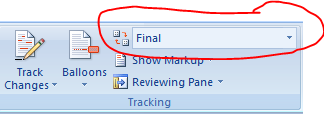
***PNotes to the Team***

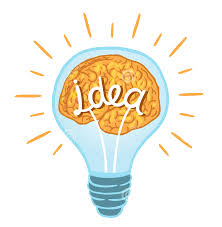
This is a template of a Requirements Document for your project with explanatory notes included as comments.

**When using this template, the following steps are recommended:**

1. Replace all text enclosed in angle brackets (e.g., <Project Name>) with the correct values. These angle brackets appear either in the body of the document or in headers and footers.
2. To update the Table of Contents, right-click on it and select “Update field” and choose the option - “Update entire table”.
3. Turn off Tracking. Go to the Review tab; make sure Display for Review is set to “Final”.



1. Before submission of this document, delete this instruction section “Notes to the Team”.



Stats and Stacks

Requirements Document

*BucketList*

Team Members:

|  |
| --- |
| 217143512, Bernard Mc Donald  217198392, Mu’Minah Daniels  213348292, Tiffany de Vos |

Date Submitted: 2 May 2019

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# SYSTEM OVERVIEW

The main objective of this system is to provide adventurous people with an app that encourages them to accomplish more out of life’s diverse activities than just sitting at home tied to their phones.

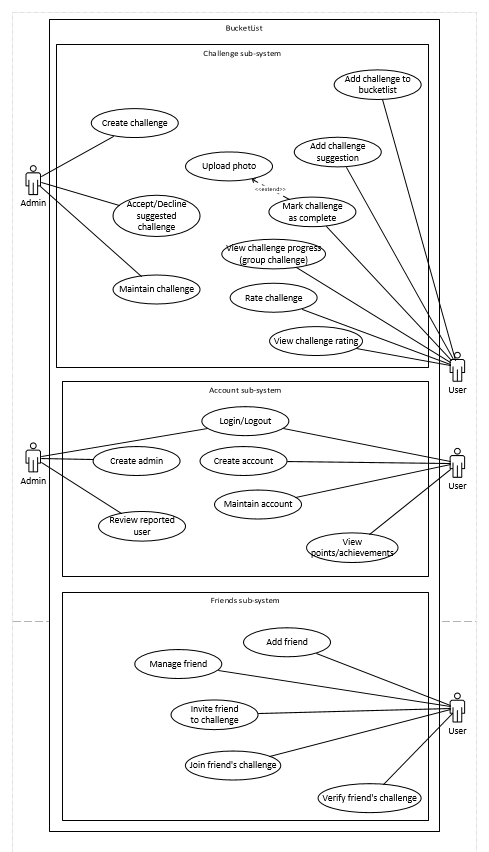
An adventurer using the app is introduced to a wide range of activities in the form of a bucket list. The user can complete the challenges that they add to their personal bucket list and simply upload a photo of the activity to receive points and gain achievements. The user’s goal is to collect all the predefined achievements. The challenges are of a wide variety and also vary in difficulty. Examples of simpler challenges are: “Talk to someone new”, “Photobomb people you don’t know”, “Go for a jog” or “Play a prank on someone”. More complicated challenges could be: “Climb a mountain” or “Go on a road trip”. Users can rate and review each challenge to ensure adventurers find the challenge best suited for them.

The system allows users to connect with friends on the app where they can view each other’s progress and achievements. It is easy to search for a friend by username or name and send them a friend invite. The system places especial emphasis on in-person social interaction as the challenges can be completed in groups and each photo a user uploads of a completed challenge need to be validated by a friend of the user.

Users and admins will log in with their personal passwords to keep their account secure. They can manage their profile and list of friends on the app. Although users can suggest challenges, all the challenges and their details are finalised by administrators. They ensure a challenge is ethical, safe and assigned a fair difficulty level. Another aspect of the system that keeps the app a safe space for users is the user reporting option. A user may report another user if there is due cause. The reported users are reviewed by an admin and blocked from the app if necessary.

