Use Cases

for

BirdGO

Version 1.0 approved

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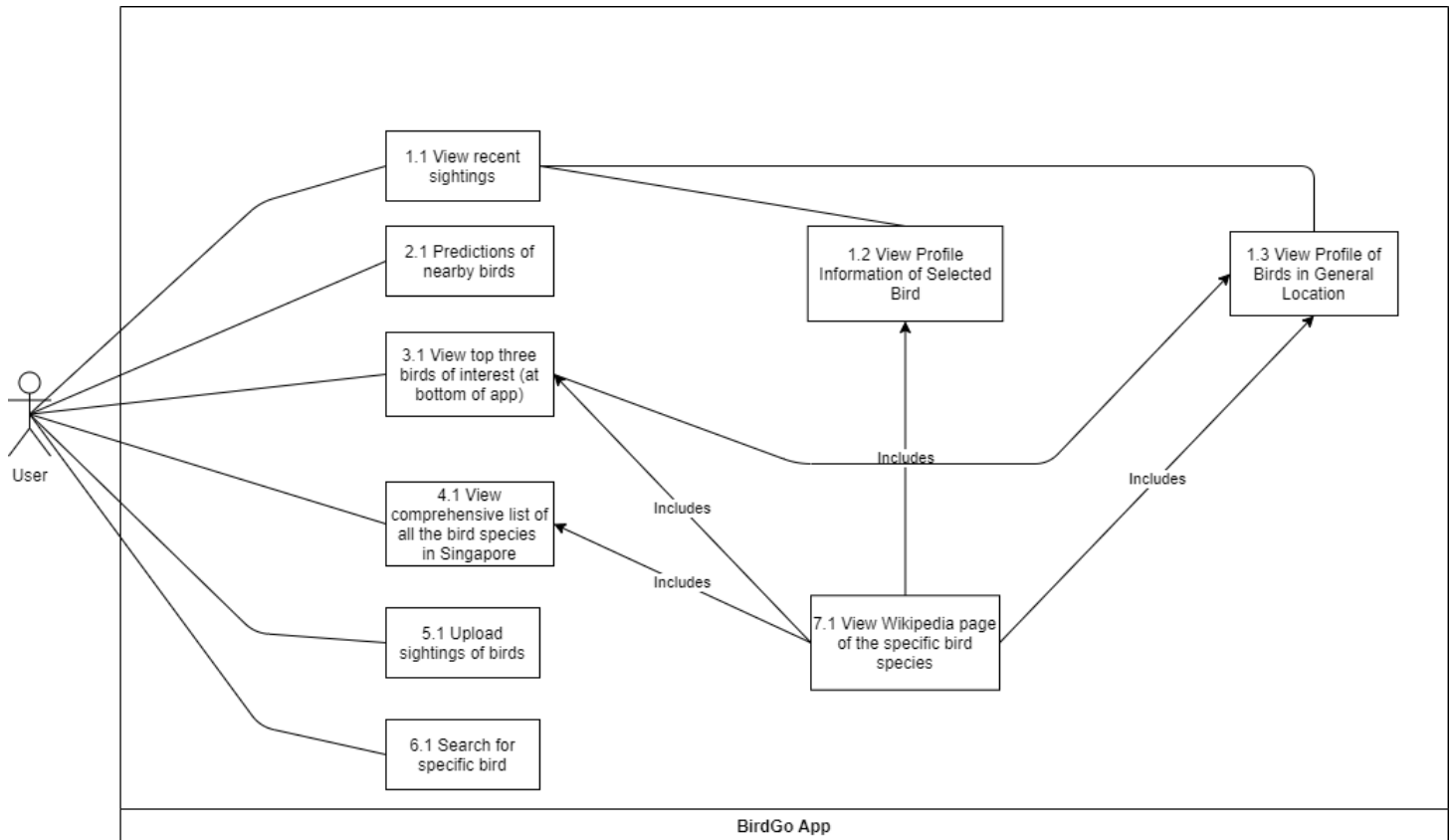
BirdGO

01/09/2021

Revision History

Name	Date	Reason For Changes	Version
Bryan Ong	01/09/21	First release	1.0

Use Cases

Use case diagram for BirdGo App. The User actor connects to: 1.1 View recent sightings, 2.1 Predictions of nearby birds, 3.1 View top three birds of interest (at bottom of app), 4.1 View comprehensive list of all the bird species in Singapore, 5.1 Upload sightings of birds, and 6.1 Search for specific bird. 1.1 View recent sightings connects to 1.2 View Profile Information of Selected Bird and 1.3 View Profile of Birds in General Location. 7.1 View Wikipedia page of the specific bird species Includes: 3.1 View top three birds of interest, 4.1 View comprehensive list, 1.2 View Profile Information of Selected Bird, and 1.3 View Profile of Birds in General Location.

