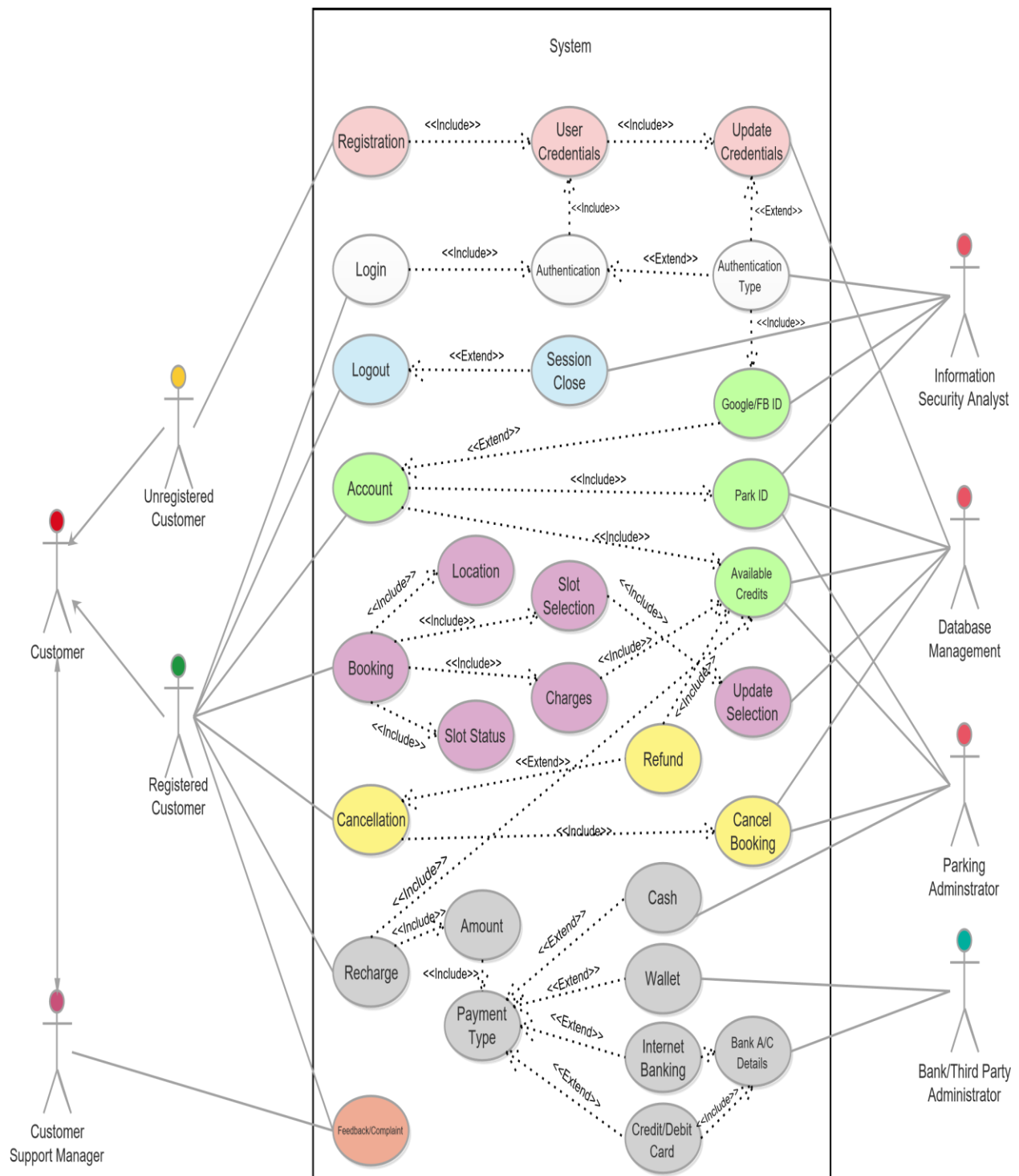
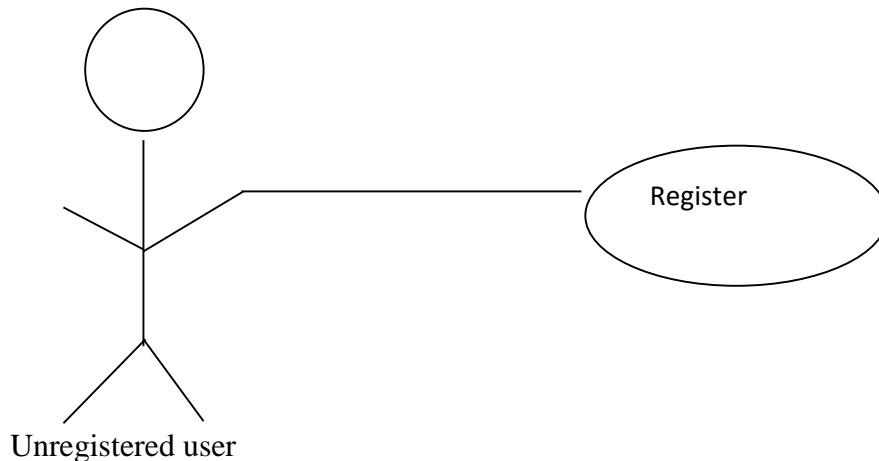


