1. Use Case Descriptions

1.1 Start Screen

| Use Case ID: | 1.0 | | |
|----------------|--------------|--------------------|----------|
| Use Case Name: | Start Screen | | |
| Created By: | Aishwarya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last Updated: | 11/04/21 |

| Actor: | User | | |
|--------------------|---|--|--|
| Description: | Allows the user to login or Register to the Application | | |
| Preconditions: | Application must be downloaded | | |
| Postconditions: | The user is taken to the <u>Login Screen</u>. | | |
| | (OR) | | |
| | The user is taken to the <u>Register Screen</u>. | | |
| Priority: | High | | |
| Frequency of Use: | When the application is opened | | |
| Flow of Events: | The user selects login or register to be redirected to the respective | | |
| | screens. | | |
| Alternative Flows: | N/A | | |
| Exceptions: | N/A | | |
| Includes: | Redirect to <u>Login Screen</u> . | | |
| | Redirect to <u>Register Screen</u>. | | |
| Special | N/A | | |
| Requirements: | | | |
| Assumptions: | N/A | | |
| Notes and Issues: | Nil | | |

Table 1: Start Screen: Use Case Description

1.2 Registration Screen

Table 2: Registration Screen: Use Case Description

| Use Case ID: | 2.0 | | |
|----------------|---------------------|--------------------|------------|
| Use Case Name: | Registration Screen | | |
| Created By: | Aishwarya | Last Updated By: | Aishwarya |
| Date Created: | 04/02/2021 | Date Last Updated: | 05/02/2021 |

| Actor: | User, Account System | | |
|--------------------|---|--|--|
| Description: | Allows the user to register an account to the application | | |
| Preconditions: | Application must be started | | |
| Postconditions: | The user is logged on and moved the Home Screen. | | |
| | The new user account details are stored in the account system | | |
| Priority: | High | | |
| Frequency of Use: | When the application is opened | | |
| Flow of Events: | The user enters their full name. | | |
| | The user enters their age. | | |
| | The user selects their gender. | | |
| | The user enters their email. | | |
| | The user enters their height in centimeters. | | |
| | The user enters their weight in kilograms. | | |
| | . The user enters a username and password. | | |
| | The system ensures the validity of the data entered, creates a new | | |
| | account for the user and then redirects them to the Home Screen. | | |
| Alternative Flows: | The user enters some invalid data. | | |
| | The system prompts the user to re - enter the correct information. | | |
| | The correct information is then used to create the user account and | | |
| | then the user is redirected to the Login Screen. | | |
| Exceptions: | The entered email id is already a registered user in the system. | | |
| | The system prompts the user that there is a pre - existing account | | |
| | registered and redirects them to the Login Screen. | | |
| Includes: | Redirect to Home Screen | | |
| Special | N/A | | |
| Requirements: | | | |
| Assumptions: | The user has an active internet connection | | |
| Notes and Issues: | Nil | | |
| | | | |

1.3 Login Screen

Table 3: Login Screen: Use Case Description

| Use Case ID: | 3.0 | | |
|---------------|--------------|--------------------|------------|
| Use Case | Login Screen | n | |
| Name: | | | |
| Created By: | Abhinaya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last Updated: | 11/04/2021 |