# FUNCTIONAL REQUIREMENTS

## Business Use Case Model



## Use Case Glossary

|  |  |  |
| --- | --- | --- |
| **Package Id: Package Name: Challenges sub-system** | | |
| **Use Case Id** | **Use Case Name** | **Actors** |
| A0100 | Create challenge | Admin |
| A0200 | Approve/Decline challenge | Admin |
| A0300 | Maintain challenge | Admin |
| A0400 | Calculate challenge cost | Admin |
| A0500 | Add challenge to bucket list | User |
| A0600 | Add challenge suggestion | User |
| A0700 | Mark challenge as completed | User |
| A0800 | Upload photo | User |
| A0900 | View challenge progress (group challenge) | User |
| A1000 | Rate challenge | User |
| A1100 | View challenge rating | User |
| **Queries/Reports** | | |
| A0600 |  |  |
| A0700 |  |  |

|  |  |  |
| --- | --- | --- |
| **Package Id: Package Name: Account sub-system** | | |
| **Use Case Id** | **Use Case Name** | **Actors** |
| B0100 | Create admin account | Admin |
| B0200 | Review reported users | Admin |
| B0300 | Login/Logout | Admin/User |
| B0400 | Create user account | User |
| B0500 | Maintain account | User |
| B0600 | View points | User |
| **Queries/Reports** | | |
| B0600 |  |  |
| B0700 |  |  |

|  |  |  |
| --- | --- | --- |
| **Package Id: Package Name: Friends sub-system** | | |
| **Use Case Id** | **Use Case Name** | **Actors** |
| C0100 | Add friend | User |
| C0200 | Manage friends | User |
| C0300 | Invite friend to challenge | User |
| C0400 | Verify friend’s challenge | User |
| C0500 | Join friend’s challenge | User |
| **Queries/Reports** | | |
| C0600 |  |  |
| C0700 |  |  |

