

Software Requirements Specification

Version 1.0

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IAPAA

“Island Ark Project Android Application”

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1.0. Introduction

1.1. Purpose

The purpose of this document is to describe the Island Ark Project Android Application (IAPAA) product with the release number 1.0. This document contains the functional and non-functional requirements of the project. It also contains the guidelines for program developers and designers to start working on the project.

1.2. Project Scope

Climate changes, sea levels rising, and other forces are causing migration for islanders around the world. As a consequence, important cultural practices are at risk of disappearing forever. To solve this problem, the Island Ark Project is a kind of living time capsule where anyone can upload, discuss, and access culture content regardless of where they live. These functionalities are available at your fingertips through our Android mobile application.

The mobile application does not require a skillful user to operate it. In other words, it is user-friendly and very easy to handle.

The product allows registered users to upload and download cultural data in order to preserve this invaluable information.

Content is securely encrypted and stored in our servers providing confidentiality, integrity and availability, also known as the CIA triad.

The intended readers of this document are the developers of the site, testers, and anyone actively participating in the Island Ark Project.

Any suggested changes on the requirements listed on this document should be included in the last version of it, so it can serve as a reference for development, improvement or optimization purposes.

1.3. Glossary

Term	Definition
IAPAA	Island Ark Project Android Application
User	Refers to a registered user

1.4. References

- IEEE 830-1998 standard for writing SRS document.
- I. Sommerville, Software Engineering, 8th ed., England: Addison-Wesley, 2007.

1.5. Overview of the Document

- Section 2 defines the general functions of IAPAA, operating environment and user constraints along with our assumptions.
- Section 3 specifies functional and non-functional requirements; all of them are described to a level of detail sufficient for designers to design a system.
- Section 4 illustrates interfaces and its possible scenarios along with some screenshots to make a general idea about the interfaces.

2.0. Overall Description

2.1. System Environment

The LAPAA is a program that operates on an Android platform. Specifically, it was built and tested using a Windows 10 machine. In addition, Android Studio IDE, Android Studio SDK tools, Android 6.0 (Marshmallow) Platform, Genymotion Emulator (Basic, Individual Plan) and Java Development Kit (JDK) 7 were also used.

2.2. Functional Requirements Specification

REQUIREMENT ID	REQUIREMENT DESCRIPTION
FR 001	The application has a window where the user can login, register or go back to the Home window.
FR 002	The application has a home window providing the user information about the project.
FR 003	The login window allows the user to register or to go back to the Home window.
FR 004	Once the user has logged in successfully, he/she should have the option of modifying the e-mail and name at all times. The username will not be modifiable.
FR 005	Once the user has logged in successfully, he/she should be able to change the password at all times. The current user password must be entered in order to update the password.
FR 006	Once the user has logged in successfully, he/she should be able to upload or download content.
FR ***	More items to be added. i.e.: input validation, encryption, password requirements, data requirements...to be added.

2.3. User Characteristics

The application depends majorly on the most important piece of the puzzle: its users.

Anyone who wishes to upload, discuss, and access culture content from around the world now has the power to do it through the application.

2.4. Non-Functional Requirements

- Usability
- Appearance
- Availability
- Confidentiality
- Integrity
- Error handling
- Performance requirements
- Safety requirements
- Security Requirements
- Frequent Q&A section to solve common issues