| Actor: User, Account System, Email Client Description: Executes the login procedure when the User Details are input Preconditions: 1. Application must be started. 2. The user has registered with the application Postconditions: 1. The user is logged on and moved the home page. 2. Stored information of the user is retrieved Priority: High Frequency of Use: Every time the application is opened Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special Requirements: Assumptions: The user has an active internet connection Notes and Issues: Nil | | | |
|---|--------------------|--|--|
| Preconditions: 1. Application must be started. 2. The user has registered with the application Postconditions: 1. The user is logged on and moved the home page. 2. Stored information of the user is retrieved Priority: High Frequency of Use: Every time the application is opened Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special Requirements: Assumptions: The user has an active internet connection | Actor: | User, Account System, Email Client | |
| 2. The user has registered with the application Postconditions: 1. The user is logged on and moved the home page. 2. Stored information of the user is retrieved Priority: High Frequency of Use: Every time the application is opened Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | Description: | Executes the login procedure when the User Details are input | |
| Postconditions: 1. The user is logged on and moved the home page. 2. Stored information of the user is retrieved Priority: High Frequency of Use: Every time the application is opened Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special Requirements: Assumptions: The user has an active internet connection | Preconditions: | Application must be started. | |
| 2. Stored information of the user is retrieved Priority: High Frequency of Use: Every time the application is opened Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special Requirements: Assumptions: The user has an active internet connection | | The user has registered with the application | |
| Priority: High Frequency of Use: Every time the application is opened Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special Requirements: Assumptions: The user has an active internet connection | Postconditions: | The user is logged on and moved the home page. | |
| Frequency of Use: Every time the application is opened 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen N/A Requirements: Assumptions: The user has an active internet connection | | Stored information of the user is retrieved | |
| Flow of Events: 1. The user enters email. 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen N/A Requirements: Assumptions: The user has an active internet connection | Priority: | High | |
| 2. The user enters password. 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | Frequency of Use: | Every time the application is opened | |
| 3. Account System verifies the user information. 4. User is redirected to the Home Screen Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | Flow of Events: | The user enters email. | |
| Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | | The user enters password. | |
| Alternative Flows: 1. The user enters incorrect login information. 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | | Account System verifies the user information. | |
| 2. The state of the system does not change. 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | | | |
| 3. The user is prompted to re - enter details to Login Screen Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | Alternative Flows: | The user enters incorrect login information. | |
| Exceptions: 1. The user forgets login credentials. 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | | The state of the system does not change. | |
| 2. The user can click forgot password. 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | | <u> </u> | |
| 3. An email is sent to the user to reset their password Includes: Redirect to Home Screen Special N/A Requirements: Assumptions: The user has an active internet connection | Exceptions: | The user forgets login credentials. | |
| Includes: Redirect to <u>Home Screen</u> Special N/A Requirements: Assumptions: The user has an active internet connection | | The user can click forgot password. | |
| Special N/A Requirements: Assumptions: The user has an active internet connection | | An email is sent to the user to reset their password | |
| Requirements: Assumptions: The user has an active internet connection | Includes: | Redirect to Home Screen | |
| Assumptions: The user has an active internet connection | Special Special | N/A | |
| 1 | Requirements: | | |
| Notes and Issues: Nil | Assumptions: | The user has an active internet connection | |
| | Notes and Issues: | Nil | |

1.4 Home Screen

Table 4: Home Screen: Use Case Description

| Use Case ID: | 4.0 | | |
|---------------|------------|--------------------|------------|
| Use Case | Home Scree | n | |
| Name: | | | |
| Created By: | Abhinaya | Last Updated By: | Aishwarya |
| Date Created: | 04/02/2021 | Date Last Updated: | 05/02/2021 |

| Actor: | User | | |
|-------------------|--|--|--|
| Description: | Provide an interface for the user to navigate across the different features of | | |
| | the app | | |
| Preconditions: | The user has successfully logged in or registered to the system | | |
| Postconditions: | The user is redirected to the chosen screen | | |
| Priority: | High | | |
| Frequency of | Every time the application is opened | | |
| Use: | | | |
| Flow of Events: | The user can view concise information on the current active trail in | | |
| | the form of a widget. | | |
| | If the widget is clicked by the user, the user is redirected to the | | |
| | Active trail tab. | | |
| | The user selects the page to be navigated to selected page from | | |
| | among Access My Profile, Discover New Trails, Open Settings and | | |
| | Preferences and access my trails. | | |
| | User is redirected to the chosen screen | | |
| Alternative | N/A | | |
| Flows: | | | |
| Exceptions: | N/A | | |
| Includes: | Redirect to the My Account Screen | | |
| | Redirect to the <u>Discover New Trails Screen</u> | | |
| | Redirect to the <u>Settings Screen</u> | | |
| | Redirect to the My trails Screen. | | |
| | Redirect to the <u>Active trail Screen</u> | | |
| Special | N/A | | |
| Requirements: | | | |
| Assumptions: | N/A | | |
| Notes and Issues: | Nil | | |