# System use case



**Name: Register**



**Identifier: UC01**

**Description:** The system creates a registration page to register a new user

**Goal:** To create a new account.

**Preconditions:**

1. The browser is opened and after entering the correct url home page is displayed.

**Assumptions :**

1.The system displays the registration form correctly.

2. The data being entered is synchronized with the database .

**Frequency :** Every time an unregistered users tries to use the application.

**Basic Course of Action:**

- The system displays two option either login or register to the user.
- The system displays whether to register using facebook or google id.
- The system displays the registration form which contains (name,car no,phone no,email id,password,captcha).
- The user enters all the details.(Alternate course 2)
- All the data entered at the time of registration is being saved in database.(Alternate course 1)
- The system then redirects on the login page

**Alternate Course :**

1. If a registered person tries to register then the system displays “already registered user”and redirects to the home page .
2. The system displays the form again if the details entered are invalid or one of the required field is left empty.

**Post conditions**

- 1.A new record of a new user has been created in the database.
2. The user can now log-in and book a parking slot.

**Actors :**

Unregistered user

Registered user

Information Security Analyst

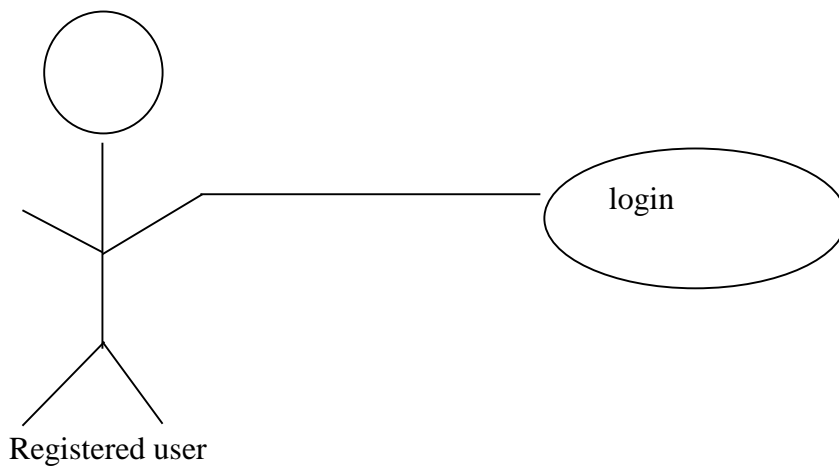
Database Manager

**Included Use Cases**

- 1.User credentials

**Extended Use Case**

**Name: login**



**Identifier : UC02**

**Description :** The system displays the login page to the registered user.

**Goal :** The system authenticate the registered user.

**Preconditions :**

- 1.The user has already registered.
- 2.A new record of a new user has been created in the database.

