Product Requirements for Mobile Museum App

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This document is written to specify both functional and non-functional requirements for the mobile museum app. The expected readers include product owner, scrum masters, developers, testers and other related persons. The current version of this document is v1.0

Introduction

This app is aimed at providing an online platform of the museum. The app should enable users to login/logout their account, randomly explore artwork, search for specific items and purchase tickets. The system should get access to the database of artwork in this museum so that it can present the picture and information of the item. It should also get access to the users' bank account so that the user can purchase the ticket online. The app should help users get more detailed information of the artwork. Besides, it should help the museum to propagate itself and attract more visitors.

Glossary

Database: a structured set of data held in a computer, especially one that is accessible in various ways (e.g. using special designed computer language).

User interface (UI): in the industrial design field of human–computer interaction, user interface is the space where interactions between humans and machines occur. For example, the interface of a software on the computer screen is a graphical user interface.

OS: An operating system (OS) is system software that manages computer hardware and software resources and provides common services for computer programs. Two most popular OSs for mobile device are IOS and Android.

Functional Requirements

1. User account: register/login/logout/account information
   1.1. The app should be able to let users register their own accounts using specific username and password.
   1.2. The app should enable users to log in to their specific accounts using username and password authentication.
   1.3. The app should enable users to view their favorite items in their 'Favorite' folder after logging in.
   1.4. The app should enable users to view the ticket information if they have bought tickets.
   1.5. The app should enable users to store their bank information after logging in, the bank information should be used for the payment of ticket purchasing.
   1.6. The app should enable users to log out their accounts.

2. Interaction with database
   2.1. The app should be able to access the database provided by the museum.
   2.2. The app should be able to get images, unearthed date, type, location and date of exhibition as well as basic introduction to this item of its value from the database.

2.3. The app should be able to get items' information according to their classes or types.

3. Items presentation
    3.1. The app should be able to present information of items on the user interface.
    3.2. The information presented should include their images, unearthed date, type, location and date of exhibition as well as basic introduction to this item of its value.
    3.3. The app should enable users to view more detailed information of the item by pressing a 'more information' button.

4. Exploration
    4.1. The app should have a module to push daily recommended artwork to users.
    4.2. The module will present a brief introduction to the artwork, including its history and meaning.
    4.3. The artwork pushed everyday will be random.

5. Search for items
    5.1. The app should have a module for users to search for specific artwork.
    5.2. The module should enable users to search for items by key words, such as name, author.
    5.3. The module will list all the relevant results, ordered by relevance.

6. 'Like' items/'favorite'
    6.1. The app should allow users to 'like' the items they are interested in.
    6.2. The app should make users to login their account before they 'like' the item.
    6.3. The items 'liked' by the user will be listed in the 'Favorite' folder of the user, so that they can check those items later.

7. Ticket purchasing
    7.1. The app should enable users to purchase tickets.
    7.2. The app should make users to login their account before they purchase the tickets.
    7.3. After providing their IDs and paying for the tickets, the users' information will be recorded, and users will be allowed to enter the museum by showing their IDs.
    7.4. The app should only allow users to purchase today's tickets.

Non-functional Requirements

Performance (Speed, Size)

NF 1.   Performance requirement
    NF 1.1.   The app should meet the requirements in app store so that it can be released in the app store.
    NF 1.2.   The size of the app should be no larger than 15MB (megabyte).

NF 1.3.　　The app should have relatively quick response time within 2s.
NF 1.4.　　The app should have a low battery consumption.

Security

NF 2.   The app should encrypt sensitive privacy information, such as chat log, link bank account, etc.
NF 3.   The app should check the directory where the App is located, and its permissions should not be read and written by other group members.
NF 4.   The internal components of this app are prohibited from being called by any third party.

Ease of Use

UI design

NF 5.   The information content is conveyed quickly and accurately.
NF 6.   The displayed information can be distinguished accurately.
NF 7.   Users will not be overloaded with extraneous information.
NF 8.   The information presented is easy to read.
NF 9.   The meaning of each module is clearly understandable, unambiguous, interpretable, and recognizable.

Portability, Platforms supported, etc.

NF 10. The app should be available in the app store and free to download.
NF 11. The app should be supported up to 90% of Android device in the market, including the latest version of Android.
NF 12. The app should be usable in any portable device equipped with Android OS.