## Use Case Narratives (User Stories)

### Package A: Challenge sub-system

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0100 | Create challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| Admin | | User |
| **Description** | The admin creates a challenge that is made available for users to add to their bucket list. | |
| **Pre-Conditions** | The admin must be logged in. | |
| **Triggers** | The admin has an idea for a new challenge which is not currently available. | |
| **Post-Conditions** | A challenge is created and is made available for users for use. | |
| **Basic Flow of Events** | 1. Admin logs in 2. Admin fills out form containing all information of challenge 3. Challenge is saved and made available to users for use | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0200 | Approve/Decline challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| Admin | | User |
| **Description** | The admin approves or declines a challenge that has been suggested by a user. | |
| **Pre-Conditions** | The admin must be logged in and a challenge must be suggested. | |
| **Triggers** | A challenge is suggested by a user. | |
| **Post-Conditions** | The challenge is declined and discarded or approved and made available to users for use. | |
| **Basic Flow of Events** | 1. Admin logs in 2. Admin views list of suggested challenges and selects one 3. If admin declines challenge, challenge is discarded 4. If admin approved challenge, challenge is made available to users for use. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0300 | Maintain challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| Admin | |  |
| **Description** | The admin makes changes to an existing challenge. | |
| **Pre-Conditions** | The admin must be logged in and the challenge must already exist, either by admin creation or approval of challenge. | |
| **Triggers** | A challenge contains an error or is out dated. | |
| **Post-Conditions** | The challenge is changed and made available to users for use. | |
| **Basic Flow of Events** | 1. Admin logs in 2. Admin views challenges and selects one 3. Admin makes changes to challenge 4. Changes to challenge is saved. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0400 | Calculate challenge cost | |
| **Primary Business Actors** | | **Other participating Actors** |
|  | |  |
| **Description** |  | |
| **Pre-Conditions** |  | |
| **Triggers** |  | |
| **Post-Conditions** |  | |
| **Basic Flow of Events** |  | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0500 | Add challenge to bucket list | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | User adds a challenge to his/her bucket list. | |
| **Pre-Conditions** | User must be logged in and the challenge must exist. | |
| **Triggers** | The user sees a challenge he/she would like to attempt. | |
| **Post-Conditions** | The challenge is added to his/her bucket list. | |
| **Basic Flow of Events** | 1. User logs in 2. User views challenges 3. User sees challenge he/she would like to attempt 4. User selects challenge 5. Challenge is added to his/her bucket list | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0600 | Add challenge suggestion | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | | Admin |
| **Description** | The user creates a challenge suggestion which is either approved or declined by an admin. | |
| **Pre-Conditions** | The user must be logged in. | |
| **Triggers** | The user has an idea for a new challenge which is not currently available. | |
| **Post-Conditions** | The suggested challenge is made available to an admin for review. | |
| **Basic Flow of Events** | 1. User logs in 2. User fills in form for challenge suggestion 3. User submits challenge for admin review | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0700 | Mark challenge as completed | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user marks a challenge as complete once they have completed the challenge. | |
| **Pre-Conditions** | The user must be logged in, the challenge must exist, and the challenge must have been added to their bucket list. | |
| **Triggers** | The user completes the challenge. | |
| **Post-Conditions** | The challenge is marked as complete and is made available for validation by friends. | |
| **Basic Flow of Events** | 1. User logs in 2. User views bucket list 3. User selects challenge and marks it as complete 4. Completed challenge is made available for validation by friends. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0800 | Upload photo | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user uploads a photo of them completing the challenge. | |
| **Pre-Conditions** | The user must be logged in, the challenge must exist, the challenge must have been added to their bucket list, and the user must have a photo of them completing the challenge. | |
| **Triggers** | The user completes the challenge. | |
| **Post-Conditions** | The photo is uploaded to their account and is made available for validation by friends. | |
| **Basic Flow of Events** | 1. User logs in 2. User views bucket list 3. User select challenge and uploads photo 4. Completed challenge is made available for validation by friends. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A0900 | View challenge progress (group challenge) | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can view the progress of a group challenge. | |
| **Pre-Conditions** | The user must be logged in, the group challenge must exist, and the group challenge must be added to their bucket list | |
| **Triggers** | The user wants to view the progress of the group challenge. | |
| **Post-Conditions** | The progress of the group challenge is displayed to the user. | |
| **Basic Flow of Events** | 1. User logs in 2. User views bucket list 3. User selects group challenge 4. Group challenge progress is displayed to user | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A1000 | Rate challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can rate a challenge that they have viewed. | |
| **Pre-Conditions** | The user must be logged in and the challenge must exist. | |
| **Triggers** | The user is interested in giving feedback on a challenge. | |
| **Post-Conditions** | The challenge is rated. | |
| **Basic Flow of Events** | 1. User logs in 2. User views challenges 3. User selects challenge 4. User rates challenge | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| A1100 | View challenge rating | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can view the rating of the challenge as rated by other users. | |
| **Pre-Conditions** | The user must be logged in, the challenge must exist, and the challenge must have a rating. | |
| **Triggers** | The user wants to view the rating of a challenge. | |
| **Post-Conditions** | The rating of the challenge is displayed to the user. | |
| **Basic Flow of Events** | 1. User logs in 2. User views challenges 3. User selects challenge 4. Rating it displayed to user | |

### Package B: Account sub-system

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| B0100 | Create admin account | |
| **Primary Business Actors** | | **Other participating Actors** |
| Admin | |  |
| **Description** | The admin creates another admin account. | |
| **Pre-Conditions** | The admin must be logged in. | |
| **Triggers** | The admin requires to make another admin account. | |
| **Post-Conditions** | Another admin account is created. | |
| **Basic Flow of Events** | 1. Admin logs in 2. Admin fills in form containing new admin account details 3. Admin account is created. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| B0200 | Review reported users | |
| **Primary Business Actors** | | **Other participating Actors** |
| Admin | |  |
| **Description** | The admin reviews reported users and could terminate their account if the reported user violates guidelines. | |
| **Pre-Conditions** | The admin must be logged in, the user must exist, and the user must be reported. | |
| **Triggers** | A user reports another user. | |
| **Post-Conditions** | The admin reviews the user and possibly terminates their account. | |
| **Basic Flow of Events** | 1. Admin logs in 2. Admin views reported users 3. Admin reviews specific user 4. If user violates guidelines, admin terminates user account. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| B0300 | Login/Logout | |
| **Primary Business Actors** | | **Other participating Actors** |
| Admin/User | |  |
| **Description** | The admin/user can log into or log out of their account using their credentials. | |
| **Pre-Conditions** | The admin/user must have an account. | |
| **Triggers** | The admin/user wants to log into/log out of their account. | |
| **Post-Conditions** | The admin/user it logged into/logged out of their account. | |
| **Basic Flow of Events** | 1. Admin/User logs into their account 2. Admin/User logs out of their account. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| B0400 | Create user account | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can create and account of their own. | |
| **Pre-Conditions** |  | |
| **Triggers** | The user wants to create an account. | |
| **Post-Conditions** | A user account is created. | |
| **Basic Flow of Events** | 1. User fills in form containing new account details 2. Account is created 3. User logs in | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| B0500 | Maintain account | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can make changes to their account. | |
| **Pre-Conditions** | The user must be logged in. | |
| **Triggers** | The user wants to change their account details. | |
| **Post-Conditions** | The changes to the user account are saved. | |
| **Basic Flow of Events** | 1. User logs in 2. User makes changes to account details 3. Changes to account details are saved | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| B0600 | View points | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** |  | |
| **Pre-Conditions** |  | |
| **Triggers** |  | |
| **Post-Conditions** |  | |
| **Basic Flow of Events** |  | |