**Frequency:** Every time a registered users tries to use the application.

**Basic Course:**

- The system displays the login page after the user clicks on login page .
- The system displays the login fields i.e login id and password
- The system then compares the entered value to the value in database.(Alternative course 1)
- If the data matches ,the system authenticates the user.
- The system directs the user to his account.

**Alternate Course A:**

1) The user enters wrong authentication details and an error message is displayed and the home page is displayed again . (if any one match is found in the database)

2)Unregistered user tries to login :

- The system displays error message telling to register first.(If no match is found in the database).

**Post conditions :**

The system takes the user to his account after successful login .

**Actors :**

Registered user

Information Security Analyst

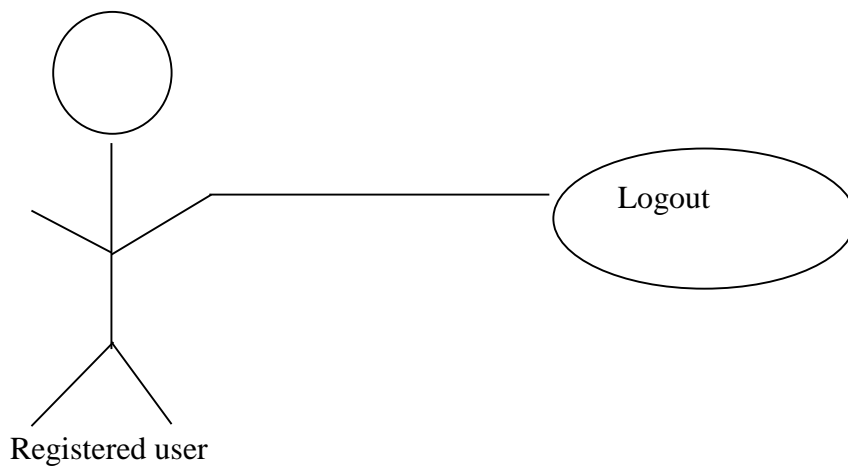
**Included Use Cases :**

- 1.User credentials
- 2.Authentication

**Extended Use Case**

- 1.Authentication Type

**Name: Logout**



**Identifier:** UC03

**Description:** The session is closed after the logout button is clicked.

**Goal:** To logout from application.

**Preconditions:**

- The system has authenticated the user.

**Frequency :** Every time the user logouts or quits the application.

**Basic course:**

- The logout button is displayed on every page.
- After clicking on logout, system ask for the confirmation for closing the session.(Alternative course 1)
- The session is then closed .
- The system directs the user on its home page.

**Alternate Course :**

1. The logout confirmation is cancelled ,and the user continues the session.

**Post conditions :**

2. Home page is displayed.

**Actors :**

Registered user

Information Security Analyst

Database Manager

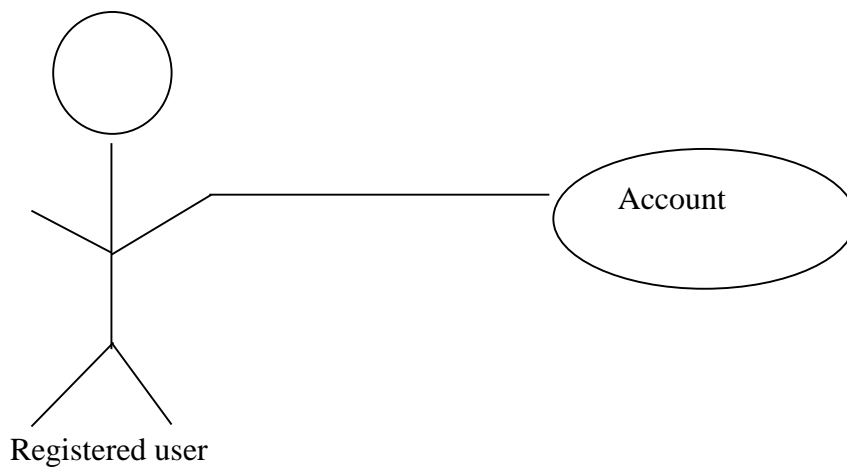
Parking administrator

### Included Use Cases

1. Session closed

Extended Logout

### Name: Account



**Identifier:** UC04

**Description:** The system displays the account after successful login.

**Goal:** To access the account.

#### Preconditions:

The system has authenticated the user.

