BaseActivity is responsible for hadling NavigationView, Drawer Items.
    - Integrate ads layout and load ads in MainActivity.
    - Implement and integrate ListView Adapter.
    - Implement action listener for listview items like long press, left swipe, and on click item.
- Implement UI for Add new account dialog fragment.
    - Implement layout for Add new account dialog.
- Implement UI for update existing account dialog fragment.
- Implement UI for settings page.
    - Allows user to switch algorithm.
    - Other settings.
- Implement UI for About page.
    - Find efficient way to implement this view to give more info about app.

Task 3: Password generation and update task

Implement Password generation task and supporting utilities to have UI to generate password, update password versions.

- This needs to use PBKDF2 BCrypt utilities.
- Use Base64 encoding according to Bcrypts scheme.

Task 4: Implement Data persistence using Android room library

- Create MetaData DAO, Entity and Database classes.
- Create Database operation tasks, to make sure all database calls are made asynchronously.

Task 5: Implementing Adapter list view

- Adapter inherited from RecyclerView.Adapter.
- Use android.support.v7.widget.CardView to implement list item layout.