3.0. Requirements Specification

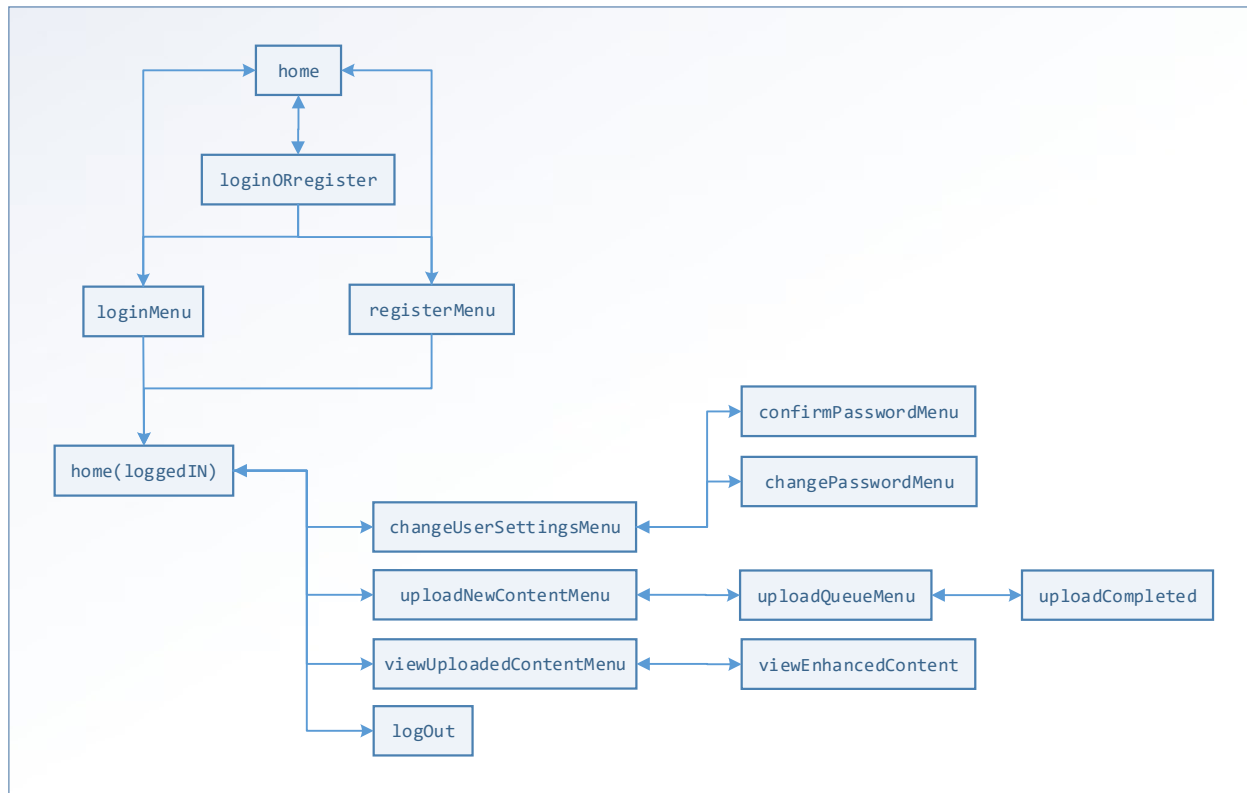
3.1. External Interface Requirements

Hardware Interfaces

- Amount of ram required (to be determined)
- Amount of free drive space required (to be determined)

Software Tools Used	Description
Operating System	Windows 10 Home Edition, 64 bit
Mobile Application IDE	Android Studio 6.0 (Marshmallow)
Mobile Android Emulator	Genymotion Emulator
Database	MySQL
Mockup Designs	Justinmind & Paint.Net
Programming Development Kit	Java JDK 7 & Android Studio SDK tools
Other Design Software	Word, Excel, Visio

3.2. Functional Requirements



Initially, the program will have 13 windows since the logout button is not included - it is just a button that exits the application. Additional windows might be added later on.

button connects to window
exampleButton ➔ **exampleWindow**

Window functionality and usability breakdown:

home

Displays Island Ark Project's main purpose and project scope.

Click here to begin! ➔ **loginORregister**

loginORregister

Allows non-registered users to register and registered users to login. It gives the user the option to go back to the **home** window.

Login ➔ **loginMenu**

Register ➔ **registerMenu**

Home ➔ **home**

loginMenu

Prompts the user to enter the username and password.

Allows the user to register or go back to the **home** window.

Login → **home (loggedIN)**

Register here → **registerMenu**

Home → **home**

registerMenu

Prompts the user to enter the following fields: username, password, confirm password, e-mail and name.

Once the information has been successfully filled in, it registers the user.

Allows the user to go to the **login** window or **home** window.

Back to Login → **loginMenu**

Register → **home (loggedIN)**

Home → **home**

home (loggedIN)

From this window, the user is able to change the user settings, upload new content, view uploaded content or exit the app.

Change user settings → **changeuserSettingsMenu**

Upload New Content → **uploadNewContentMenu**

View Uploaded Content → **viewUploadedContentMenu**

Log out → **exits the app**

changeUserSettingsMenu

Allows the user to change his/her e-mail or name.

Username field is non-modifiable.

It also provides access to upload new content, view uploaded content, go home, change the password and log out.

Upload New Content → **uploadNewContentMenu**

View Uploaded Content → **viewUploadedContentMenu**

Home → **home (loggedIN)**

Change Password → **changePasswordMenu**

Undo changes → **sets the fields to its original state**

Update → **updates the information in the database**

Log out → **exits the app**

uploadNewContentMenu

Provides access to change user settings, view uploaded content, go home and log out. It also enables document, picture, audio or video uploading, as well as accessing the camera to take a photo or video and upload it immediately.

Change user settings → **changeuserSettingsMenu**

View Uploaded Content → **viewUploadedContentMenu**

Home → **home**

Log out → **exits the app**

Icons → **upload in phone content or access camera for immediate access and upload.**

viewUploadedContentMenu

Provides access to change user settings, upload new content, go home, access in-server photos. It also sorts the data by Location, Date of Event, Uploaded Date or Alphabetically.

Currently, there are two arrows (left and right) that enables viewing the different pictures. However, a slide-option might be added later on. In a way that the user can tap on the picture and slide to the left or to the right. A slide show option might also be added to increase functionality.

Change user settings → **changeuserSettingsMenu**

Upload New Content → **uploadNewContentMenu**

Home → **home**

Center menu buttons → **sort the requested data**

Log out → **exits the app**

confirmPasswordMenu

A window to authenticate the user before making the changes current previously done from **changeUserSettingsMenu** window.

Cancel → **changeuserSettingsMenu**

Submit → **home (loggedIN)**

changePasswordMenu

Prompts the user to enter the current password and a new password to update the password.

Submit → **home (loggedIN)**

Cancel → **changeuserSettingsMenu**

uploadQueueMenu

Enables a user to change user settings, view uploaded content, go home or log out. It also allows a file to be uploaded by filling out the name of the event, description, date and location. Additional functionalities include making the document/file private or public and a check box must be pressed confirming file or document ownership prior to upload such file/document.

Change user settings → **changeuserSettingsMenu**

View Uploaded Content → **viewUploadedContentMenu**

Home → **home (loggedIN)**

Cancel → **home (loggedIN)**

Upload → **uploadCompleted**

viewEnhancedContent

Displays a more detailed version of the content shown in the **viewUploadedContentMenu** window and also shows the document's full description and details. The user has access to change user settings, go home, upload new content, view uploaded content or log out.

Change user settings → **changeuserSettingsMenu**

Home → **home (loggedIN)**

Upload New Content → **uploadNewContentMenu**

View Uploaded Content → **viewUploadedContentMenu**

Log out → **exits the app**

uploadCompleted

Simply confirms the desired document was successfully uploaded. Allows the user to either go home or log out.