**Frequency :** Every time when the user will open the application its can visit its account.

#### Basic course:

- The system displays three options booking, recharge and edit information.
- It also shows the amount of available credits. (Alternate course 2)
- If edit account option is selected then system displays the information to be edited and connect with the database .
- The edit account form is displayed with fields having existing name, car number, phone number, password, user ID. An edit option is available next to each field

- On clicking any of these edit options, the field value can be edited.
- After entering the edited details the system asks for confirmation from the user.(Alternative course 1)
- After successful updation of data in database ,user is redirected to its main account page.
- If booking option is selected then system directs the user to booking page. Similarly if recharge option is selected then system directs the user to recharge page.

#### **Alternate Course A:**

1. If the user enters wrong information at the time of editing the system re-displays the page.
2. In case the logout option is clicked ,the system directs the user to homepage.

#### **Post conditions:**

- The system displays all the updated information of the account.
- The system now prompts the user to book a slot.

#### **Actors :**

Registered user

Information Security Analyst

Database Manager

Parking administration

#### **Included Use Cases :**

1. Google/ fb id

#### **Extends Account**

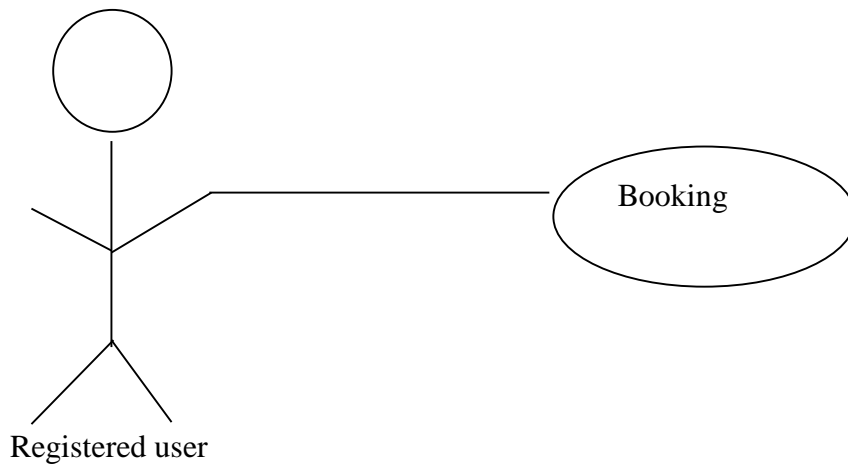
2. Account

Includes park id

3. Account

Includes Available credits

**Name: Booking**



**Identifier : UC05**

**Description :** The system displays full view of the parking area to the authenticated user.

**Goal :** To book a parking slot

**Preconditions :** The system has authenticated the user.

**Frequency:** Everytime a user wants to book a parking slot.

**Basic Course:**

- The system displays the map of the parking area with the available booking slots at the current time.(Alternate Course 1)
- The system also displays the charges.
- After the selection of parking space, the system confirms the selection .
- If the selection is confirmed ,system directs the user to the payment gateway. .(Alternate Course 2)
- The amount is deducted form the credits if the payment is successful. .(Alternate Course 3)
- The user's credit details are updated in the database.
- Parking database is now updated with the booked slot.
- This is viewed by the parking administrator in his Parking area map.
- A booking ID is generated which is sent to the user's Registered Mobile Number.

**Alternate Course :**

1. No free slots available ,then system displays that parking space is full and user will be notified when space is available.



2. Before the payment if the user re-selects the parking slot then system re-directs the user to available parking spaces page.
3. If the user's available credit are less then the parking amount then system directs the user to recharge his account page.

