Requirements and Specifications for KloudBook

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1   Introduction

KloudBook seeks to tackle the modern day challenge of staying connected. In this age of information, Kloud-Book seeks to revolutionize how people connect with each other.

With a simple tap or click, a KloudBook user can have an up-to-date personalized, portable, and private contact directory of friends, family, and colleagues. The user can then securely share his contact information with anyone of his choosing to connect himself with others from all over the world. Using the KloudBook website and application, the user will be able to add, edit and organize his contacts which can then be synced across all devices. The user will also be able to update his own information making the distribution of his information a piece of cake!

With KloudBook, finding the contact information of the girl or guy you have a crush on or the recruiter at your favorite company is simple and fast, and you only have to do it once. If your contact changes any pieces of information, these changes will be automatically updated in your directory. KloudBook is a simple way to always stay connected with your friends, family, and colleagues!

In this document, we will address the functional and non-functional requirements that will make Kloud-Book a reality.

2   User Stories

The functional requirements of KloudBook will be presented in the form of narratives by certain actors. The actors used in the following narratives are:

- John Doe, a typical user of KloudBook
- Charlie Day, a user of KloudBook, he is also a group admin
- KloudBook, the KloudBook application/server on any platform

2.1   Create an account

John Doe wants to create an account on KloudBook because he wants to better connect with his friends, family, and colleagues. This is achieved by the following process:

- Watch the homepage video
- Enter basic information
- Enter contact information
- Add a profile picture
- Connect and invite friends

2.1.1   Watch the homepage video

- After reaching KloudBook's homepage, John is shown a short video teaching him how to use KloudBook
- This video will not be hosted through another website such as youtube.
- This video will on the homepage of the website.

2.1.2   Enter basic infomation with Sign-up form

- John Doe decides to sign up using the "Get Started" form on the homepage of KloudBook.

- He first fills in the following fields:

  – His first and last name
  – His email address that will be used as the primary login
  – His desired password that is at least 8 characters long
  – His birthday using the drop-down menus Month/Date/Year
  – His gender using Male/Female check boxes

- John then clicks the "Join Now" Button which directs him to the second page of the sign up process.

- To help John find his friends, KloudBook asks John to enter the following information about himself:

  – His high school and college
  – His current employer
  – His current city
  – His hometown

- After John makes sure his information is correct, he clicks the "Create My Profile" button to be directed to the next steps

2.1.3   Enter basic information with Facebook

- Alternatively John Doe decides to sign up by getting his basic information from his Facebook Account

- John clicks on the "Sign up with Facebook" button on the KloudBook homepage

- A new window or a new page will pop up, that will request John to log into his Facebook account and allow KloudBook's request for his information

- John is directed automatically to the second page of the sign up process with his information populated from his Facebook profile

- John is then asked to confirm or edit the following information KloudBook has retrieved from John's Facebook account:

  – His high school and college
  – His current employer
  – His current city
  – His hometown

- After John makes sure his information is correct, he clicks the "Create My Profile" button to be directed to the next steps

2.1.4 Enter contact information

- After creating his profile, John is asked by KloudBook to provide his "Contact Information"

- John can also skip this step by pressing the "Skip this step" link which will direct him to the next step

- John can now enter some of his basic contact information:

  - He can view the primary email that he has used to create his profile
  - He can add or remove other emails by clicking on the "Add/Remove Emails" link which will add or remove fields for him to enter his email informations
  - He can add one "mobile" phone number and specify the area code using a drop-down menu (Default on United States (+1))
  - He can add more than one mobile number by clicking the "Add Another Number" link which creates more mobile number fields
  - He can add one "other" phone number, specify if it is a Work number or Home number using the a drop-down menu and he can also specify the area code using a drop-down menu (Default on United States (+1))
  - He can add one of his address into the following fields: Address Line 1, Address Line 2, City/Town, Zip Code. He can choose the "Address Type" of this specific address using a drop-down menu with the options "Home", "School", and "Work".
  - He can add more than one address by clicking the "Add Another Address" link which creates more than one address fields.