Home → **home (loggedIN)**

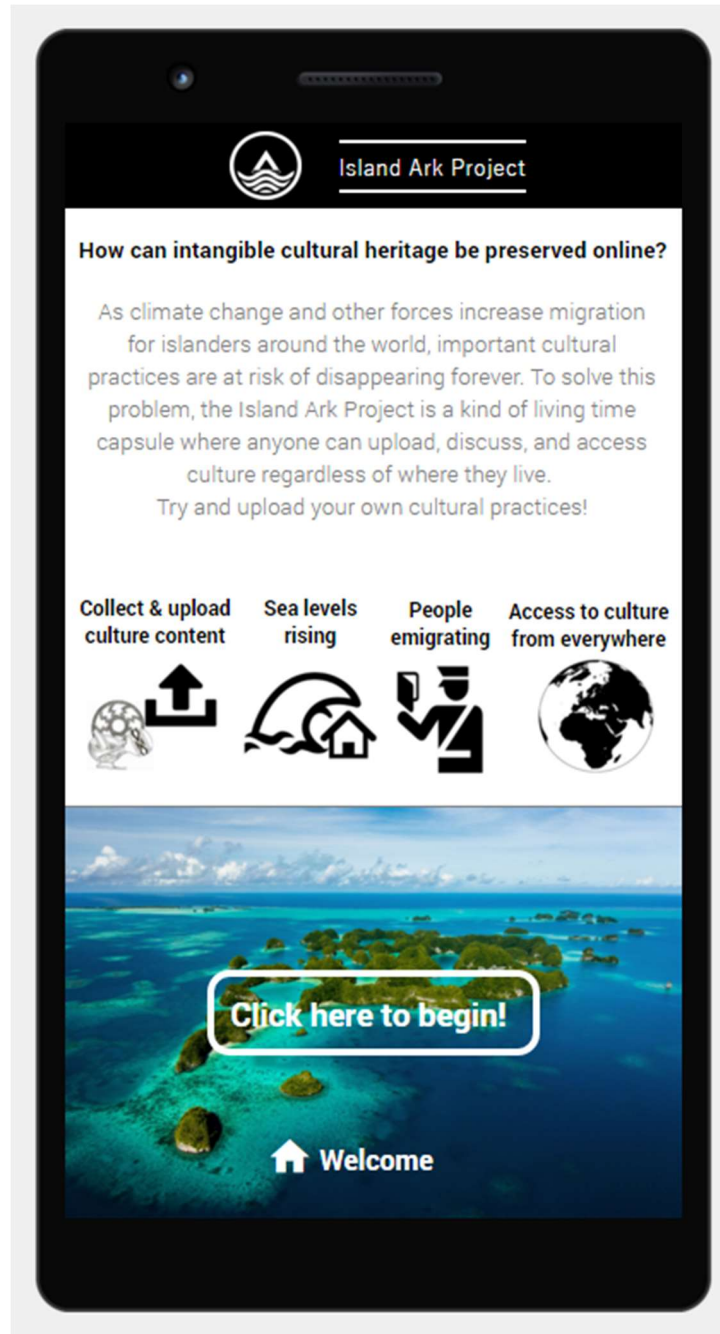
Log out → **exits the app**

3.3. Detailed Non-Functional Requirements

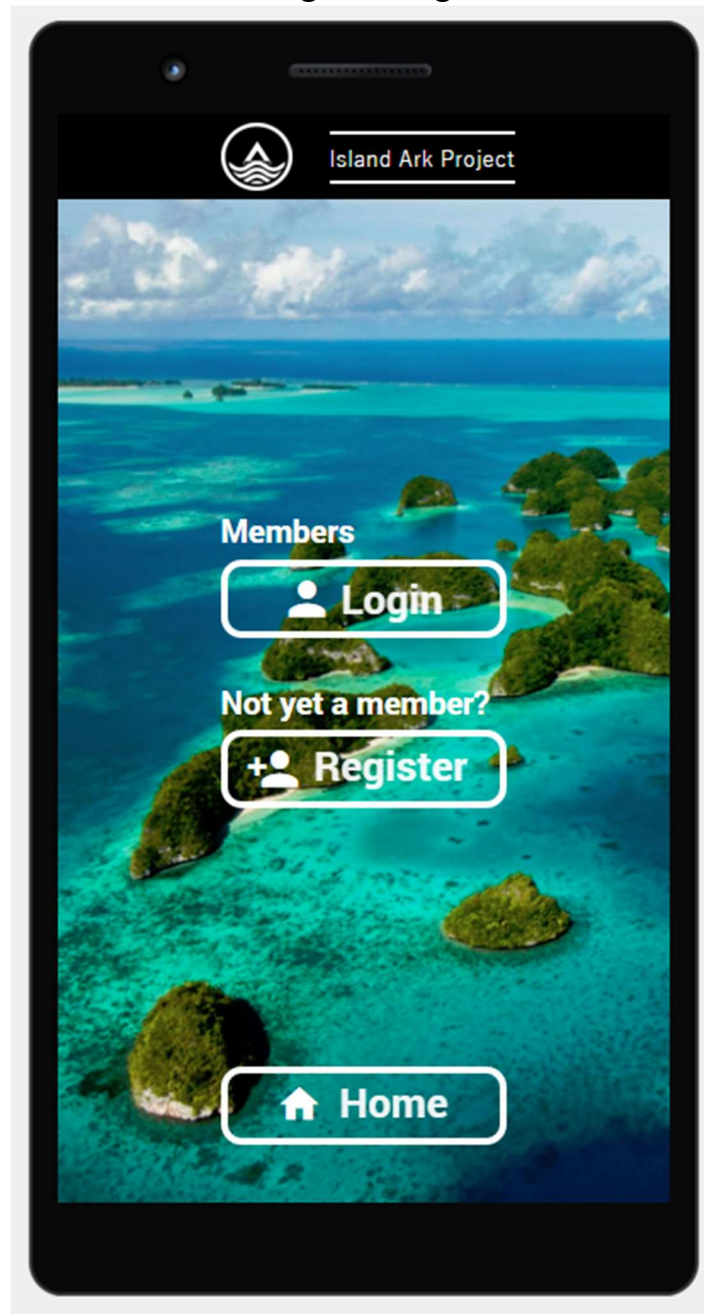
- **Usability:** The program is easy and simple to learn. User requires basic application knowledge.
- **Appearance:** The program is appealing, promoting confidence in its use.
- **Availability:** The program is able to be used when desired.
- **Confidentiality:** Prevents sensitive information from reaching the wrong users while making sure the right users can in fact have access to it.
- **Integrity:** Maintains the consistency, accuracy, and trustworthiness of data over its entire lifecycle.
- **Error handling:** IAPAA product shall handle expected and non-expected errors in ways that prevent loss of information and long downtime period.
- **Performance requirements:** The system shall accommodate high number of requests without any fault. Responses to view/upload information shall take no longer than 5 seconds to appear on screen.
- **Safety requirements:** System use shall not cause any harms to users.
- **Security Requirements:** System will use security encryption techniques implemented at our servers. Only authorized personnel are allowed to edit or modify data.
- **Frequent Q&A section to solve common issues:** This section will address common issues, concerns in an attempt to provide immediate help to users.