Use Case ID:	1.1		
Use Case Name:	View Recent Sightings		
Created By:	Bryan Ong	Last Updated By:	Bryan Ong
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	Allows the user to view a map based on their current location. The map will display different pins indicating where each bird species has recently been sighted.
Preconditions:	1. Stable internet connection 2. App has access to location services
Postconditions:	1. Map will be displayed on the user's screen 2. Pins indicating individual bird occurrence will be shown on the map 3. Flags indicating regions will show on the map
Priority:	High
Frequency of Use:	15 times per user / hour
Flow of Events:	1. User opens the app and is immediately shown this map view.
Alternative Flows:	NIL
Exceptions:	1.1.EX.1: Google maps API fails to load Throw an exception box to the user indicating that there is an issue with the google maps API.
Includes:	(1.2) View Profile Information of Bird Selected (1.3) View Profile of Birds in General Location
Special Requirements:	NIL
Assumptions:	Google maps API is compatible with user's phone
Notes and Issues:	NIL

Use Case ID:	1.2		
Use Case Name:	View Profile Information of Selected Bird		
Created By:	Chua Yong Xuan	Last Updated By:	Chua Yong Xuan
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	Users can view the profile description of the bird that they have selected. This includes its common name, scientific name, rarity and resident status etc. This allows users to learn more about the bird species that they are interested in.
Preconditions:	1. Stable internet connection
Postconditions:	1. Bird information is retrieved from database
Priority:	High
Frequency of Use:	10 times per user / hour
Flow of Events:	1. User clicks on the bird image that they are interested in. 2. Users can also click on 'More info' to be brought to that bird species' Wikipedia page.
Alternative Flows:	NIL
Exceptions:	1.2.EX.1: Information of the bird cannot be retrieved. The app displays an error message ("Information cannot be retrieved from the database.").
Includes:	(7.1) View Wikipedia Page
Special Requirements:	NIL
Assumptions:	NIL
Notes and Issues:	NIL

Use Case ID:	1.3		
Use Case Name:	View Profile of Birds in General Location		
Created By:	Tan Jia Min	Last Updated By:	Tan Jia Min
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	Users can view a gallery of images of the birds ever sighted in selected locations. This allows the user to have a brief overview of what kind of birds they may expect to find by exploring this area.
Preconditions:	1. Users have previously uploaded sightings in that location 2. Stable internet connection
Postconditions:	1. Data of birds from the last week will be loaded 2. Gallery is populated with bird data and images
Priority:	Medium
Frequency of Use:	6 times per user / hour
Flow of Events:	1. User clicks his/her flag of interest. 2. Swipe up menu displaying all birds ever sighted in that location appears at the bottom of the page. 3. The user can click on the images to be brought to the Wikipedia page of that bird species.
Alternative Flows:	NIL
Exceptions:	1.3.EX.1: No sightings of birds uploaded by users in that area. App displays a message stating that there are no nearby birds of interest. 1.3.EX.2: Users did not upload photographs of their sighting. App only displays the stock image of the birds pulled from the database.
Includes:	(7.1) View Wikipedia Page
Special Requirements:	NIL
Assumptions:	1. Map view function is compatible with user's mobile device
Notes and Issues:	NIL

Use Case ID:	2.1		
Use Case Name:	Predictions of Nearby Birds		
Created By:	Tan Jia Min	Last Updated By:	Tan Jia Min
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	Based on the data of past sightings, the app will use machine learning techniques to provide users with a prediction of where a particular bird species is likely to appear at that point in time. The percentage likelihood of the prediction being true will be displayed on the map.
Preconditions:	1. Stable internet connection
Postconditions:	1. Pins indicating certain birds will be shown across the map 2. A menu showing percentage of finding the bird will be shown
Priority:	Medium
Frequency of Use:	2 times per user / hour
Flow of Events:	1. User clicks on the lightbulb icon on the right of the screen to access the prediction view of the map. 2. View will immediately be taken to the predictions layer
Alternative Flows:	NIL
Exceptions:	2.1.EX.1: No sightings of birds uploaded by users in that area. App displays a message stating that there are no nearby birds of interest.
Includes:	NIL
Special Requirements:	NIL
Assumptions:	1. Map view function is compatible with user's mobile device
Notes and Issues:	NIL

Use Case ID:	3.1		
Use Case Name:	View Top Three Birds of Interest		
Created By:	Chua Yong Xuan	Last Updated By:	Chua Yong Xuan
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	Enables the user to view the top 3 birds of interest nearby to the user's current location, via a swipe up menu. This list is formulated based on the rarity of the birds as well as how recent they were last sighted. This allows the user to identify birds of interest and increase the likelihood of spotting a rare bird.
Preconditions:	1. Stable internet connection 2. App has access to location services 3. User is in Singapore
Postconditions:	1. Relevant bird and data is retrieved from the database 2. A swipe up menu displaying the birds is shown
Priority:	Medium
Frequency of Use:	5 times per user / hour
Flow of Events:	1. The user launches the BirdGo App and the swipe up menu appears with the top 3 birds of interest OR 1. If the bottom menu has been previously closed, the user swipes up the bottom menu.
Alternative Flows:	NIL
Exceptions:	3.1.EX.1. Information cannot be retrieved from the database. The swipe up menu displays an error message ("The information cannot be retrieved, please try again."). 3.1.EX.2. User has no GPS signal. The swipe up menu displays an error message ("No GPS signal found."). 3.1.EX.3. User's GPS signal is out of bounds. The app displays an error message ("The current location is out of Singapore.").
Includes:	(7.1) View Wikipedia Page
Special Requirements:	NIL
Assumptions:	NIL
Notes and Issues:	NIL