- John confirms that all of the information he entered is correct. Then he clicks the "Add Contact Information" button to be directed to the next step.

2.1.5 Add a profile picture

- John wants his friends to better recognize him on KloudBook by adding a profile picture.

- John clicks on "Upload a Photo" to upload a picture from his computer. A window appears that allows John to browse his file system to select a picture he wants. He clicks on "Confirm" to close the window.

- Alternatively, John clicks on "Take a Photo". A window appears which accesses his webcam. John clicks on the "Camera" button to snap the picture and clicks "Confirm" to close the window.

- The picture he chose will appear on the page. John can upload or take another picture or he can click the "Save & Continue" to be directed to the next step.

- John can also skip this step by pressing the "Skip this step" link

2.1.6 Connect and invite friends

- After he finished uploading his picture and entering his information, John needs to connect to his friends. He is directed to the Connect page.

- KloudBook uses the information he provided to bring up a list of people John already knows (Elaborated in the "Getting friends" user story)

  - John can check a check box next to the profile of these people and press the "Add to Network" button to be directed to the next step.
  - John can also skip this step by pressing the "Skip this step".

- KloudBook then uses the information he provided to provide a list of his friends who are not already on KloudBook. (Elaborated in the "Getting friends" user stories)

- John can check a check box next to the people he wants to invite.
- John can select all of the people on this list by clicking the "Select All" link.
- John can then click the "Invite Friend" button to be directed to the next step.
- KloudBook sends out an email invite to John Does list of friends with a link for them to sign up for KloudBook.
- John can also skip this step by pressing the "Skip this step" link

2.2 Login and logout

After John has created an account, he can access KloudBook by logging in and leave KloudBook by logging out. If he is having trouble logging in, KloudBook provides a "Forget Password" option that allows John to retrieve his password.

2.2.1 Login

- John can log into KloudBook on the KloudBook homepage or on his mobile app.

- John needs to enter his primary email and his eight character minimum password.

- John can save his username and password by clicking a checkbox that says "Remember me". He needs to have his cookies enabled on his browser for this to work.

- John can then click on the "Login" button to bring him to his "Kloud Contacts" main page.

2.2.2 Logout

- When John is already logged in, he can log out of his profile by pressing the "Log out" button.

- This will direct John to the homepage on the website or the log-in screen on his mobile app awaiting John to log in again.

2.2.3 Forgot password

- If John forgets his password, he can click on the "Forgot Password?" link on the homepage or the log-in screen on his mobile app

- Book will ask for John's primary email on his account

- KloudBook will send an email to John's primary email giving him a temporary new password that he can log in with

- John can then change his password to something that he can remember this time (Elaborated in the "Edit profile" user stories)

2.3 Getting friends

John is new and has no friends in his address book. John wants to connect with his friends and KloudBook simplifies this process. John can connect to his friends through the following methods:

- Connect by searching

- Connect by importing

- Connect by inviting

2.3.1 Connect by searching

- John can search for his friends by typing in their name on the basic search bar.

- John can search for his friends using an advanced search. He clicks on the "Advanced Search" link beside the basic search option and is directed to the advanced search page.

- On the advance search page, he can enter detailed information about the person he is searching for by following fields:

  - Name
  - High School
  - College or University
  - Employer
  - Current City
  - Hometown
  - Phone Number
  - Email Address

- After entering the necessary information for basic or advanced search, John clicks on the "KloudBook Search" button to conduct the search.

- A list of contacts that matches the search parameters is displayed in a search result page. The contacts are listed by their profile pictures with the following information:

  - Name
  - Current Employer
  - College/University
  - High school
  - Hometown
  - Gender

- John can click on the name of an individual contact to look at the public profile which includes:

  - Public information (Education, City, Empoyer)
  - Public contact information (Emails, Phones)
  - Links to various social networks and websites
    * Facebook
    * Twitter
    * LinkedIn
    * Google+
    * SnapChat
    * Tumblr
    * YouTube
    * Flickr
    * Websites

- John can refine the search on the side bar by the following parameters:

  - Gender
  - Relationship
  - Employer

– Current City

 – Hometown

 – School

- If John find his friend, John can request his or her contact information using the "Add Friend" button under the person listed in the results page.