**Post conditions :**

- The system updates the available booking slots in database.
- The system also generates the booking id to the user

**Actors :**

Registered user

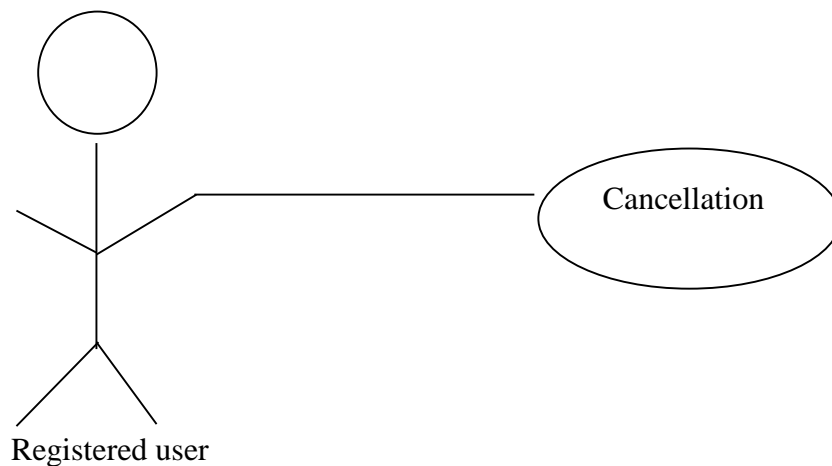
Database Manager

Parking Administrator

**Included Use Cases**

- 1.Location
- 2.Slot selection->Update selection
- 3.Charges.
- 4.Slot status

**Name: Cancellation**



**Identifier:** UC06

**Description:** The system cancels a booking if the user selects cancel option and update the database accordingly.

SmartParking

**Goal:** To cancel a booking.

**Preconditions:**

The system has generated a booking id for the authenticated user.

**Frequency :** The user can cancel the booking after successfully booking parking slot.

**Basic course:**

- The system has generated a booking id and an option to cancel the booking is displayed by the system.
- On clicking the cancel booking option, the system re-confirms the user decision to cancel.
- After the user confirms cancellation, the system updates the slot status in database.(Alternate course 2)
- The refund is initiated if cancelation is done before arrival time.(Alternate course 1)
- The credits of user is updated accordingly.

**Alternate Course :**

1. If the cancellation is done after arrival time,no refund is initiated. A message is displayed that “no refund is possible”. The booked slot status is now changed to “free”.
2. If the user clicks on the cancellation but doesn’t confirm it then system directs the user to its main account page.

**Post conditions:**

- The user re-books a parking slot,then the system displays all the information of thr parking area.
- If the user clicks on logout,then the system directs the user on its home page.

**Actors**

Registered user

Database Manager

Parking administration

**Included Use Cases**

1. Refund

**Extends**

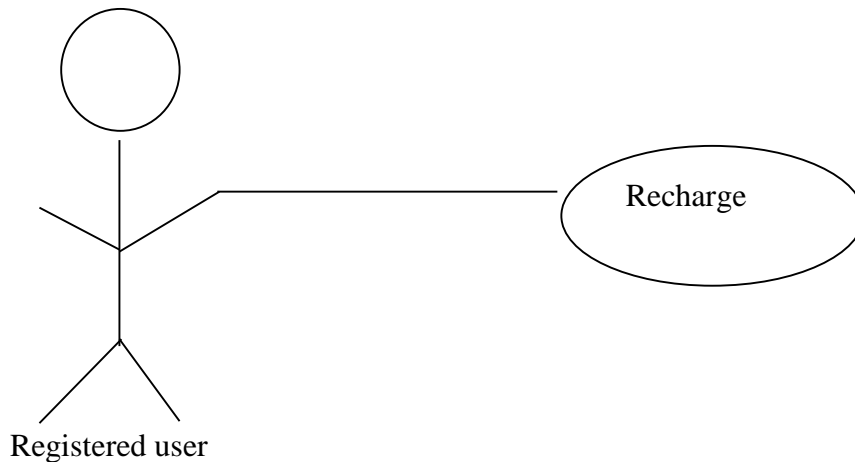
1. Cancellation

SmartParking

Includes cancel booking

**Name: Recharge**

**Identifier :UC07**



**Description :** The system directs the user on a third party page to recharge his account.

**Goal :** To recharge the account .

**Preconditions :**

- The system has authenticated a user.
- Available credits in account are lesser then the parking charges.

