



Title of the Project: Travel Planning and Tour Guide Finding Portal

Group Number: 05

Group Members:

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Introduction

Historical sites, resorts, beaches, picnic areas, woods and tribal people, as well as wildlife of various varieties, are some of Bangladesh's most popular tourist attractions. Angling, water skiing, river cruises, hiking, rowing, yachting, and sea bathing are some of the activities available to tourists. Located in the north-east region of South Asia, Bangladesh boasts a wide variety of natural attractions. Bangladesh has part of the world's largest mangrove the Sundarbans. The Cox Bazaar is the longest sea beach in the world, covering 125km. Bangladesh recorded a total of 323,000 tourists in 2019, ranking 148th in the world in absolute terms. Our system is a bridge between customers, travel agencies and tour guides. In our country there is a lack of these portals. In this portal customers can choose from different packages, on the other hand travel agency and Tour guides can register and provide their travel plan details and get benefitted from it.

Motivation

Life of people are getting busier day by day and people are unable to find proper time in their daily life to get information about these tour packages. Fundraising may be unpleasant and time-consuming for many small nonprofits with limited resources. For most NGOs, a flexible fundraising strategy is a top objective. To keep track of donors, most of them still use spreadsheets or a paper file system and they don't get enough opportunity to promote their campaigns for support, which is why their activities don't reach a large number of people. This is where our desire to work on this project stems from. Our main goal was to enable the ways to bring all types of social workers altogether in one platform, making sure that these organizations could attract more people to donate and participate in social activities, as well as ensuring they could streamline their fundraising to relieve stress on their employees through this website. This website will make it easier for NGO(s) to accept a larger range of donations and coordinate their fundraising activities. This will also make it easier for them to handle their campaigns and donors. Donor participation is encouraged by making the donation process simple for them. More individuals will be aware of social activities taking place in their community, which will encourage them to support nonprofit organizations activities and to do volunteering.

System Request

● Project Sponsor:

- Arko Mazhar,CEO,Travellers.bd
- Sumaiya Mehjabeen,Co-Founder,Travellers.bd
- Tasnim Fuyara Chhoan,Co-Founder,Travellers.bd

● Business Need:

Tourism is a lucrative business sector in Bangladesh. In this recent era, people are willing to visit Bangladesh from all parts of the world. Bangladesh's tourism attractions include history and monuments, holiday villages, beaches, picnic areas, woods and tribal people, and diverse species of wildlife. As we all know Bangladesh is a developing country, there is not much availability of travel planning platforms in online medium. This agency works as a bridge between travel partners and travel enthusiasts. On the other hand, Bangladesh is currently an excellent choice for foreigners who want to explore the Indian subcontinent but due to lack of knowledge about the details of the trips, accommodation and travel transportation they cancel their plan despite having great enthusiasm. They do not have to face any difficulties anymore. They can now easily book their travel plans along with a diverse collection of packages and hire travel guides for them. Apart from all this, all the travel enthusiasts will get a security device which will send the radio frequency signals to other devices nearby if someone presses it after getting lost. This will attract customers who don't want to travel due to security issues. So, people on field tours will get the most secure experience. Clients around the world can share their experiences and thoughts through this platform in order for others to get a better suggestion. The initiative ensures to stay as close as possible to their customers by understanding their behavior, their preferences, their purchasing patterns, etc.

● Business Requirements:

1. Our system will allow different Travel agency service providers to register into our system and after verification they can log in to our system to provide their service to our customer.
2. Our system will allow people for user registration.
3. Our system will also contain Travel Guide registration.

4. Service providers can upload pictures and detailed descriptions about their services so that people can easily get some details and ideas about the service.
5. In our system, all the packages that'll be provided by the travel agencies will be categorized so that users can find any package according to their budget and choice easily.
6. Our system will also contain a filter out option based on the pricing, rating, date, place.
7. Our system will allow users to confirm their destination, shuttle, accommodation, tour guide etc. via online.
8. Our system will also have customization options. Users can customize their package according to their choice.
9. Our system will allow online payment.
10. In our system, user can give reviews and ratings and share their experiences with post and pictures as well
11. Our system will suggest users for different popular or top pick packages, exciting deals etc.
12. Our system will have a 24/7 online support system to support the users. 13. Our system will also provide security to the tourist while on a tour.
14. Our system will have a complaint option for the user for complaining about their bad experiences related to our service.
15. Our system will contain google map integration for better searching.
16. Our system will contain Simple, hassle-free calendars to view calendar for arrival and departure dates, which pops out off the departure and return fields.
17. Our system will contain a "Favorites list", which allows users to remember the places that briefly took them fancy earlier in their search.
18. Our system will have a "Predictive search" option, which provides results based on hotel names, the city as a search category and other hotels/places within that city.

● Business Value:

Tangible:

1. Annual cost savings of 20% compared to the traditional offline method, which requires more staff due to the handheld-based account history system.
2. Affiliate partners provide 10% of income to the initiative.
3. Acquiring 30% of foreign tourists who cancel their visit to Bangladesh due to a lack of organized travel agreements.
4. Earning a monthly revenue of 2,00,000 BDT to 3,00,000 BDT through membership fees paid by travel firms and tour operators.
5. Gaining around 20% to 25% of new consumers who use our service for the first time through referral and win programs/providing additional benefits to existing clients.

Intangible :

1. Creating a positive brand image for the company by acquiring the trust of its clients.
2. Improvement of the relationship between the company and its customers.
3. Gaining a strong position among other competitive organizations.
4. Data may be easily managed and categorized, resulting in time savings.
5. All of the history may be accessible from anywhere in the world, which reduces the dependency on offline access.

● Special Issues or Constraints:

1. There is no content delivery network or DDoS mitigation services implemented from Cloudflare, Inc.
2. Restrictive cancellation terms. There may be a cancellation fee, depending on the property and the date/time of cancellation.
3. The amount of the refund and the time required to complete it may vary according to national and international terms.
4. For any kind of refund, service charge and convenience fee are non-refundable.
5. In case of national emergency, lockdown, political unrest, natural disaster etc., standard refund policy may not be applicable.
6. Incapable of ensuring that travel partners provide the package services properly to which they are entitled to.

Requirement Analysis

Functional Requirements:

1. Account Management:

1. The system will allow three distinct types of users to sign up and create profiles. Travel partners, tour guides, and travel enthusiasts are the three types of users.
2. · Users can access their accounts by logging in with the email address and password that they used to register for the account.
3. · All user data will be saved in the system's database.
4. · Each time a user attempts to log in, they will be subjected to a captcha verification process.
5. · Users will see a variety of different interfaces depending on their user category (Travel Partner, Travel Guide, and Travel Enthusiast) at registration.

Travel Agency Management:

1. · Travel Partners can create their accounts which will represent their agency.
2. · Travel Partners will have the ability to add 'Travel Packages' in the system's travel package.
3. · Travel Partners will be able to update their package availability when their packages reach their limit.
4. · Travel Partners can add pictures and descriptions of their travel packages, and the details of the whole trip.
5. · Travel Partners can respond to the queries of the customers and share their suggestions.
 - Create combo offers for the customers to make their travel plan easier.

Customer Management:

1. · Create their user profiles using all credentials.
2. · Customer can search different types of services from travel, accommodation, tour guides etc.
3. · Customer can filter out options according to alphabet rating, date, place, package prices from high to low and vice versa.
4. · Customer can communicate with the travel partners using the chat option to get an idea of the packages.
5. · Customer can customize travel plans according to their preferences.
6. · Customers can bookmark and add packages to their cart.

Tour guide Management:

1. • Tour guides can create their profile.
2. • Can add their travel guidance plan details.
3. • Guides can set their availability to on/off.
4. • Tour guides can chat with customers and make the customers understand about what service he will provide.

System:

1. • System will suggest users for different popular or top pick packages, exciting deals. • System will have many online payment gateways such as bKash for national users, Card based payment system(Visa, MasterCard, American Express), PayPal for international customers.
2. • An end to end encrypted security system device(free of cost) will be added to cart whenever someone avails service.
3. • System will give a section for the customers to provide their valuable suggestions regarding any service through the complaint section.
4. • System will collect user preferences using cookies.
5. • System can provide notifications about recently added travel plans.

Non-functional Requirements:

Operational:

1. • The system will be cross-platform, supporting Windows, Linux, Android, and iOS. • The system is compatible with a variety of devices, including desktop and laptop computers, smartphones, and tablets.
2. • The system will be accessible via any web browser, including Mozilla Firefox, Google Chrome, and Microsoft Edge.
3. • The system must make sure that the products, customer service, and service are accessible in an easier and faster way.
4. • The system will have a light and dark theme.
5. • The system will have the ability to communicate with printers. (wired/wireless) • Implementation of a responsive user interface.

Performance:

1. • The system will update and refresh the information every 10 seconds.
2. • Within 1 nanosecond, users will be able to load the system.
3. • Low data consumption from users.
4. • Pop-up animations open as quickly and efficiently as possible.