4.0. Interfaces and Possible Windows

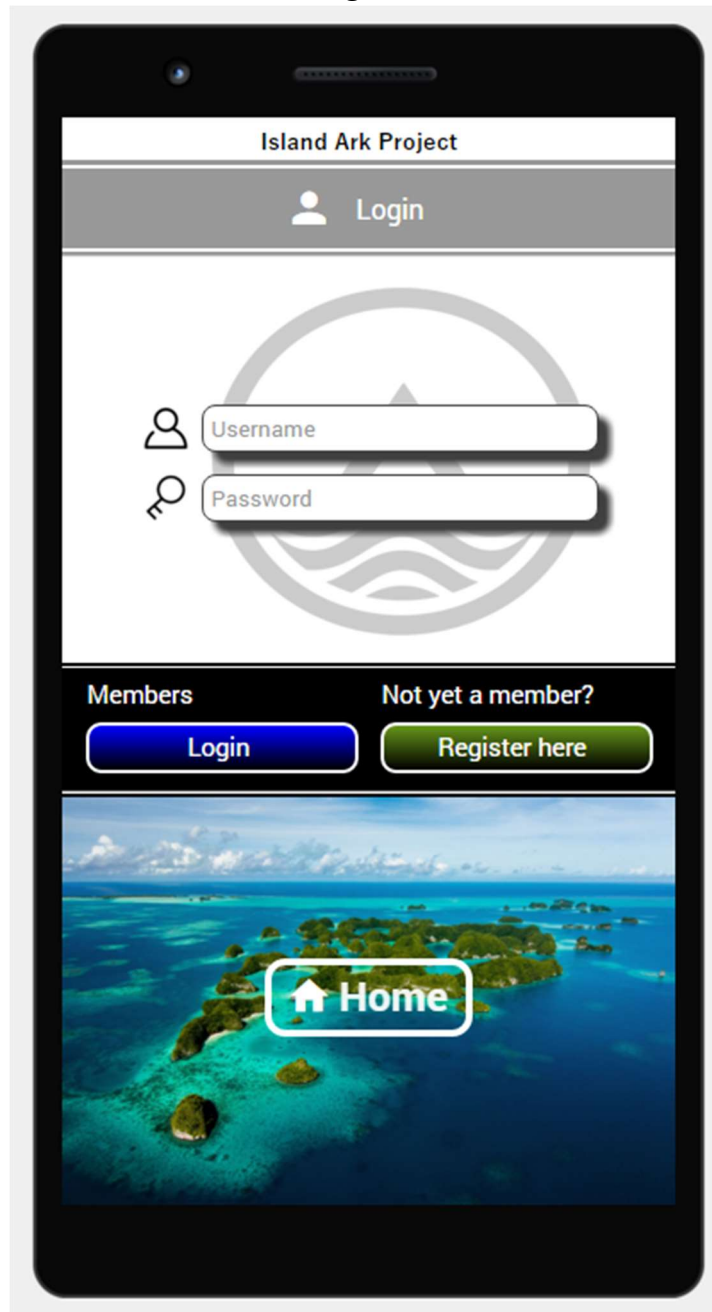
4.1. home



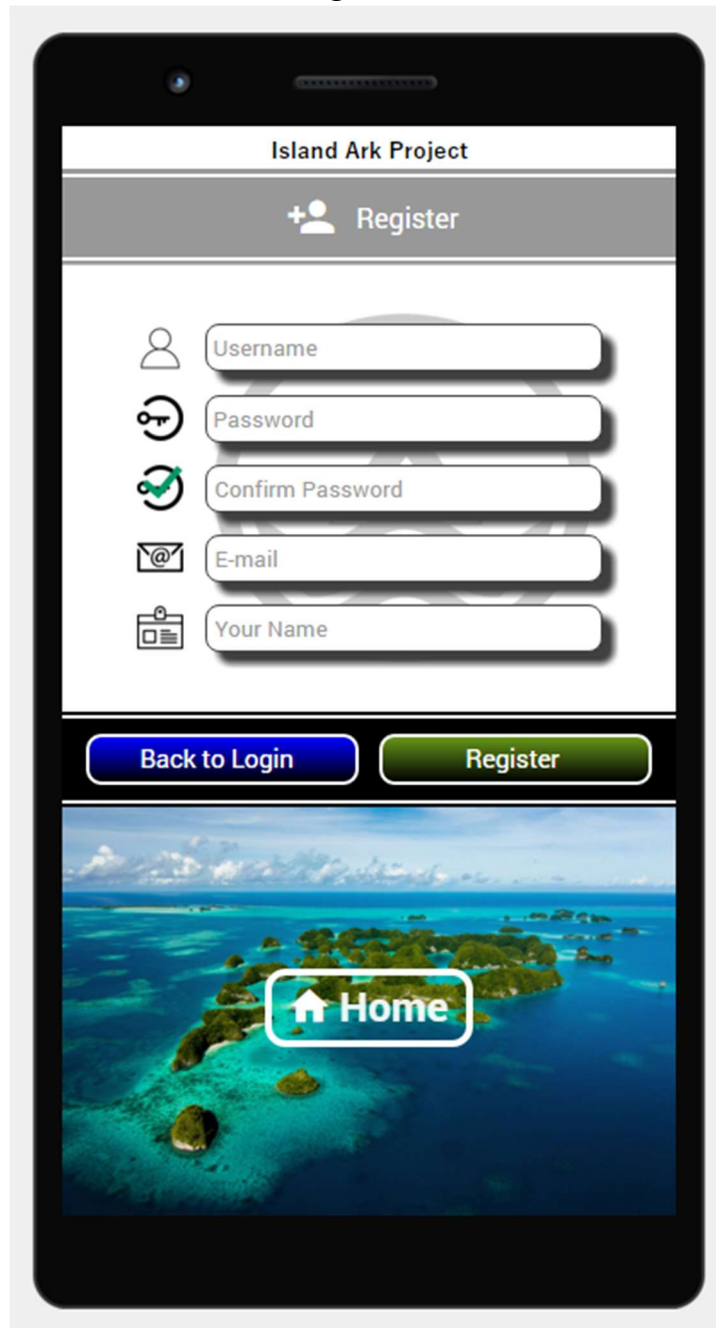
4.2. loginORregister



4.3. loginMenu



4.4. registerMenu



The image shows a mobile application interface for the "Island Ark Project". At the top, the title "Island Ark Project" is displayed. Below it is a grey header bar with a plus icon and the word "Register". The main content area contains five input fields, each with an icon to its left: a person icon for "Username", a key icon for "Password", a key with a checkmark icon for "Confirm Password", an email icon for "E-mail", and a calendar icon for "Your Name". Below the input fields are two buttons: a blue "Back to Login" button and a green "Register" button. At the bottom of the screen is a large image of a tropical island with a white "Home" button (with a house icon) overlaid on it.