2.3.2 Connect by importing

- John can import his current friends from his various networks onto KloudBook.

- John is prompted to import his friends when he signs up but he can do so again by pressing the "Import friends" link. He can import friends from:

 – Facebook

 – Gmail

 – LinkedIn

- A new window or new page will be opened depending on these services. John can log in to these services and allow KloudBook's request for information.

- KloudBook searches for users that have signed up and linked their accounts to these services.

- John can check the check boxes beside the profiles of people who are already on KloudBook.

- He can select all the people by clicking the "Select all" link.

- After selecting the people he wants to add, he clicks on the "Add to network" button to send a request to connect.

- He is then directed to the page to invite his friends that are not on KloudBook.

2.3.3 Connect by inviting

- After importing his friends, KloudBook will list everyone who isn't on KloudBook on a results page.

- John can check the check boxes beside the person he wants to invite to KloudBook

- John can select everyone by clicking the "Select all" link.

- After selecting the people he wants to invite, he click on the "Invite friends" button.

- KloudBook sends out an email invite to John Does list of friends with a link for them to sign up for KloudBook

- John can also skip this step by pressing the "Skip this step" link which will direct him to the next step

2.4 Change settings/Edit account

John can change and update his profile at any time so that his friends and colleagues can have John's up-to-date contact information. John will be able to:

- Edit basic information

- Edit additional information

2.4.1 Edit basic information

- John will be able to modify his basic information such as:

  - High school
  - College or University
  - Employer
  - Current city
  - Hometown

- However, these are public fields that cannot be set private.

- John can also modify his primary email address which changes his login email.

2.4.2 Edit additional information

- John will be able to add or remove additional information such as:

  - Phone numbers
  - Additional email addresses
  - Link to other social networks, websites and messengers
    * Facebook
    * Twitter
    * LinkedIn
    * Google+
    * SnapChat
    * Tumblr
    * YouTube
    * Flickr
    * AIM
    * Google Talk
    * Windows Live Messenger
    * Skype
    * Yahoo Messenger
    * Websites

- John can change the privacy settings of these fields to either "public" or "private"

2.5 Interacting with Kloud Contacts page

John will be shown his Kloud Contacts once he logs in. This page contains everyone who has agreed to John's request to connect.

2.5.1 Interacting with contacts

- The contacts are listed on the left side by their first name under alphabetical tabs.

- John can click on one of these contacts to view their basic information and information that specific contact has chose to reveal to John.

- Under Kloud Contacts, there is a search bar for John to search through his own contacts (different from searching for new friends).

2.5.2 Other page features

- The Kloud Contacts page has a list of buttons to the left of the contacts:
  - Links to John's social networks
  - Settings button to edit his account (Elaborated by "Change settings/Edit account" user stories)
  - Delete contact button to remove the contact from your contact book
- Below the detailed information on each contact, is an edit button which allows John to change what he wants to share with that certain contact.
- John can also use that edit button to request more information from that contact.

2.6 Notification and requests

KloudBook will notify John of any changes that concern him. The notification will happen in a form of a push notification on the mobile application or email.

John will be notified when:

- Users request to add him as a contact
- Users share their contact information with John
- A friend gives additional contact information to John
- John is invited to a group

John can choose to respond to these requests by:

- Choosing to release one of four contact information bundles:
  - All contact info
  - Personal Info (Home address, Home number, Mobile number)
  - Business Info (LinkedIn, Business address, Business number)
  - Custom (A list of all contact information with check boxes for John to check what he will show)
- John can accept a request to join a group, which allows John to share his contact information with everyone in the group
- John can reject or ignore requests.