5. • The system's minimum RAM requirement should be 2 GB.
6. • Ability to handle 1500 users on real-time.

Security:

1. • User verification based on NID/SSN/ Passport/ Bank account/ Birth certificate etc. • All the information of customers, registered travel partners and tour guide will be secured by the system. These are not accessible to third parties.
2. • Cloudflare implementation to prevent distributed denial-of-service (DDoS) attack . • The system will not let a single user to create numerous accounts using the same NID/ Passport/Birth Certificate.
3. • Implement banking API in the system. As a result, funds transfers must be conducted securely through affiliated partner banks or mobile banking services.

Culture and Politics:

1. • Personal information about all sorts of users is protected in accordance with the Data Protection Act.
2. • Customers can confirm payment in two currencies. However, Bangladeshi Taka and United States Dollar is preferable for instant confirmation.
3. • Languages such as Bengali and English will be supported.

Usability:

1. • User Friendly software interface for users.
2. • Integration of new and existing features will be simple, as the portal's backend will include

built-in version control.

3. • In the event of a server loss, the portal can switch between different servers, ensuring maximum availability.
4. • The system's user interface should be responsive. Using our website on a mobile phone should be as straightforward as using it on a desktop or laptop.
5. • The font size can be customized to the user's preference.
6. • The layout should be adaptable and automatically alter as the screen area decreases.

Usage Scenario

The login system for the Travel Planning and Tour Guide Finding Portal is depicted in the above use case diagram. Customers, Travel Partners, and Tour Guides are all categories of users in this system.

Everyone has the ability to sign up and log in to the system. A user's email address, password, birth date, and phone number are all required in order to complete the registration process. To the contrary, they can log in with their already registered email address and password. In order to log in or sign up, users must first pass the captcha verification test. During the registration process, personal data will be saved in a database.

Customers can receive notifications, browse for services, communicate, and save their favorite packages in this section of our website. Sorting packages by price, date, and location are all options available to this service. They can also book packages and confirm their payment using various payment methods. A free security gadget will be added to their shopping cart each time they add a shipment. The third option is for travel companions to post their own itineraries and add or update existing itineraries, as well as upload images and provide other information. Customers can submit their vacation arrangements, change their availability, and receive responses from their tour operators. Customers can also leave testimonials and suggestions in the form of reviews and comments. Admin clearance is required for these actions. All users can signup and sign in. To register, they require an email address, a password, a phone number. They can, however, use their registered email and password. Both login and registration must pass the system's captcha verification test. During registration, their data will be saved in a database. Guests can sign up for alerts, search for services, chat, and bookmark their favorite packages. They can sort packages by price, date, and location. They can also book packages and pay using numerous methods. Every time customers add a package, they get a free security gadget. The "Travel Partner" activity diagram represents features that travel agents can access and edit. Any system update requires admin permission. Agencies can also directly communicate with customers and offer services. The activity diagram "Tour guide" illustrates the system's tour guide. Travel guides can add and amend all details that require admin permission here. GUIDES CAN ALSO SET THEIR VAC They can also directly connect with clients and deliver services.

Use Case Diagram

LOGIN SYSTEM:

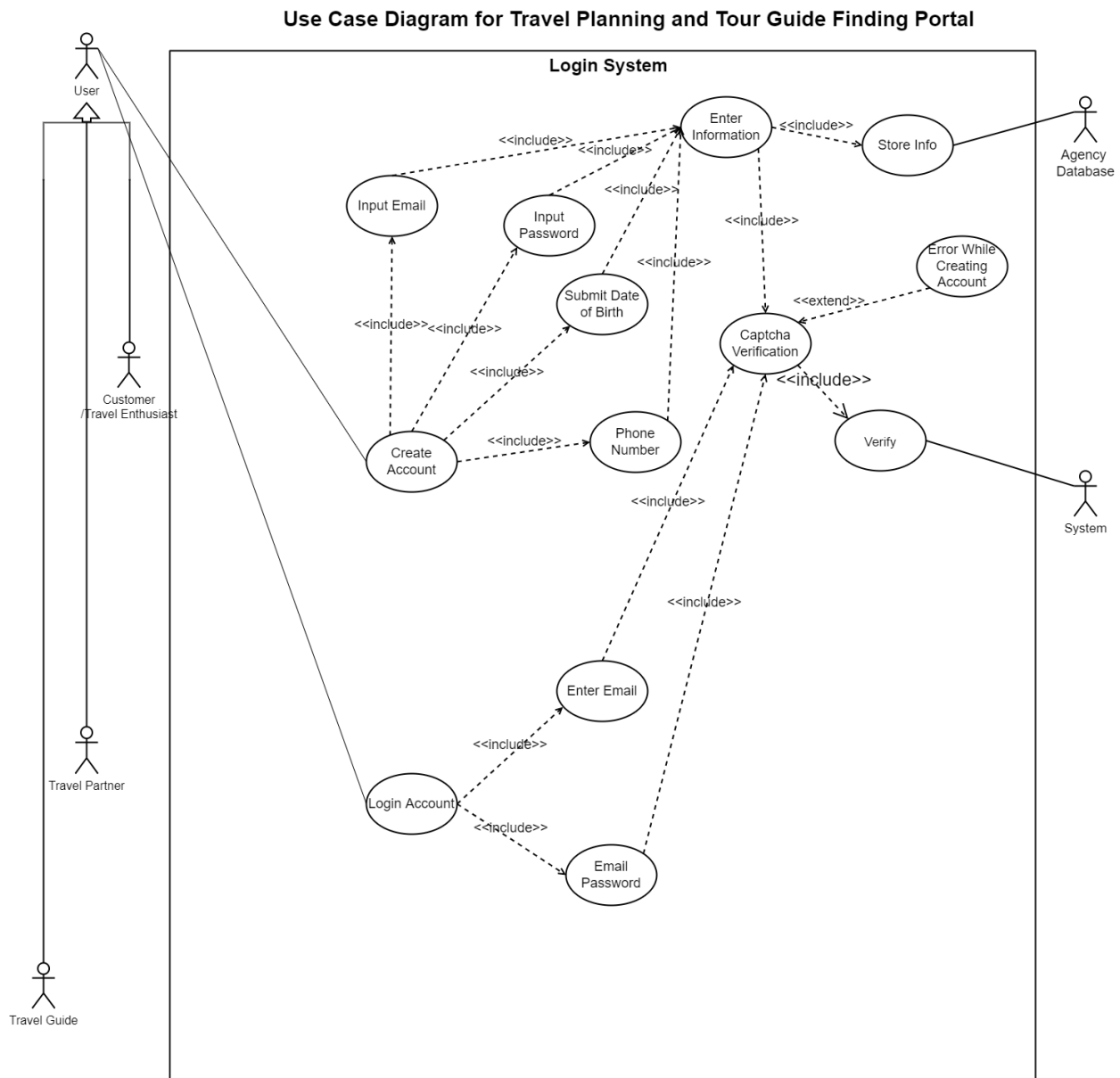
Short Description for Use Case Diagram 1:

The above use case diagram show the login system of the Travel Planning and Tour Guide Finding Portal. Here, there will be three types of users,

- i) Customer
- ii) Travel Partner
- iii) Tour Guides.

All of the users can both register and sign in into the system. To register, they need to provide their email address, password, date of birth and phone number. On the other hand, they can login using their registered email and password. While both login and register they need to pass the captcha verification test from the system. Also, their

