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| High Level Design |
| Web Application & iOS Application |
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# Introduction

Team Cloud7 is responsible for implementing the web application and the iOS Application portion of KloudBook. Our high level design will encompass the architecture of the web application in the form of webpage diagrams and the iOS Application in a form of class diagrams. Our interaction with the backend server is documented under a RESTful API with detailed specification of the expected requests and returns of their database.

The design goals are effective implementation of the use cases specified in the requirements document and simplistic interface for the user. The webpage diagrams and class diagrams will cite the use cases presented in the requirements specification document provided by Team Cloud7. Our partners are Team Pippin for the Database and Backend and Team Kilobyte for the Android Application.

# Web Application class diagrams

Attached following this section is the web application class diagram which describes the high level design for the web application.

**Home Page**

The user access the home page through the URL. They can play the video, log in, sign up and click forget password. When the user log in, the page will attempt to authorize with the back-end. When the user signs up, the page will direct the user to the sign up pages. When the user click forget password, the page will ask the user to fill out a forget password form and send the forget password form to the back-end to email the user.

Use Cases: Create an account, Watch the homepage video, Login, Forget Password

**Sign Up**

Sign up pages redirected from the homepage. Allow user to fill up a sign up form and add a picture with fields defined in the requirements.

Use Cases: Create an account

**KloudContacts**

When sign-in in successful, the user is brought to the Kloud Contacts page where he can view his own profile, view his contact list, delete a specific contact, go to his settings, or go to a specific contact. You can sort and search your contacts. You can initiate a search for a new contact. You will receive notifications on this page. You can log out from this page.

Use Cases: Interacting with Kloud Contacts page, Other page features Log out

**Contacts Profile/User Profile**

Detailed view of the user or contact profiles after clicking on a specific contact or the user profile link in Kloud Contacts. Able to edit user fields from here. You can log out from this page.

Use Cases: Edit account information, Log out

**Account Settings**

Settings page redirected from KloudContacts allowing changing password, deactivating account and logging out.

Use Cases: Deactivate Account

**Create group**

Create a group using a form defined by the fields stated in the requirements for group creation.

Use Cases: Group features

**Manage group**

View and edit your list of groups and the contacts in your list of groups. Manage individual group, add and remove members.

Use Cases: Group features

**Search Results**

After initiating a search on the KloudContacts page, listing every contact that matches the parameters. Enter into a form for advance search and display the results back on the search results page.

Use Cases: Connect by searching

**Invite Results**

By clicking import friends links on the search results page. Connect to external API and submit a query for contacts matching the results from the APIs. Send a list of selected people to invite to the back-end

Use Cases: Connect by importing, Connect by inviting

# iOS Application class diagrams

Attached following this section is the iOS application class diagram which describes the high level design for the iOS application.

**Login**

User begin on the login screen upon installing and starting the iOS app. He can login, sign up or request forget password from this page. When click on forget password, he is directed to the forget password form. When log in, the app will authorize the login with the back-end.

Use Cases: Log in, Create an account, Forget Password

**Data Mapping Provider**

Get data from the database and map it into the right format for the iOS app.

**Contact List**

After logging in successfully, user sees the Contact List with list of contacts, link to user profile, groups and adding new contacts. User can also search his current contacts on this page. User receives notification here.

Use Cases: Interacting with Kloud Contacts Page, Group features, Notification and requests

**Group List**

List of your groups, edit, delete, and create groups.

Use Cases: Group features

**Group Contact List**

List of members in your group, manage this specific group

Use Cases: Group features

**User Profile**

Detailed view of the user profile. User can modify their information, log out and access the settings page from here

Use Cases: Edit account information, Deactivate, Log out

**Contact Profile**

Detailed view of the specific contact. User can delete the contact and view their information.

**Sign-Up**

Sign up pages directed from the login screen that allow the user to create a new account by filling up a form with the fields specified in the requirements specification.

Use Cases: Create an account

# External API and 3rd Party Libraries

RestKit (http://restkit.org): To interact with the RESTful API, RestKit "combines a clean, simple HTTP request/response API with a powerful object mapping system.” (Apache License, Version 2.0)

AFNetworking: Described as “a delightful networking library for iOS and Mac OS X”, it is an underlying library used by RestKit and may also be used directly for simple API calls. (MIT license)

FXForms is an Objective-C library for easily creating table-based forms on iOS. It is ideal for settings pages, or data-entry tasks. (zlib License)

Facebook provides a graph API where users {user-id}, node, provides various fields used to define a user on Facebook. Such fields include first\_name, middle\_name, birthday, email, link (to the user's profile, etc. Furthermore, we can access a user's friend list by using the friend list edge defined as /friends. A link to their API, https://developers.facebook.com/docs/graph-api/reference/user/.

LinkedIn API

LinkedIn allows access to the "first degree connections for a user" via their Connection API https://developer.linkedin.com/documents/connections-api. Furthermore, a user profile's basic fields can be accessed using the Profile API, https://developer.linkedin.com/documents/profile-api.