1.5 Emergency SOS Screen

Table 5: Emergency SOS Screen: Use Case Description

| Use Case ID: | 5.0 | | |
|---------------|----------------------|------------------|------------|
| Use Case | Emergency SOS Screen | | |
| Name: | | | |
| Created By: | Abhinaya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last | 11/04/2021 |
| | | Updated: | |

| Actor: | User, System Manager |
|--------------------|---|
| Description: | Allows the user to make an Emergency Call |
| Preconditions: | The user has already logged on or registered to the system. |
| | The user has given permissions to place calls |
| Postconditions: | An emergency distress call is sent to the emergency contact |
| Priority: | High |
| Frequency of Use: | Two to three times in a year |
| Flow of Events: | The user places an emergency call by pressing the button on the screen |
| Alternative Flows: | N/A |
| Exceptions: | The application is unavailable to place a call. |
| | The application requests the user for permission to place a call. |
| | The system places a call to the emergency contact |
| Includes: | Nil |
| Special Special | Place call permission |
| Requirements: | |
| Assumptions: | N/A |
| Notes and Issues: | Nil |

1.6 My Account Screen

Table 6: My Account Screen: Use Case Description

| Use Case ID: | 6.0 | | |
|---------------|-------------------|------------------|------------|
| Use Case | My Account Screen | | |
| Name: | | | |
| Created By: | Abhinaya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last | 11/04/2021 |
| | | Updated: | |

| | 77 4 .0 . |
|--------------------|---|
| Actor: | User, Account System |
| Description: | The user can view their personal profile |
| Preconditions: | The user already has a registered account with the application |
| Postconditions: | N/A |
| Priority: | High |
| Frequency of Use: | 7 - 8 times in a month |
| Flow of Events: | The user views the personal profile. |
| | The information of the user account is displayed by the account |
| | manager. |
| | The user is redirected to the My settings and Preferences page |
| | when the button is clicked |
| Alternative Flows: | N/A |
| Exceptions: | N/A |
| Includes: | Display user information |
| | Redirect to the <u>Settings Screen</u> |
| Special Special | N/A |
| Requirements: | |
| Assumptions: | N/A |
| Notes and Issues: | Nil |

1.7 Settings Screen

Table 7: Settings Screen: Use Case Description

| Use Case ID: | 7.0 | | |
|---------------|-----------------|------------------|------------|
| Use Case | Settings Screen | | |
| Name: | | | |
| Created By: | Abhinaya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last | 11/04/2021 |
| | | Updated: | |

| | · | | |
|--------------------|---|--|--|
| Actor: | User, Account Manager | | |
| Description: | The user can edit personal information. | | |
| Preconditions: | The user has set up an account with the application | | |
| Postconditions: | The user personal information is updated in the account system | | |
| Priority: | High | | |
| Frequency of Use: | Once a month | | |
| Flow of Events: | The user inputs height in centimeters | | |
| | The user inputs weight in kgs | | |
| | The inputs are verified and updated in the user account by the | | |
| | account manager | | |
| Alternative Flows: | The user enters an invalid value for height or weight. | | |
| | Application prompts the user to re - enter data until a valid data is | | |
| | entered | | |
| Exceptions: | Nil | | |
| Includes: | Update user account | | |
| Special | Internet Connection | | |
| Requirements: | | | |
| Assumptions: | N/A | | |
| Notes and Issues: | Nil | | |

1.8 Discover New Trails Screen

<u>Table 8: Discover New Trails Screen: Use Case Description</u>

| Use Case ID: | 8.0 | | |
|---------------|----------------------------|------------------|------------|
| Use Case | Discover New Trails Screen | | |
| Name: | | | |
| Created By: | Aishwarya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last | 05/02/2021 |
| | | Updated: | |

| Actor: | User, Trails Manager | | |
|--------------------|--|--|--|
| Description: | The user can choose and explore new uncharted trails | | |
| Preconditions: | The user already has a registered account with the application and has | | |
| | successfully logged in. | | |
| Postconditions: | N/A | | |
| Priority: | High | | |
| Frequency of Use: | ⅓ times the application is launched and used | | |
| Flow of Events: | The user has 2 options to pick from - "Trail by distance", "Trail by | | |
| | type." | | |
| | 2. Trail by Distance - | | |
| | Prompts the user to enter a distance. | | |
| | List of available trails with distance approximately equal to | | |
| | the user's input is displayed. | | |
| | 3. Trail by Type - | | |
| | The user can pick between City Trails and Nature Trails | | |
| | The chosen type of Trail is displayed | | |
| Alternative Flows: | N/A | | |
| Exceptions: | The user enters a distance for which Trails are unavailable. | | |
| | The User prompted to enter a correct distance. | | |
| | The corresponding trail is displayed | | |
| Includes: | Redirect to Active Trails Page | | |
| | Enter walking distance | | |
| Special | N/A | | |
| Requirements: | | | |
| Assumptions: | N/A | | |
| Notes and Issues: | Nil | | |
| | | | |