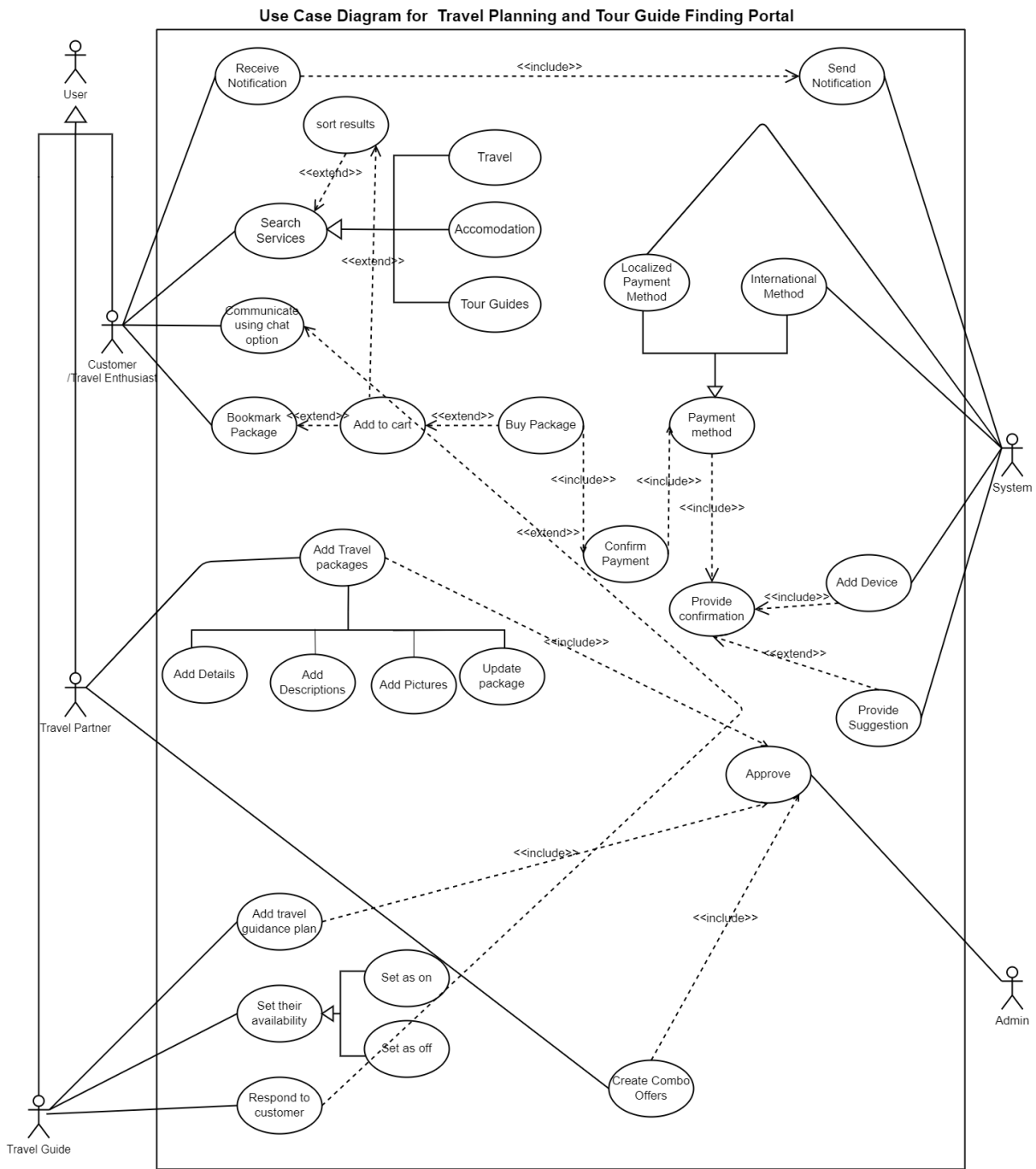
information will be stored in the database while they register.



Use Case For Primary Actors:

Short Description for Use Case Diagram 2:

Here, customers can receive notifications, search services, chat and bookmark their favourite packages. They can sort packages depending on price, date, location and other criteria. They can also book packages and confirm their payment using various payment methods. Whenever they add a package, a security device will be added to their cart free of cost. On the other hand, travel partners can add their packages, update packages, add pictures, descriptions and details. Travel guides can add their travel plans, set availability as on/off and respond to their customers. Also, the customers can give their reviews and feedback. These things will go through admin approval.

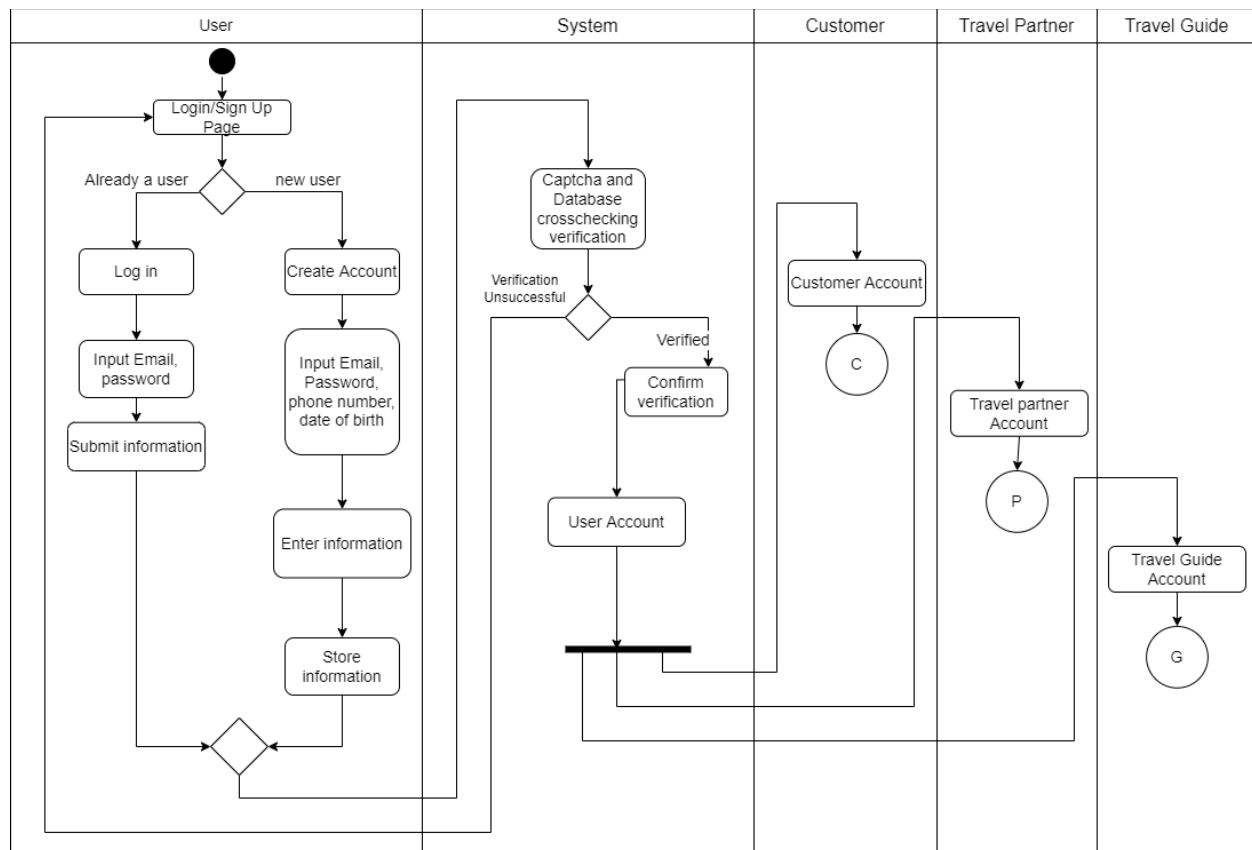


Activity Diagram

Login System

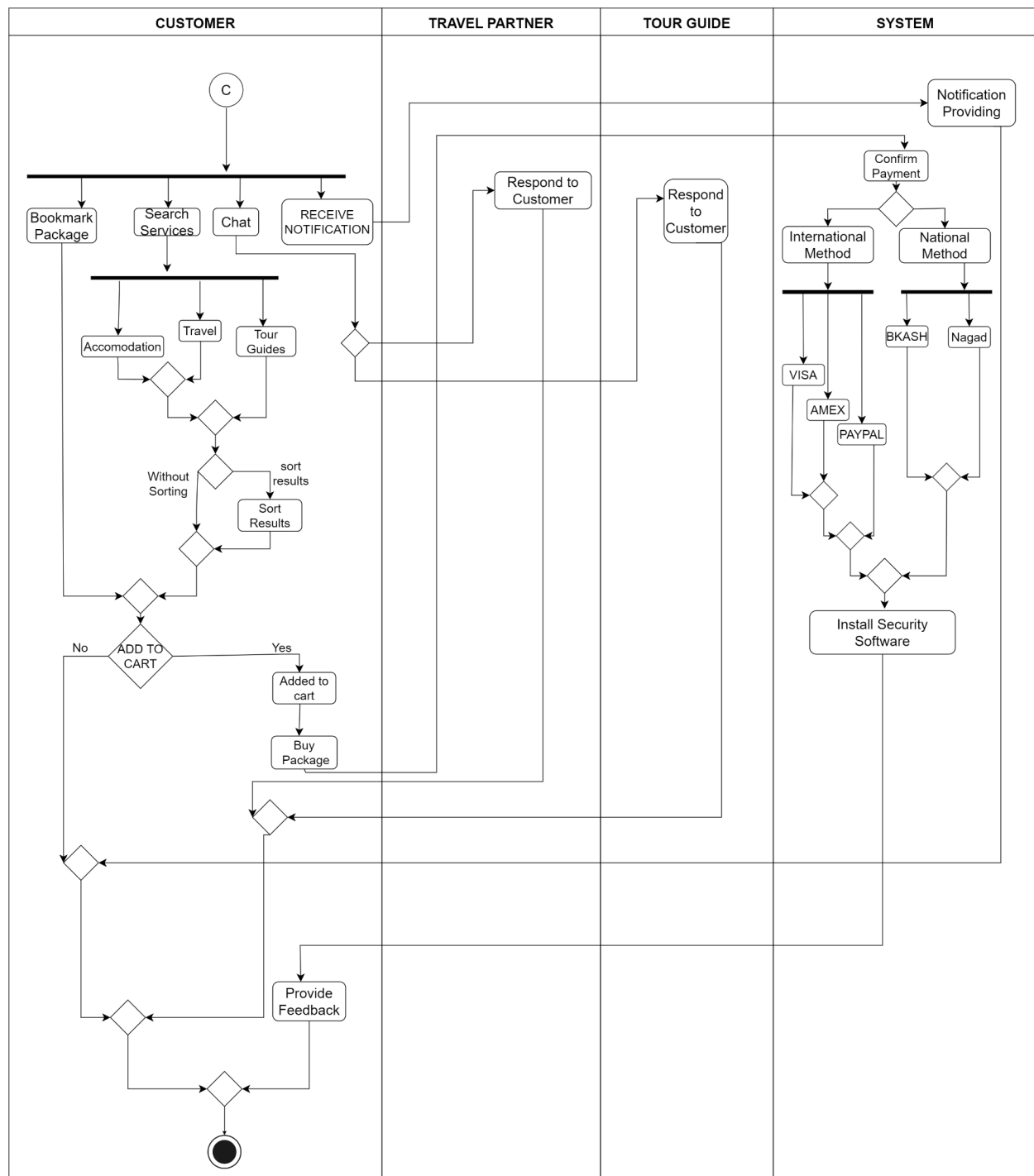
Short Description:

All of the users can both register and sign in into the system. To register, they need to provide their email address, password, date of birth and phone number. On the other hand, they can login using their registered email and password. While both login and register they need to pass the captcha verification test from the system. Also, their information will be stored in the database while they register.