Island Ark Project

+ Register

Username

Password

Confirm Password

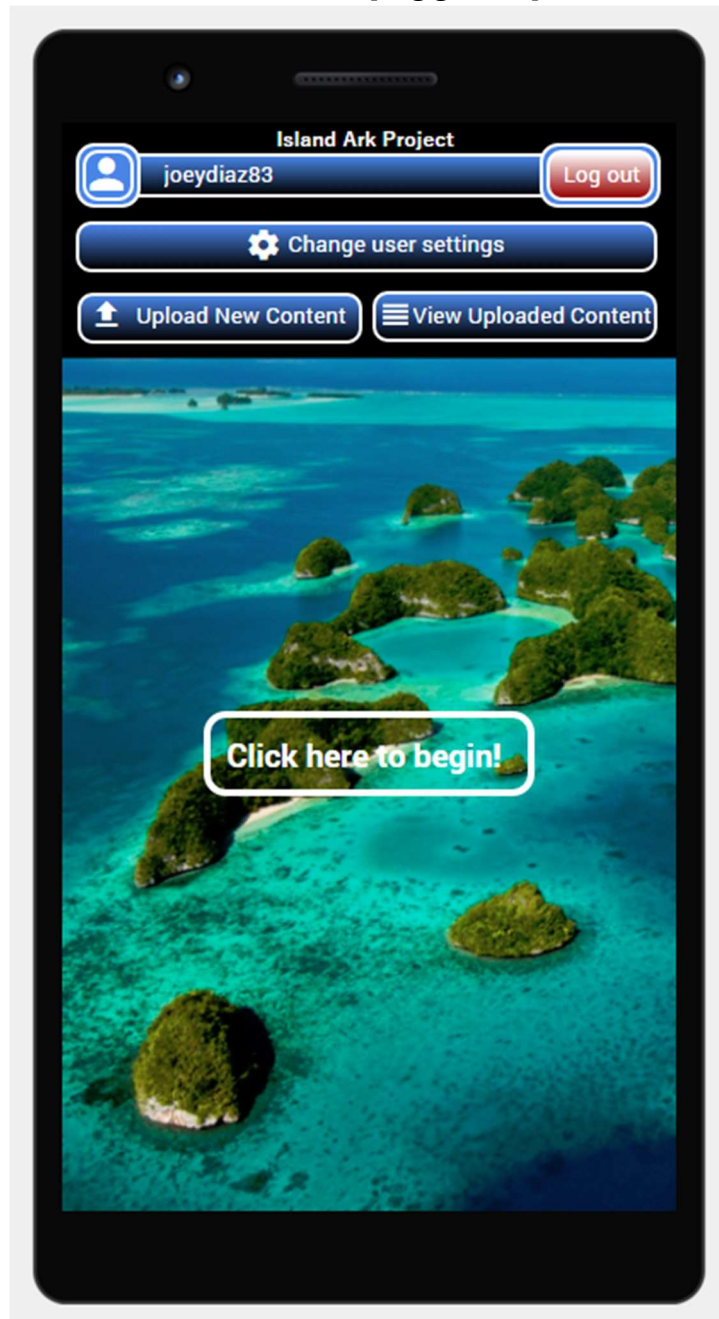
E-mail

Your Name

Back to Login Register

Home

4.5. home (loggedIN)



4.6. changeUserSettingsMenu

The image shows a mobile application interface for the 'Island Ark Project'. At the top, there's a header with the project name. Below it, a user profile bar shows the username 'joeydiaz83' and a 'Log out' button. A navigation bar contains 'Upload New Content', 'View Uploaded Content', and a 'Home' button. The main section is titled 'Update User Information' with a circular refresh icon. It contains three input fields: 'Username' (locked with a red warning 'This field is non-modifiable'), 'E-mail', and 'Your Name'. Below these are buttons for 'Change Password', 'Undo changes', and 'Update'. At the bottom is a large circular logo with a stylized 'A' and waves.