1.9 My Trails Screen

Table 9: My Trails Screen: Use Case Description

| Use Case ID: | 9.0 | | |
|---------------|------------------|------------------|------------|
| Use Case | My Trails Screen | | |
| Name: | | | |
| Created By: | Aishwarya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last | 11/04/2021 |
| | | Updated: | |

| Actor: | User, Trails Manager | | |
|--------------------|--|--|--|
| Description: | The user can view previously completed trails | | |
| Preconditions: | The user already has a registered account with the application and has | | |
| | successfully logged in. | | |
| Postconditions: | N/A | | |
| Priority: | High | | |
| Frequency of Use: | ⅓ times the application is launched and used | | |
| Flow of Events: | The user's previous trail information is displayed | | |
| Alternative Flows: | N/A | | |
| Exceptions: | The user has not completed any trail. | | |
| | A suggested Trail is displayed | | |
| Includes: | Display User Trail history information | | |
| Special Special | N/A | | |
| Requirements: | | | |
| Assumptions: | N/A | | |
| Notes and Issues: | Nil | | |

1.10 Active Trail Screen

Table 10: Active Trail Screen: Use Case Description

| Use Case ID: | 10.0 | | |
|---------------|---------------------|--------------------|------------|
| Use Case | Active Trail Screen | | |
| Name: | | | |
| Created By: | Aishwarya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last Updated: | 11/04/2021 |

| Actor: | User, Trails Manager | | |
|--------------------|---|--|--|
| Description: | | | |
| Preconditions: | The user already has a registered account with the application and has | | |
| | successfully logged in. | | |
| Postconditions: | N/A | | |
| Priority: | High | | |
| Frequency of Use: | Almost every time the application is launched | | |
| Flow of Events: | The user can view the trail path based on the Trail that they had chosen. The word and details and the detail that they had a set to see the conditions. | | |
| | The weather widget is updated live based on the user's surroundings. | | |
| | The user presses play to begin the trail. This also starts the timer for the trail. | | |
| | The step counter counts the number of steps taken during the trail | | |
| | and the calories are also tabulated. | | |
| | The user presses pause to pause the workout. | | |
| | The end button is used to end the trail. | | |
| Alternative Flows: | N/A | | |
| Exceptions: | The user has not given Location permissions. | | |
| | Permission for the location is requested from the user. | | |
| | After the permission is granted, the user is redirected to the <u>Active</u> Trails Screen. | | |
| | (OR) | | |
| | The user has not granted access to physical activity data. | | |
| | Permission for access to the physical activity is requested. | | |
| | After the permission is granted, the user is redirected to the <u>Active</u> | | |
| | Trails Screen. | | |
| Includes: | Display the trail path | | |
| Special Special | N/A | | |
| Requirements: | | | |
| Assumptions: | The user is connected to the Internet | | |
| Notes and Issues: | Nil | | |

1.11 Music Screen

Table 11: Music Screen: Use Case Description

| Use Case ID: | 11.0 | | |
|---------------|--------------|------------------|------------|
| Use Case | Music Screen | | |
| Name: | | | |
| Created By: | Aishwarya | Last Updated By: | Abhinaya |
| Date Created: | 04/02/2021 | Date Last | 11/04/2021 |
| | | Updated: | |

| User, Music Client | | |
|---|--|--|
| The user can play music either from YouTube or from the In - App Music | | |
| player | | |
| The user already has a registered account with the application and has | | |
| successfully logged in. | | |
| N/A | | |
| High | | |
| Almost every time the application is used | | |
| The user chooses either In - App Music or YouTube to play music to | | |
| play music. | | |
| If YouTube is installed, the user is redirected to the YouTube App | | |
| when the YouTube button is clicked. | | |
| If the In - App Music button is chosen, the application redirects the | | |
| user to an In - App Music player with preloaded songs. | | |
| N/A | | |
| N/A | | |
| Nil | | |
| N/A | | |
| | | |
| N/A | | |
| Nil | | |
| | | |