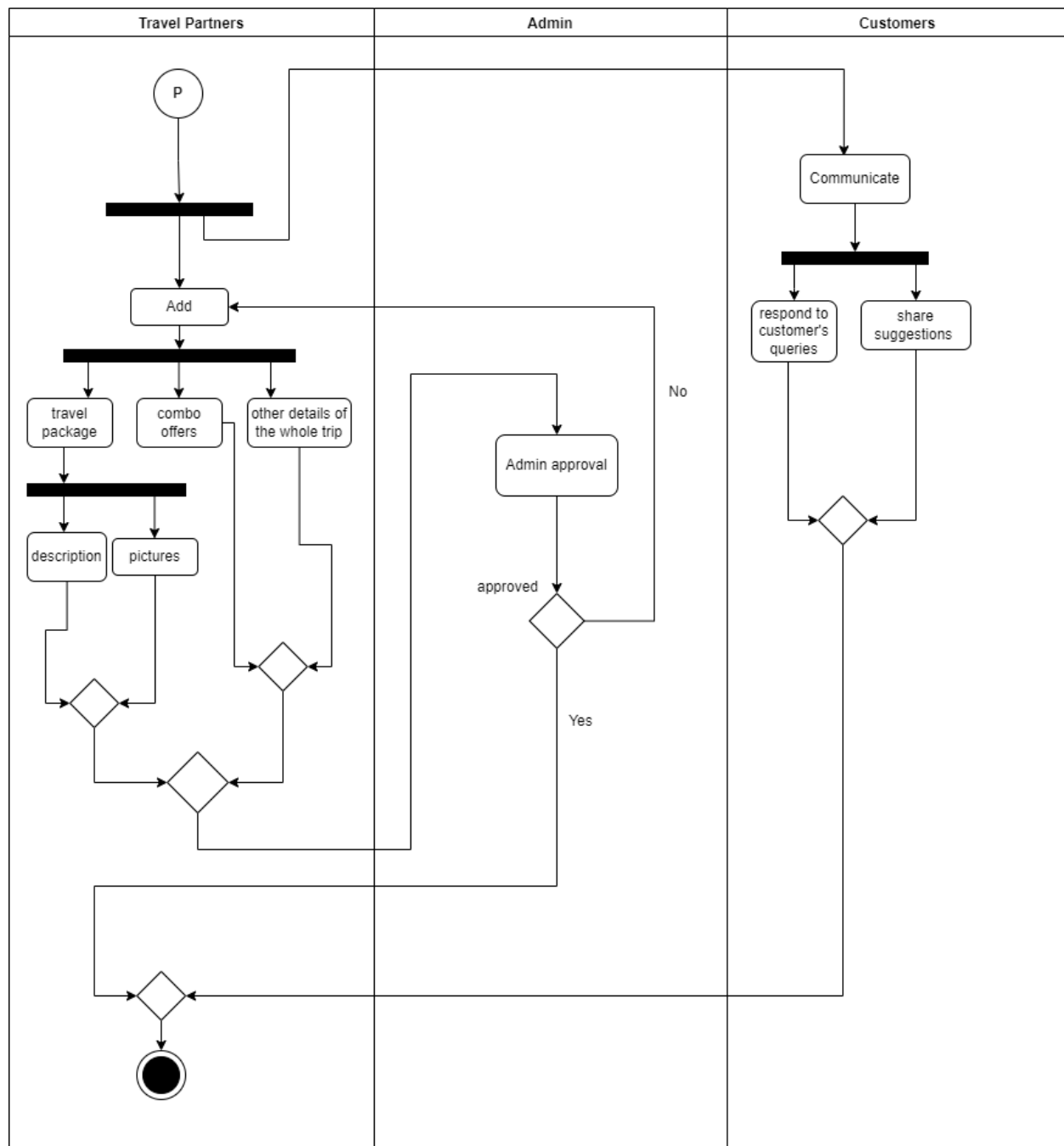
For Customer:

Short Description: Here, customers can receive notifications, search services, chat and bookmark their favourite packages. They can sort packages depending on price, date, location and other criteria. They can also book packages and confirm their payment using various payment methods. Whenever they add a package, a security device will be added to their cart free of cost.



For Travel Agency:

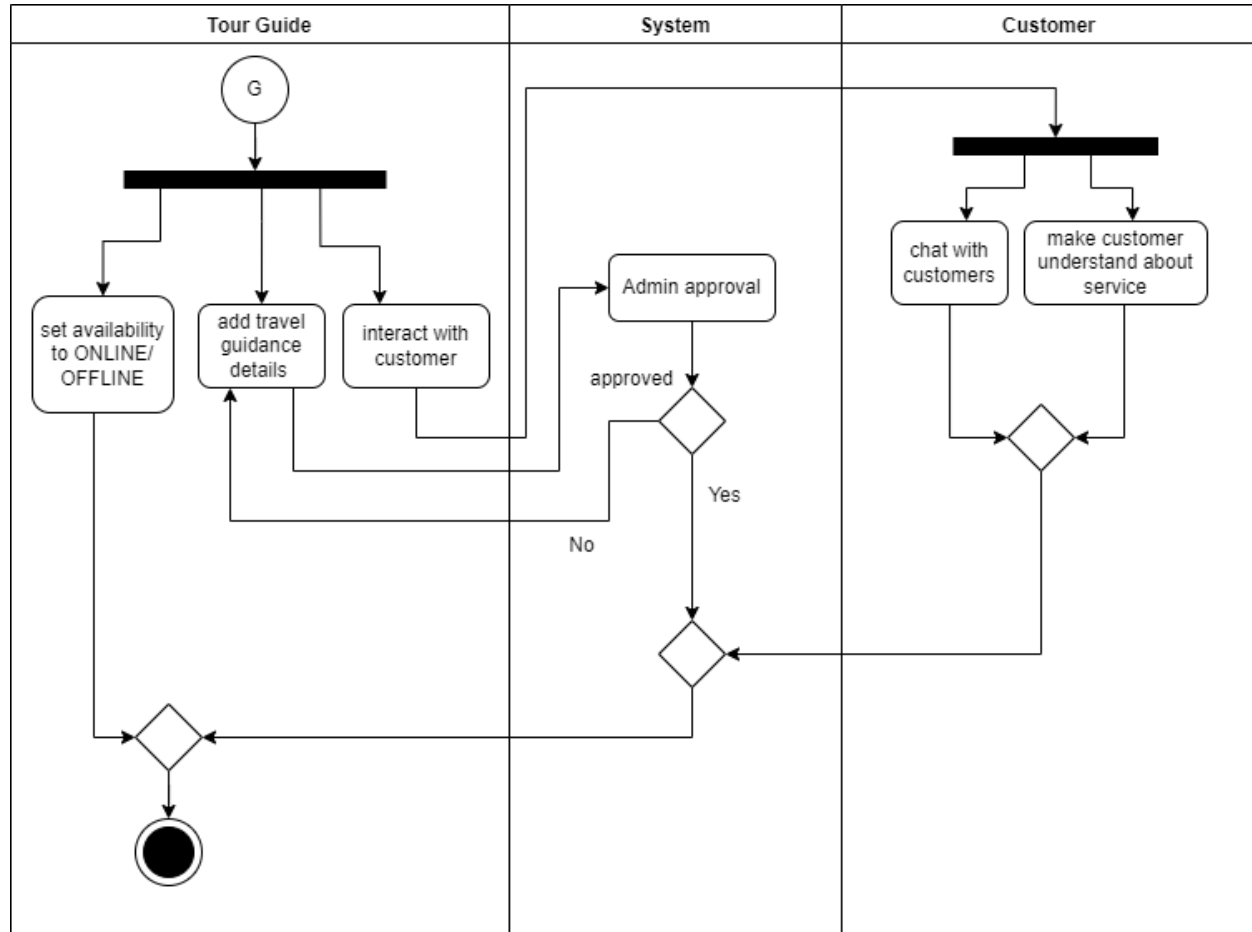
Short Description: The activity diagram "Travel Partner" represents features those travel agencies can access and update towards the system. Updating any feature to system require admin approval. Here, agencies can also directly chat with customers, provide suggestions and services.