**Frequency:** Every time a user needs more credits in his account.

**Basic course:**

- The system displays the account information including availability of credits.
- If user clicks on recharge, then system directs the user on a third party application page. (Alternate course 3)
- In the third party application page, the system asks the user to select the payment type: E-wallet, Credit/Debit card, Netbanking.
- The system asks for the user's card details to authenticate the user. (Card number, CVV, Card number, Expiry date)
- The entered authentication details are compared with database values.
- If match occurs, the system generates "a successful payment" message. (Alternate Course 2)
- The money is transferred from the account to the available credits.

- The system redirects the user on its account page.
- The credits are updated in the database accordingly.

#### **Alternate Course :**

1. The unregistered user directly pays to the parking administrator instead of using online application and occupies the parking slot on the spot.
2. The authentication details entered are invalid and the system displays a message “Wrong details” and redirects to the “Select payment type” page.
3. After being displayed the account information by the system, user clicks on logout or back button which takes the user to the previous page.

**Post conditions :** The user’s account has been recharged.

#### **Actors :**

Bank/Third Party Administrator

Registered User

Parking Administrator

#### **Included Use Cases**

Amount

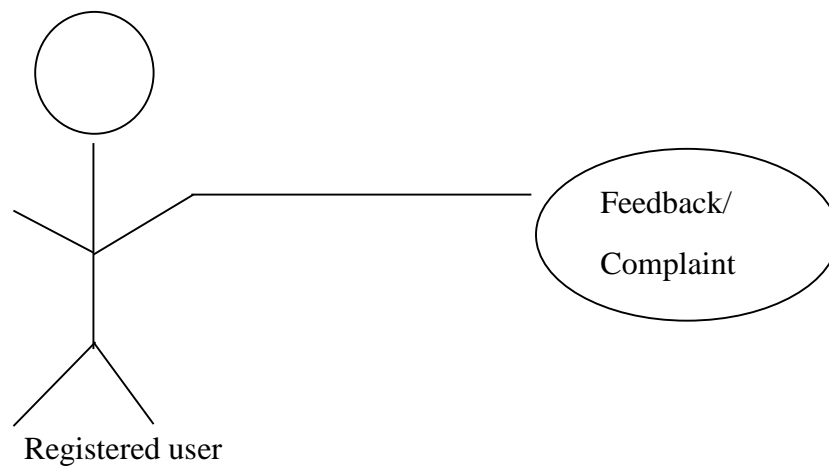
Payment type

#### **Extended Use Case**

Extended from payment type

(Cash,E-wallet,Credit/Debit card,Net Banking)

**Name: Feedback/Complaint**



**Identifier :** UC08

**Description :** The system displays a feedback form .

**Goal :** To get useful feedback from users which will help improve the functionality and user satisfaction.

**Preconditions :**

- The correct url is entered .
- A problem might have occurred in the system.

**Frequency:** Everytime a user wants to give a feedback/complaint.

**Basic course:**

- Feedback option is displayed on every page.
- On clicking on feedback option,the feedback page is displayed.
- Two options are displayed : 1) Directly talk to customer support manager. 2)Send a message to a customer support manager.(Alternate course 1)
- If the second option is selected, a message box is displayed with a field where the user can type the feedback/complaint.(Alternate course 2)
- The system prompts the user to enter his e-mail id where the reply would be sent.
- On clicking the submit option, the system forwards the user's message to the customer support manager.

**Alternate course:**

1. The back button is clicked without giving feedback .Previous page is displayed.

2. The option to directly talk to a customer support manager is selected where a call is initiated and direct interaction occurs.

**Post conditions**

The user has submitted his Feedback/Complaint.

**Actors**

Registered user

Customer Support Manager

Unregistered User