Island Ark Project

joeydiaz83 Log out

Upload New Content View Uploaded Content

Home

Update User Information

This field is non-modifiable


Username joeydiaz83

E-mail joeydiaz83@example.com

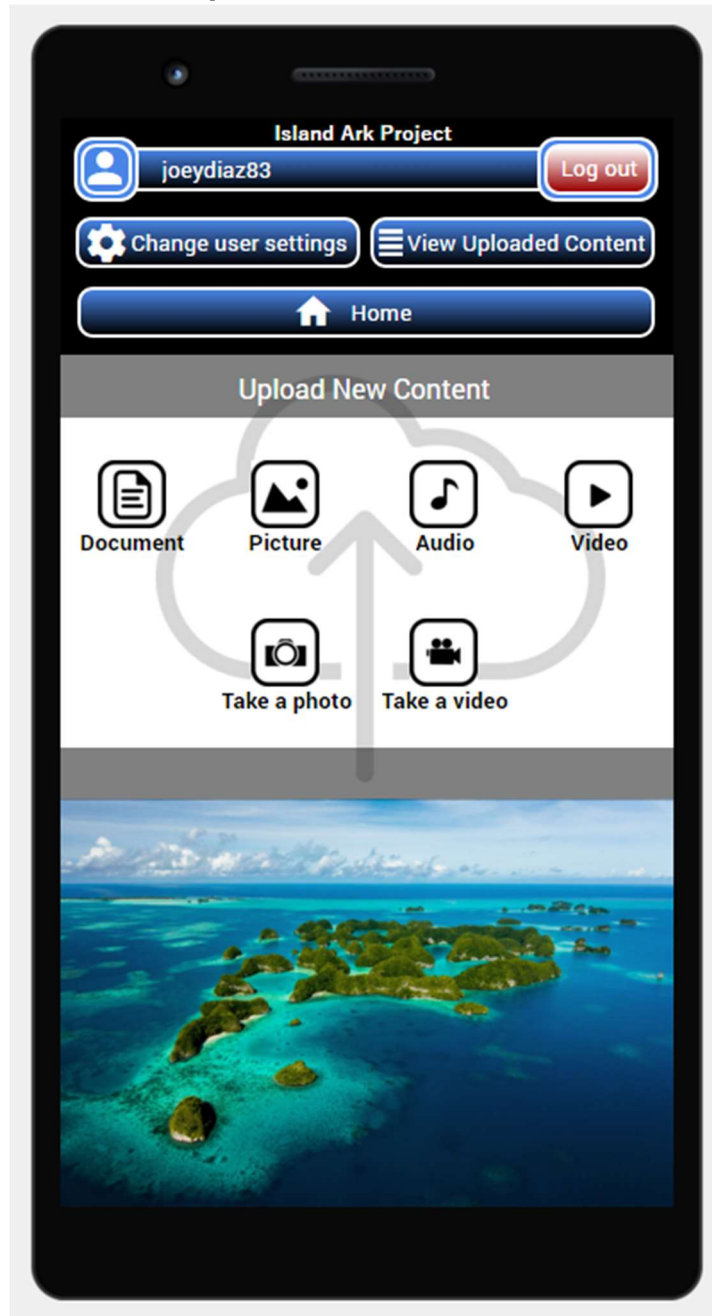
Your Name Joey

Change Password

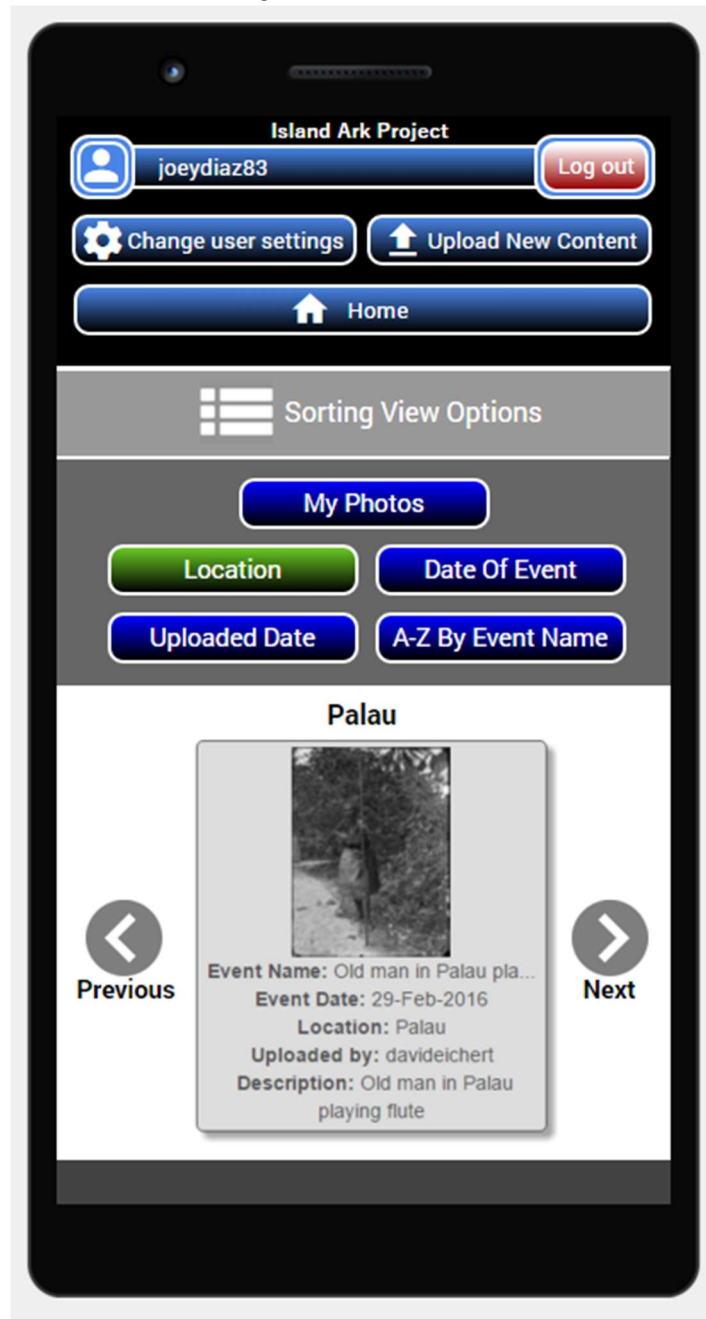
Undo changes Update



4.7. uploadNewContentMenu



4.8. viewUploadedContentMenu



4.9. confirmPasswordMenu

The image shows a mobile application interface for the "Island Ark Project". At the top, there is a header bar with the project name and a user profile icon and name "joeydiaz83". Below this is a large white rectangular area. A grey horizontal bar with a lock icon and the text "Confirm Password" is positioned in the middle. Underneath this bar, the text "Enter your password:" is displayed above a white password input field. At the bottom of the interface, there are two buttons: a blue "Cancel" button and a green "Submit" button. Below the buttons is a large white rectangular area containing a faint, circular logo of the Island Ark Project, which features a stylized triangle above wavy lines representing water.

4.10. *changePasswordMenu*



The image shows a mobile application interface for the "Island Ark Project". At the top, there is a header bar with the project name. Below it, a user profile bar shows a person icon and the username "joeydiaz83". The main content area features a "Change Password" button with a key icon. Below this button are three text input fields labeled "Current Password", "New Password", and "Confirm New Password". At the bottom of the form are two buttons: "Submit" (green) and "Cancel" (blue). A large, faint circular logo is visible at the very bottom of the screen.

Island Ark Project

joeydiaz83