For Tour Guides:

Short Description:

The activity diagram "Tour guide" shows the guide facility to the system. Here, travel guides can add and update all guidance details to the system which require admin approval. Guides can also set their availability status. Besides, they can directly interact with customers and provide their services.



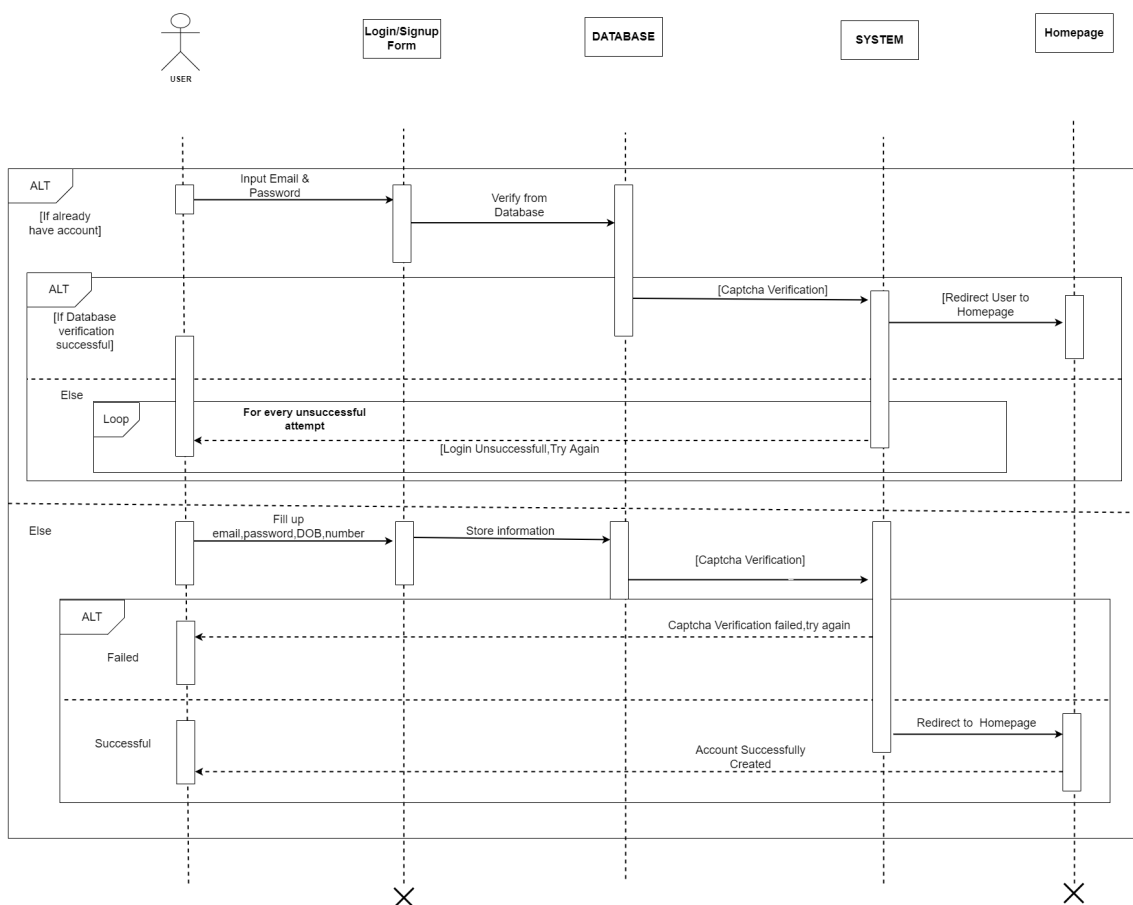
Sequence Diagram:

Login System:

Short Description:

Here, in our log in/Account system sequence diagram, there are 3 alt boxes including 1 main alt box and 2 alt boxes inside that. Besides, we've used 1 loop box. Here, in our system, if the user already has an account, s/he can directly log in to the system or not using email and password after verifying credentials from the database. If the verification is successful, the user can directly go to the homepage. Else, the system will show an error message for every wrong input. If the user doesn't have any account, then s/he has to sign up to the system using username, email, password, phone number etc and all the information will be stored in the database. Then the system will verify the user using captcha verification. If verification is successful, the account will be created successfully and redirect users to the homepage, else the system will show an error message.

Login/Account System Sequence Diagram

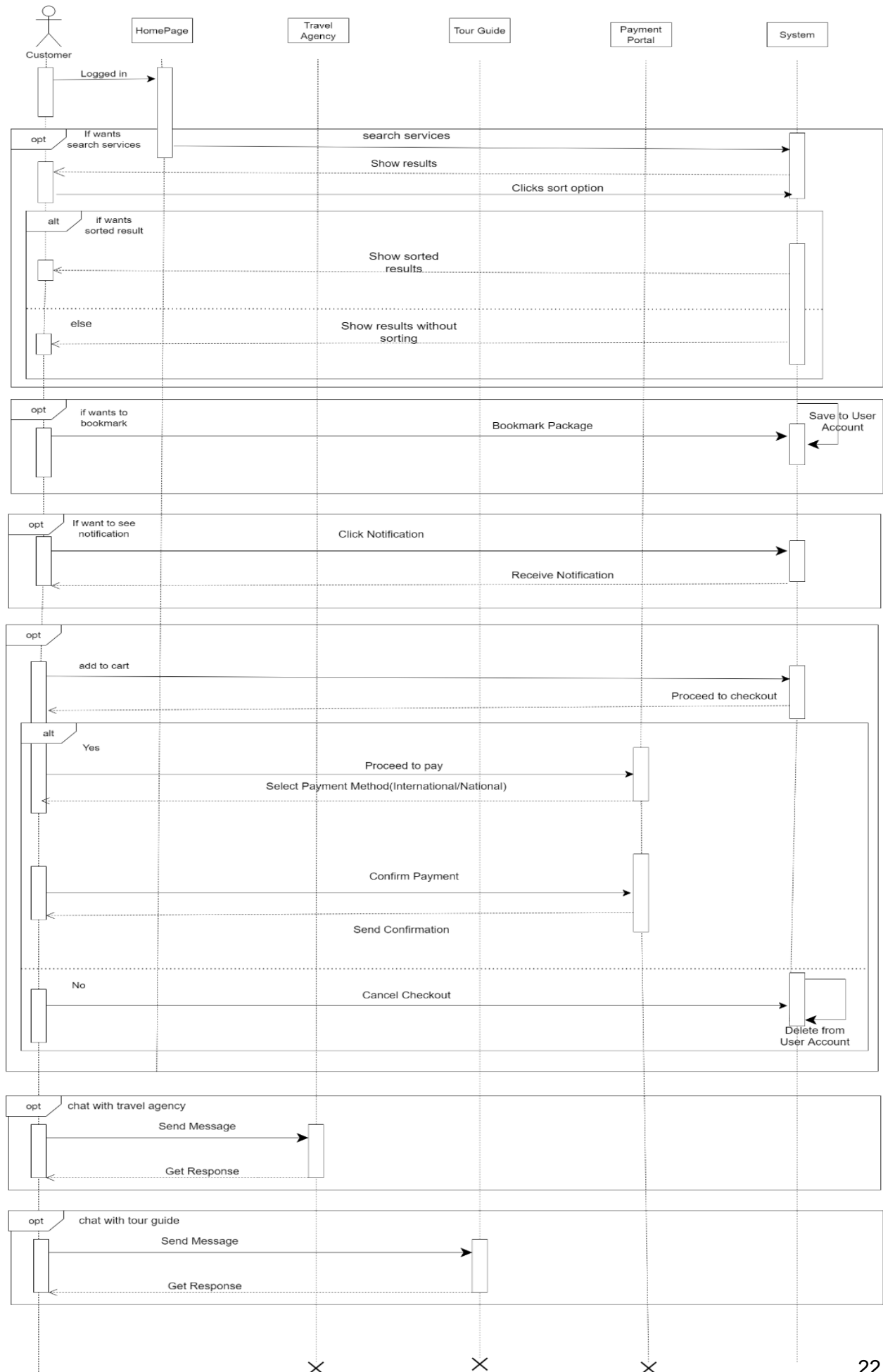


For Customer:

Short Description:

Here, in our customer account system sequence diagram, there are 4 optional boxes and 2 alt boxes. After logging in to the system, the customer can search if s/he wants to, and the system will show the result. If a customer wants a sorted result, s/he has to click the sort option, otherwise the result will appear randomly. Moreover, customers can bookmark any page and save to the account, receive notification by clicking to the notification option. Moreover, s/he can add any packages to their cart and proceed to checkout, pay via any payment method, confirm payment and get confirmation, otherwise cancel checkout. Besides, customers can chat with travel agencies and tour guides using chat option and get responses.