Use Case ID:	4.1		
Use Case Name:	View Comprehensive List of Rare Birds in Singapore		
Created By:	Timothy Teh	Last Updated By:	Timothy Teh
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	Every rare species of bird that can be found in Singapore will be compiled into a list. This gives the user an overview of the extensive range of avian species in Singapore.
Preconditions:	1. The bird that the user searches for must exist in the app's database of rare birds 2. Stable internet connection 3. User must have enough memory to handle both the app and the external browser
Postconditions:	1. User gets redirected to a Wikipedia page of the specific bird he or she searched for, i.e. user gets redirected to case 7.1.
Priority:	Medium
Frequency of Use:	6 times per user / hour
Flow of Events:	1. User clicks the hamburger menu on the top-left of the screen to access the list of birds in Singapore. 2. Users can search for the birds using the search bar, or can scroll down to search for the bird manually. 3. Once the user identifies a bird they are interested in learning more about, he/she can click on that species name to be redirected to its official Wikipedia page.
Alternative Flows:	NIL
Exceptions:	4.1.EX.1: Failed to open browser Popup notification indicating there is an error with the browser
Includes:	(7.1) View Wikipedia Page
Special Requirements:	Users must be familiar with the specific name of the bird of interest.
Assumptions:	NIL
Notes and Issues:	NIL

Use Case ID:	5.1		
Use Case Name:	Upload Occurrence		
Created By:	Bryan Ong	Last Updated By:	Bryan Ong
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	The upload feature will be essential to pinpoint exact locations of birds for other users. This image will then be displayed to the user at other sections of the app.
Preconditions:	1. Stable internet connection 2. App has access to camera or photo gallery 3. App has access to datetime service
Postconditions:	1. Database is updated with the new sighting
Priority:	High
Frequency of Use:	1 time per user / day
Flow of Events:	1. User clicks the upload icon 2. User fills form with information (i.e. Bird species, current location, photo etc) 3. User clicks upload button
Alternative Flows:	NIL
Exceptions:	5.1.EX.1: Upload failed Inform the user that the upload failed, and allow the user the option to retry upload.
Includes:	NIL
Special Requirements:	1. Photo cannot be too large 2. Location cannot be outside Singapore 3. Photo must be in a .jpeg or .png format
Assumptions:	NIL
Notes and Issues:	NIL

Use Case ID:	6.1		
Use Case Name:	Search for Specific Bird		
Created By:	Chua Yong Xuan	Last Updated By:	Chua Yong Xuan
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	The user can search for a specific bird species of interest in the search box. The app will return with pins on the locations of the bird species.
Preconditions:	1. Stable internet connection 2. App has access to location services
Postconditions:	1. Birds that match the search will be displayed in a dropdown menu
Priority:	High
Frequency of Use:	3 times per user / hour
Flow of Events:	1. User clicks on the search box 2. User types in the species of interest 3. User clicks on the search button
Alternative Flows:	NIL
Exceptions:	6.1.EX.1. Information cannot be retrieved from database Inform the user that the information cannot be retrieved from the database.
Includes:	NIL
Special Requirements:	NIL
Assumptions:	1. Species of bird searched for must be within database
Notes and Issues:	NIL

Use Case ID:	7.1		
Use Case Name:	View Wikipedia Page of the Specific Bird Species		
Created By:	Bryan Ong	Last Updated By:	Bryan Ong
Date Created:	01/09/2021	Date Last Updated:	01/09/2021

Actor:	User
Description:	The user will be redirected to a Wikipedia page of the indicated bird species. This allows the user to gain better knowledge of the various birds in Singapore. Wikipedia links, rather than scientific journals, were chosen as the resource with the intention of giving a broad overview of the various bird species, rather than inundate the average birdwatcher with in-depth scientific and technical jargon.
Preconditions:	1. Stable internet connection 2. The user has a web browser on their device
Postconditions:	1. External browser will open and load the correct Wikipedia page
Priority:	Low
Frequency of Use:	1 time per user / hour
Flow of Events:	1. User clicks the bird species 2. The user will be redirected to their default web browser to the relevant Wikipedia page
Alternative Flows:	NIL
Exceptions:	NIL
Includes:	(1.2) View Profile Information of Selected Bird (1.3) View Profile of Birds in General Location (3.1) View Top Three Birds of Interest (4.1) View Comprehensive List of Rare Birds in Singapore
Special Requirements:	NIL
Assumptions:	1. The Wikipedia page exists for the specific bird species.
Notes and Issues:	NIL