Change Password

Current Password

New Password

Confirm New Password

Submit Cancel

4.11. uploadQueueMenu

The image shows a mobile application interface for the 'Island Ark Project'. At the top, there's a header bar with the project name. Below it, a user profile section shows the username 'joeydiaz83' and a 'Log out' button. A navigation bar contains three buttons: 'Change user settings', 'View Uploaded Content', and a 'Home' button with a house icon. The main content area is titled 'Upload Queue' and shows a 'Queue length: 1'. Below this is a table with two columns: 'Name' and 'Size'. The table contains one entry: 'ImageSample.png' with a size of '0.21 MB'. Under the table is a 'Details' section with four input fields, each preceded by an icon: a tag icon for 'Name of Event', a document icon for 'Description', a calendar icon for '04-Apr-2016', and a location pin icon for 'Location'. Below these fields are two radio button options: 'Private (only available to you)' (which is selected) and 'Public (available to anyone)'. At the bottom of the details section is a checkbox with the text 'I confirm that I possess the rights to the file uploaded, or have the permission of the rights owner to upload the file.' At the very bottom of the screen are two large buttons: 'Cancel' and 'Upload'.

Island Ark Project

joeydiaz83 Log out

Change user settings View Uploaded Content

Home

Upload Queue

Queue length: 1

Name	Size
ImageSample.png	0.21 MB

Details

Name of Event

Description

04-Apr-2016

Location

☒ Private (only available to you)

☐ Public (available to anyone)

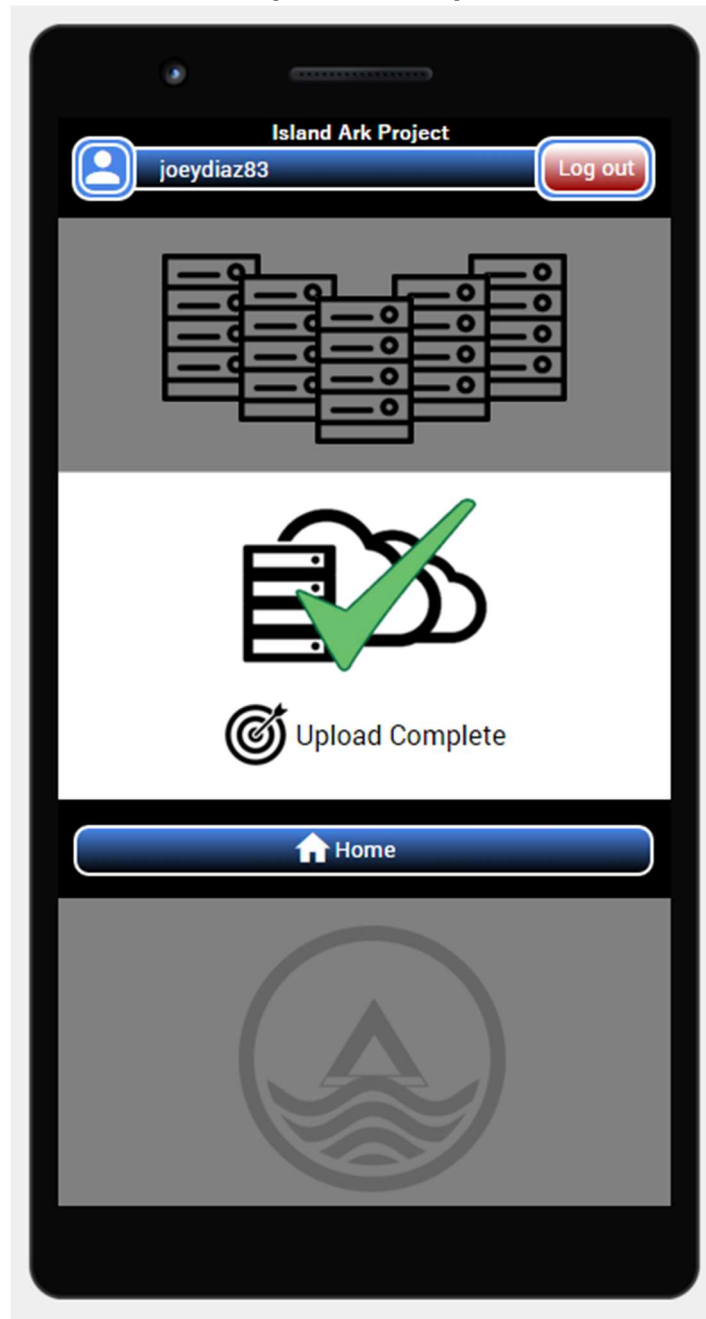
☐ I confirm that I possess the rights to the file uploaded, or have the permission of the rights owner to upload the file.