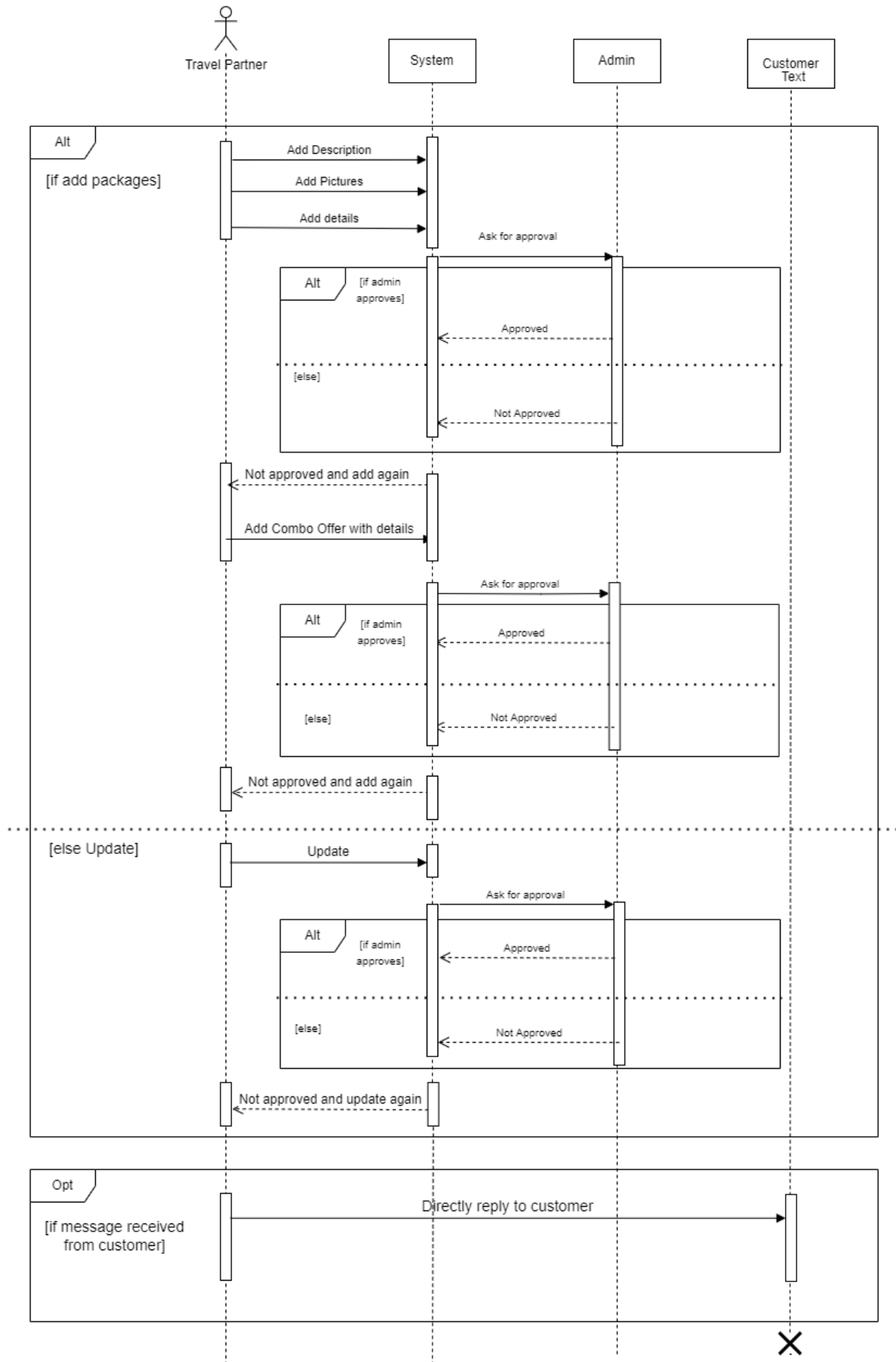
CUSTOMER ACCOUNT SYSTEM SEQUENCE DIAGRAM



For Travel Agency:

Short Description:

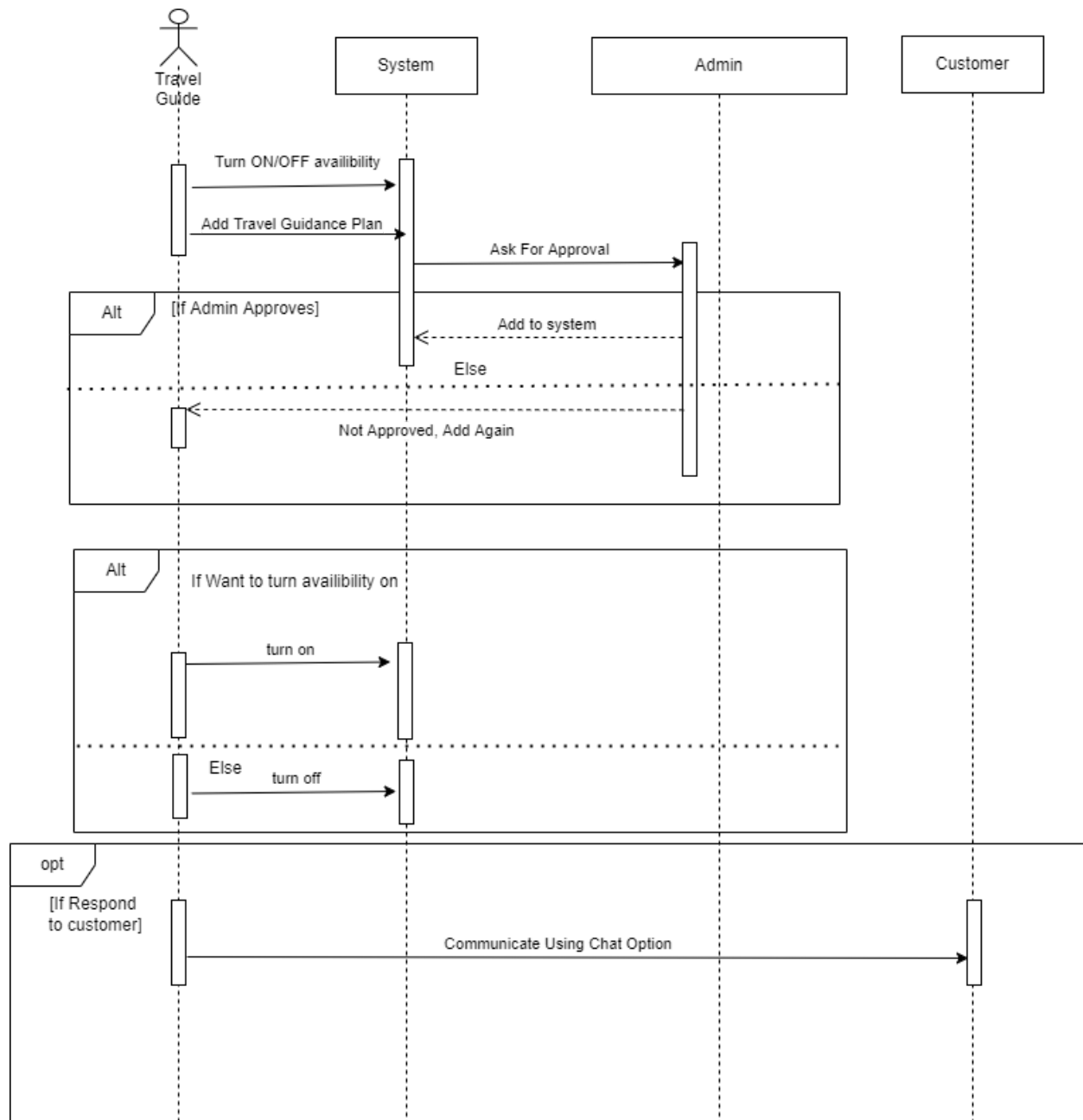
Here, in our Travel partner/agency sequence diagram, there are 4 alt boxes including 1 main alt box and 3 sub alt boxes, 1 opt box. If a travel partner wants to add any packages, s/he needs to add description, picture and details. The package will be added to the system if admin approves, otherwise the system will ask for add again. In the same way, s/he can add combo offers with details with the approval of the admin or can't add and need to add again if admin doesn't approve. After adding a package, the travel agency can update those packages as well in the same way by the approval of the admin. Moreover, s/he can reply to any query of the customer.