### Package C: Friends sub-system

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| C0100 | Add friend | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can add a friend to his friend list using the friend’s username. | |
| **Pre-Conditions** | The user must be logged in, the other user must exist, and the user must know the friend’s username. | |
| **Triggers** | The user wants to add another user to his friend list. | |
| **Post-Conditions** | The other user is added to the user’s friend list. | |
| **Basic Flow of Events** | 1. User logs in 2. User searches for the other user by username 3. User adds friend | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| C0200 | Manage friends | |
| **Primary Business Actors** | | **Other participating Actors** |
|  | |  |
| **Description** |  | |
| **Pre-Conditions** |  | |
| **Triggers** |  | |
| **Post-Conditions** |  | |
| **Basic Flow of Events** |  | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| C0300 | Invite friend to challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can invite a friend to a group challenge. | |
| **Pre-Conditions** | The user must be logged in, the challenge must exist, and the other user must be a friend. | |
| **Triggers** | The user wants to participate in a group challenge. | |
| **Post-Conditions** | The friend is added to the group challenge. | |
| **Basic Flow of Events** | 1. User logs in 2. User views challenges 3. User selects group challenge 4. User selects friend from friend list to invite | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| C0400 | Verify friend’s challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can verify that a friend has completed a challenge. | |
| **Pre-Conditions** | The user must be logged in, the other user must be added as a friend, the friend must’ve marked the challenge as completed. | |
| **Triggers** | The user sees a friend has marked a challenge as completed. | |
| **Post-Conditions** | The challenge completion is verified, and the friend receives points. | |
| **Basic Flow of Events** | 1. User logs in 2. User views friend feed 3. User sees friends challenge marked as completed. 4. User verifies challenge is completed. 5. Friend receives points. | |

|  |  |  |
| --- | --- | --- |
| **Use Case ID** | **Use Case Name** | |
| C0500 | Join friend’s challenge | |
| **Primary Business Actors** | | **Other participating Actors** |
| User | |  |
| **Description** | The user can accept an invite to a group challenge. | |
| **Pre-Conditions** | The user must be logged in, and the user must’ve received an invite from another user. | |
| **Triggers** | The user receives an invite to a group challenge from a friend. | |
| **Post-Conditions** | The user is added to the group challenge. | |
| **Basic Flow of Events** | 1. User logs in 2. User receives invitation to group challenge from friend 3. User accepts invite | |

# NON-FUNCTIONAL REQUIREMENTS

## Interface Requirements

Bucket List is intended to be a web-based application. The GUI should be easy on the eyes, minimalistic but also make the user want to add more to it’s bucket list, complete challenges and get more friends to join.

**Usability goals:**

Bucket List aims to entice users to get up and do the things of always wanted to do but never had the motivation or time to do. Bucket List navigation will be easy, straight forward, precise, intuitive for all ages and worthwhile to remember. Design across the website will be consistent between the main bucket list and each individual users bucket list so that users always feel in control. Once an onlooker has signed up it should immediately log them in and given them access to all user controls such as edit profile, send friend requests etc. The system will offer simple error handling and easy reversal of actions such as removing challenges from ones Bucket List, removing friend and deleting friend request. There will be visual or audible feedback when certain tasks are completed. Not all personal information will be immediately available so that the user feels secure when using the website.