Cancel Upload

4.12. viewEnhancedContent



4.13. uploadCompleted



5.0. Database Sample Tables

Database table sample NOT completed

COMMENTS

<u>id</u>	fileId	userId	text	order

FILES

<u>id</u>	ownerName	fileName	filePath	privacyOption	hashValue	uploadedDate	thumbFilePath

FILESTOMETADATA

<u>id</u>	fileId	metaDataOption	value

METADATAOPTIONS

<u>id</u>	description

SHAREDFILES

<u>id</u>	fileId	userId

USERS

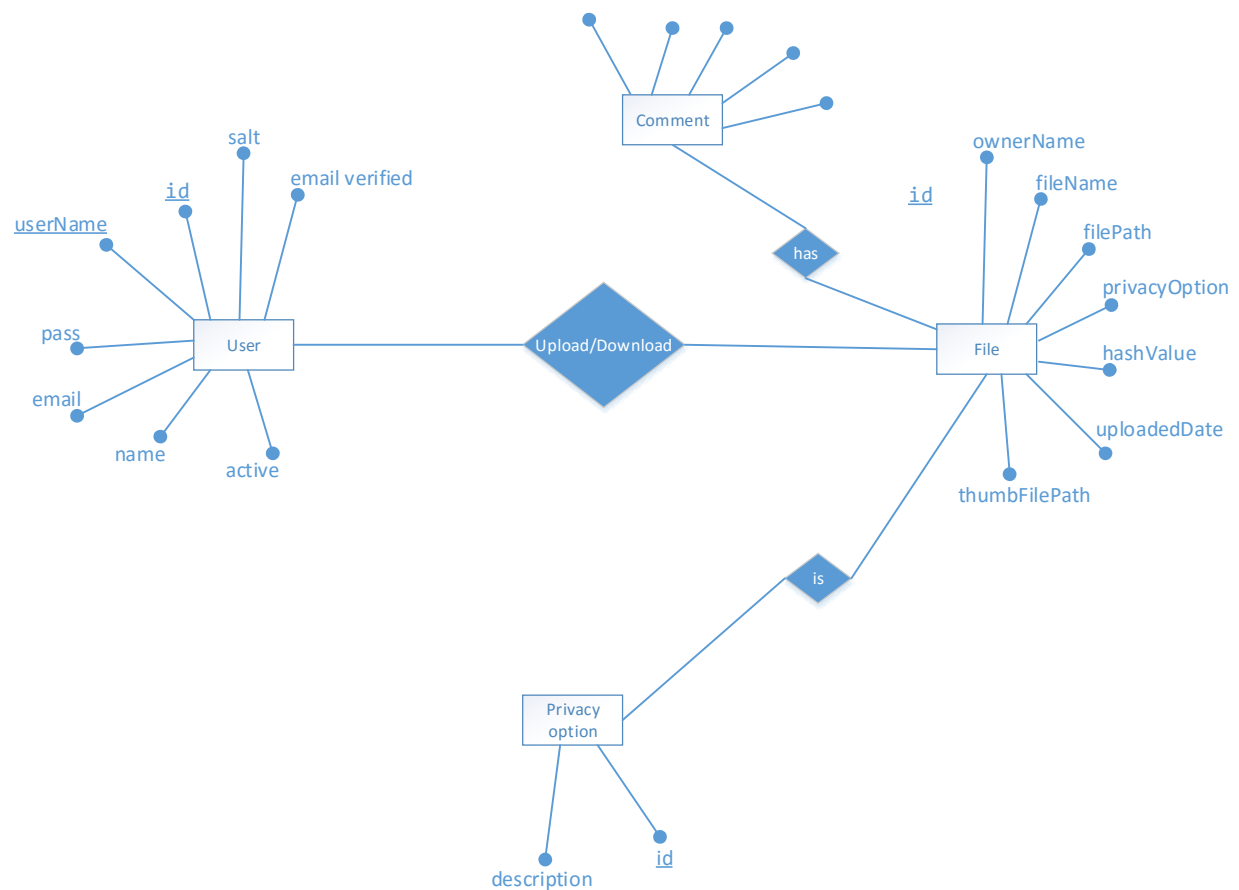
<u>id</u>	userName	pass	salt	email	name	email verified	active

PRIVACY_OPTIONS

<u>id</u>	description

6.0. ERD Diagram

Diagram NOT completed



7.0. Use Case Scenarios

Diagram NOT completed