2.7 Group features

- Charlie Day, who already has a KloudBook account can create a new group by entering:
  - A group name
  - Short description
- He can then choose who have access to the contact information and what can be accessed:
  - Everyone in the group can have other's contact information
  - The group administrator can have everyone's contact information
  - The accessed information can be "Business", "Personal" or "School".
- Charlie can then invite multiple people from his contact list to join the group by clicking "Add people to group button"

- Charlie can add an individual person from his contact list to the group by selecting them and clicking "Add to group"

- Charlie can remove individual person from the group by clicking "Remove from group" link

- Charlie can edit his groups description. He clicks on the group menu, and selects the group he created. Once at the group page, he clicks the edit button where he is able to change the description text. He clicks save and sees the group page with the now updated description.

- Charlie can delete the group by clicking on the group menu, and selects the group he created. Once at the group page, he clicks the delete button. He confirms that he is sure he wants to delete the group by pressing the confirmation button; the group is deleted. Charlie is returned to his homepage.

- Charlie can close groups that he administrates by clicking the "Change all open groups to closed" check box when he is deactivating his account.

2.8   Deactivating account

John can deactive his account on KloudBook and return to it at any time. He does so by deactivating his account from his settings and just logging in whenever he wants to restore his account.

2.8.1   Deactive account

- John decides to deactivate his KloudBook account by clicking on "Deactive Account" link in his profile settings.

- Upon getting to the deactivation page, he selects why he has decided to deactivate his account. He can select the following options:
    - I spent too much time on KloudBook
    - I don't understand how to use KloudBook
    - I don't feel safe on KloudBook
    - I have another KloudBook account
    - I get too many emails, invitation, and requests from KloudBook
    - This is temporary I will be back
    - I don't find KloudBook useful
    - My account was hacked
    - I have privacy concerns
    - Other

- John can check to opt out on emails from KloudBook by checking the "Opt out of receiving emails" check box

- John click on the "Confirm" button and his account is deactivated. His information is stored on KloudBook until his return

2.8.2   Restore account

- John decides to restore his deactivated account.

- John logs into KloudBook.

- He is welcomed back into KloudBook and asked if he wants to restore his account.

- He clicks on "Restore account" button which makes his account visible and is directed back to his "Kloud Contacts" page.

3 Environmental Specifications

3.1 Web Application

The web app is compatible with the latest versions of the following browsers:

- Chrome

- Firefox

- Safari

- IE

The web app is compatible and developed to be used with modern common screen readers.

3.2 Mobile Application

The mobile app is most compatible with the following versions of iOS and Android

- iOS 6+

- Android 4.0+

Even though the app is not limited to the latest versions of iOS and Android, it is highly recommended to use them for optimal performance. The server is stored on Amazon EC2 server.

4 Security

- The KloudBook.com website will utilize an encrypted connection at all times. A purchased SSL certificate will be used for all communications in and out of kloudbook.com.

- Using HTTPS will encrypt any data (user login/user activity) the user posts to kloudbook.com.

- User account login information and data is protected by Amazon. Amazon provides the following security:

- Amazon continually manages risk and undergoes recurring assessments to ensure compliance with industry standards. Amazons data center operations have been accredited under:

  - ISO 27001
  - SOC 1/SSAE 16/ISAE 3402 (Previously SAS 70 Type II)
  - PCI Level 1
  - FISMA Moderate
  - Sarbanes-Oxley (SOX)
  - PCI
  - (Refer to Reference 6.2)

- Amazon web services also provides a built-in firewall and DDoS protection. (Reference 6.1)

- All data stored with Amazon is automatically encrypted with Advanced Encryption Standard 256 using 256 bit keys. (Reference 6.1)

- Cookies will be used to save user session information as well as saved passwords. These cookies will be deleted once a user logs out. Users must choose to stay logged in when entering their username and password. Otherwise, cookies will not be saved.

- Cookies will be automatically encrpyted server-side by Amazon web services.

5   Performance and Robustness

- KloudBook will be able to support up to 10,000 users a month initially.

- User capacity will grow depending on the influx of new users by using Amazon CloudWatch which will automatically scale the application. (Reference 6.3)

- KloudBook's uptime will be entirely dependent on Amazon's uptime which may have fluctuations.

- Amazon does not make any guarantees on uptime; however, if Amazon fails to maintain a 99.95% uptime, they will offer service credit. (Reference 6.4)

6   References

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