Each profile will be password protected.

**User experience goals:**

When visiting the website, onlookers must want to immediately sign up and complete challenges as well as invite friends to join. Formatting and themes should be consistent throughout the website. GUI will be aesthetically pleasing, simple yet energetic in order to compel users to complete challenges.

**User requirements:**

This system will be implemented as a website but access to a computing device is required, basic understanding of how computers work and an internet connection. General casual users to expert users will be able to use the system.

## Performance Requirements

This will be a multi-user system thus accessing and capturing data into tables will have to be fast, accurate and reliable. Thus, processing time should not depend on the amount of users currently using the website.

All responses should be immediate i.e. signing up, adding to bucket List

Verifying that a challenge is completed should happen automatically once 5 friends have verified it.

Logging into one’s profile should be done swiftly so that loading the profile and querying tables are not noticeable.

There should be no lagging when uploading, moving between interfaces or adding challenges.

Feed needs to be automatically and immediately updated every time the users opts to open the feed tab.

All notifications received by the user should be in real-time.

The system should be available to upload challenges, add challenge or update profile 24/7 in real time.

## Security Requirements

All personal/ biographical information should be encrypted.

Users only have access to their own profiles but may view other profiles and verify their challenges.

Onlookers may not access any system information without signing up and being logged in.

If passwords are changed a reset password email is sent out to ensure the user wants to update.

## Operational Requirements

Bucket List will be web-based, coded in C# using Visual Studio 2017. A 2008 SQL Server database will be used to manage and store the data captured into the system. A SQL Server Management System will be used during development to maintain the database.

\*Not sure if we should add that our not as it might change

# DATA REQUIREMENTS

|  |  |
| --- | --- |
| **Entity** | **Entity Attributes** |
| User | User ID  Username  Password  First Name  Surname  Email  User Type |
| Challenge | Challenge ID  Title  Description  Difficulty Level  Points  Need Photo  Photo |
| Rating | Rating ID  Challenge ID  User ID  Rating  Review |
| Suggested Challenge | Suggested Challenge ID  User ID  Title  Description  Difficulty Level  Points  Need Photo |
| User Challenge | User ID  Challenge ID  Status  Photo |
| ????Reported User | Report ID  Reported User ID  Reporter User ID  Reason  Status |
| Friend Invite | Friend Invite ID  From User ID  To User ID |
| Friendship | Friendship ID  User1 ID  User2 ID |
| Achievement | Achievement ID  Achievement Description  Difficulty Type  Number |
| User Achievement | Achievement ID  User ID |
| Group Challenge Invite | Challenge Invite ID  From User ID  To User ID  Challenge ID  Extra Points  Status |
|  |  |
|  |  |
|  |  |

# Project Matters

## Open Issues

Put nice to have here: map, email, linking to others for challenges, Notifications – mail or when log on

## Preliminary Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **Package/Sub-System Name** | **Team Member Responsible** | | |
| **Student Number** | **Name** | **Signature** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

# Researching the Requirements

## 10 User Interview Questions

1. Do you want to be able to view the challenges without logging in, but in order to accept a challenge or interact with friends, you need to log in?
2. Would you prefer a star system for the difficulty level (e.g. 1 star = easy, 5 stars = extreme) or would words be better (e.g. easy, difficult, extreme)?
3. Do you want admin users to be able to participate in challenges?
4. Can you befriend anyone whose username you know or does it need to be accepted by the user?
5. If a user deactivates their Bucket List account, should their details be kept?
6. What happens to an account is the user was reported
7. What happens if a challenge is completed but nobody verifies it or a challenge is not actually completed but is verified?
8. How are fake accounts handled? For example, creating a fake account to get points for a group challenge
9. Besides completing Bucket lost challenges, what else does this app provide? E.g.: charity, monetary gain, unlocking challenges based on points
10. How will the app be maintained /paid for?
11. Would you like an extra security measure when logging in? (i.e. Secret question)
12. Would you like an option to disable advertisements on the system?
13. Would you like to receive monthly information via email about new challenges and other related products?
14. What details do we need from the users, and what are you comfortable sharing?