For Tour Guide:

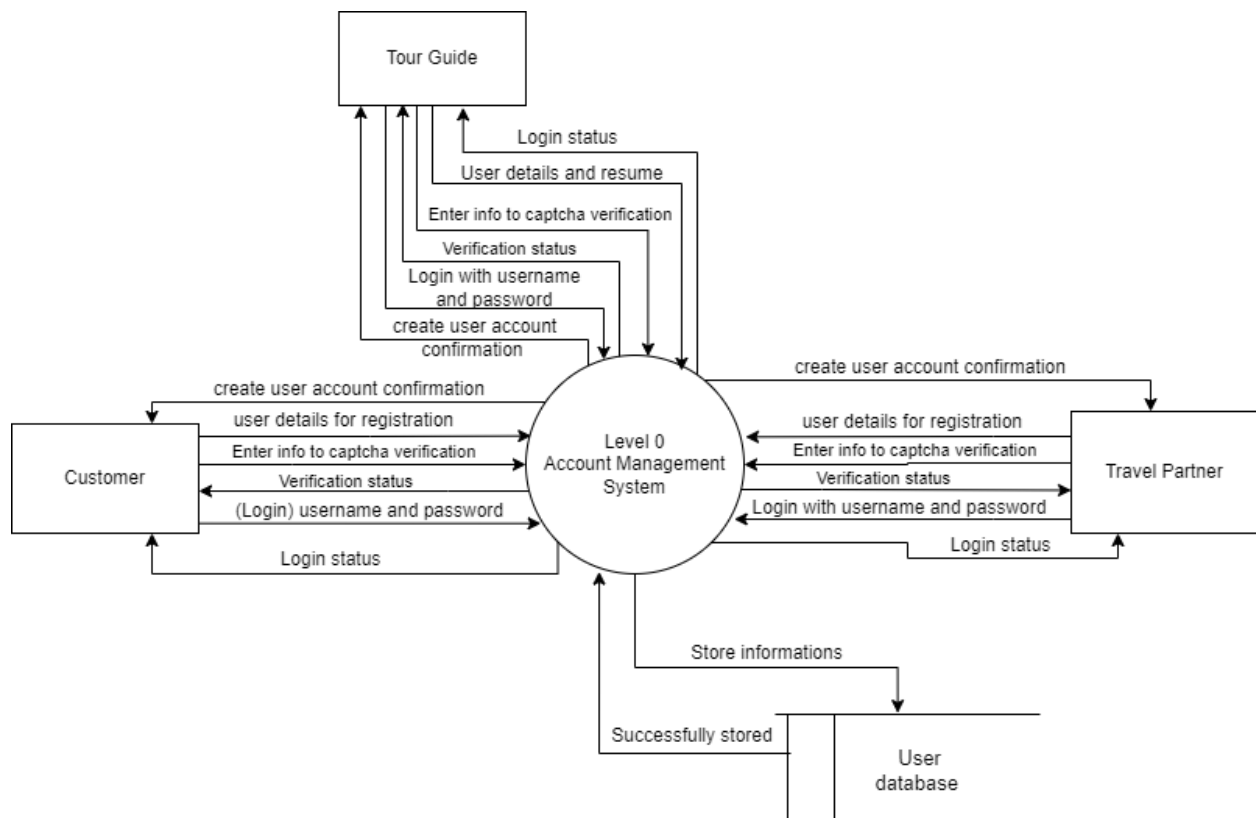
Short Description:

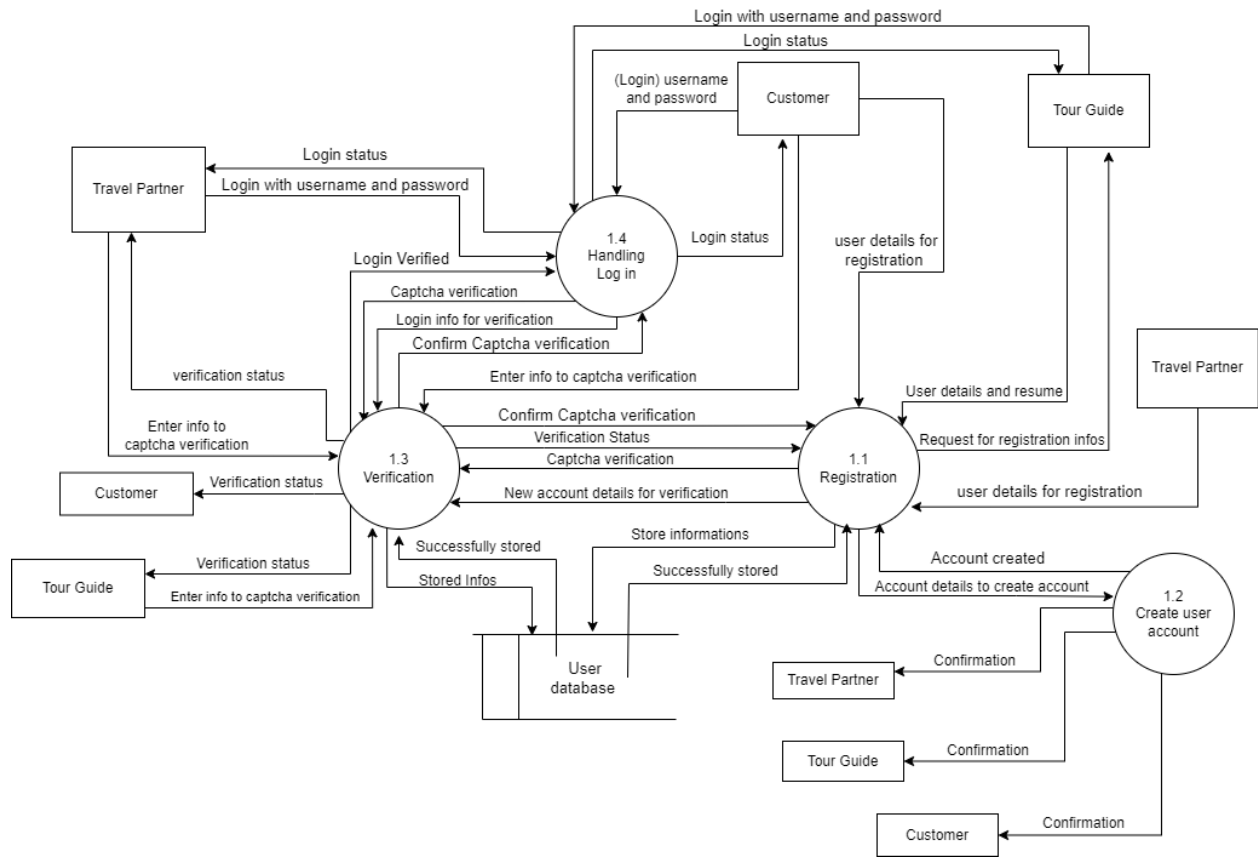
Here, in our Travel guide sequence diagram, we've used 2 alt boxes and 1 opt box. Travel guides can turn on/off availability and can also add guidance plans and ask for admin approval. The plan will be added if admin approves. Otherwise, the system will ask for add again. S/he can also reply to any query of the customer.



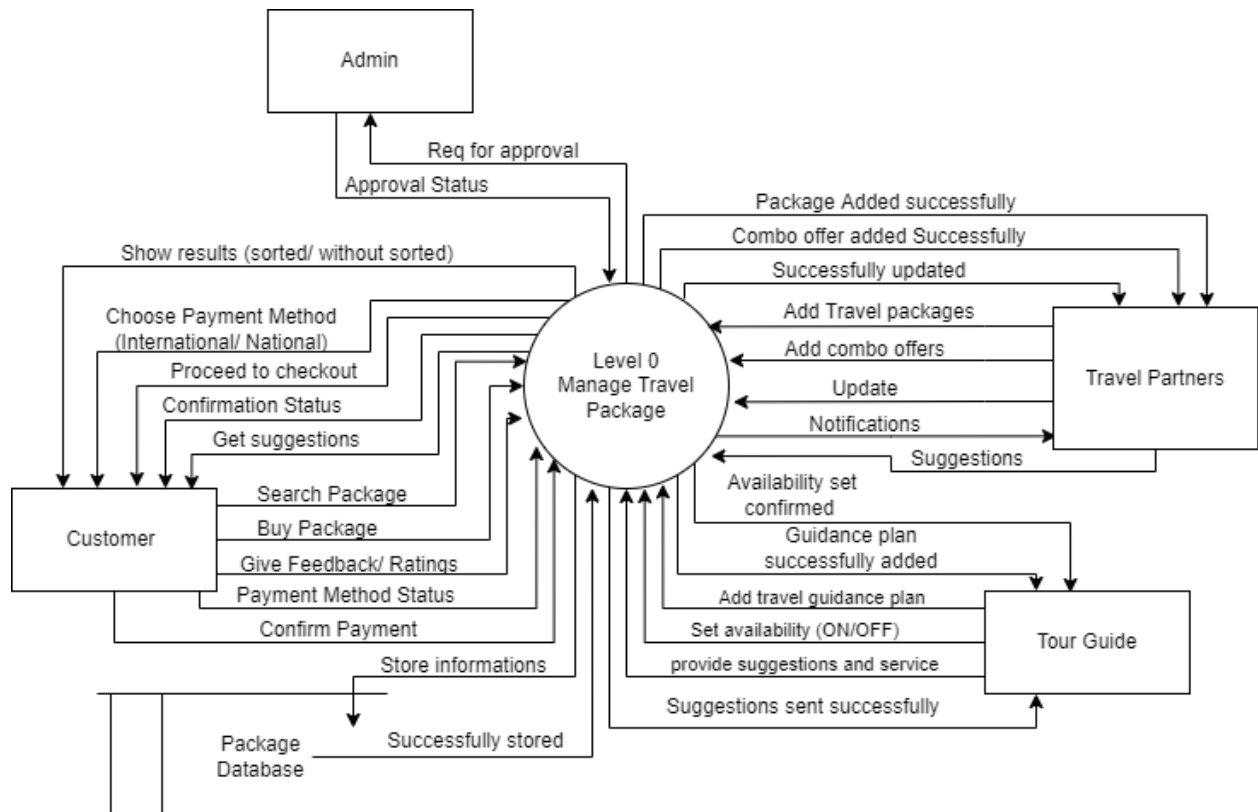
Data flow Diagram:

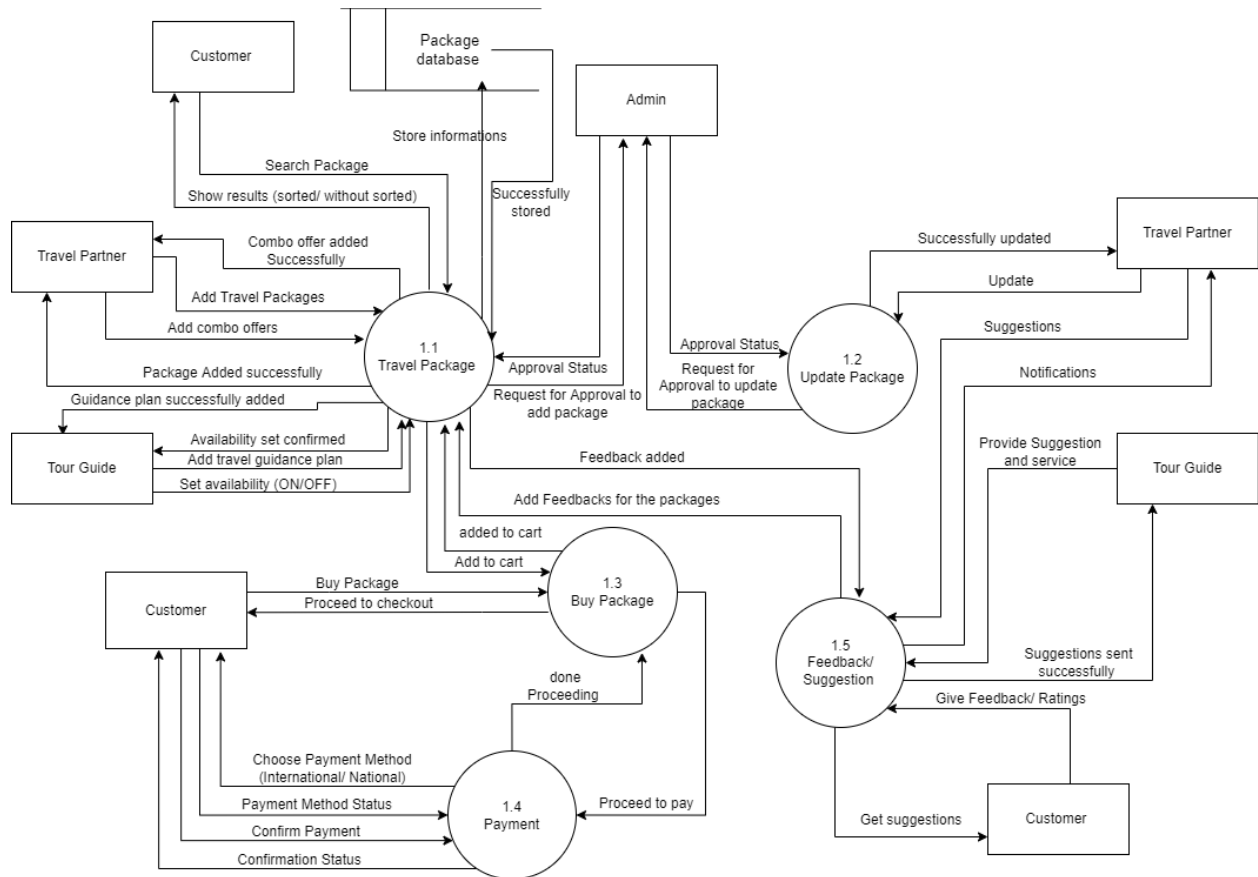
1st DFD:





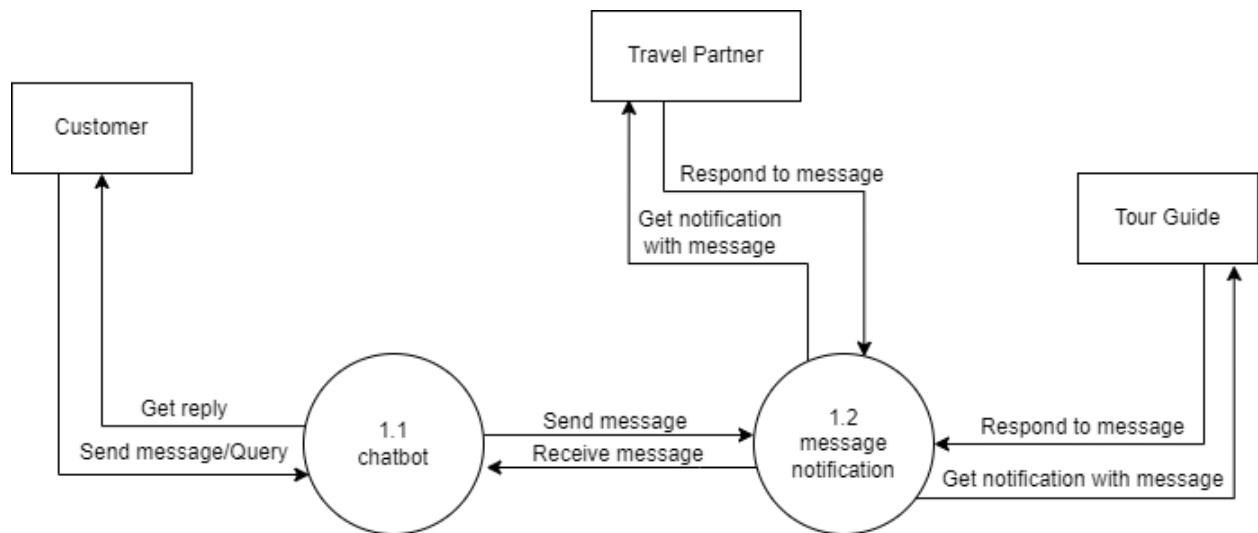
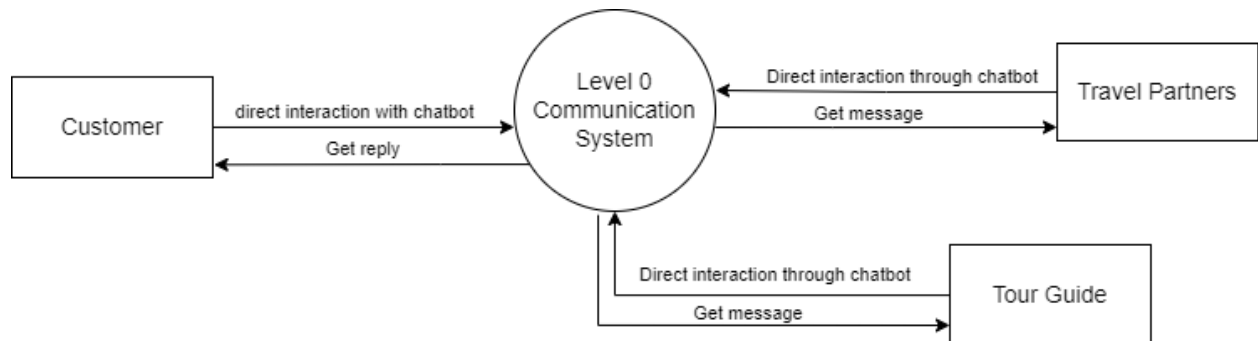
Here, we have drawn 2 DFD diagrams for Account Management- level 0 diagram and level 1 diagram. Here, level 0 diagram has 1 main process as well as 3 external agents (customer, travel guide, travel partner) and 1 agency database. On the other hand, level 1 diagram includes 4 processes- registration, verification, create an account, handling log in and 3 external agents and 1 database as before. All of the users can both register and sign in into the system. To register, they need to provide their email address, password, date of birth and phone number. On the other hand, they can login using their registered email and password. While both login and register they need to pass the captcha verification test from the system. Also, their information will be stored in the database while they register.

2nd DFD:



Travel Package Management Flow Diagram:

Here, again we have drawn 2 DFD diagrams - level 0 and level 1 diagram. Here, level 0 diagram has 1 main process (manage travel package) as well as 4 external agents (customer, admin, travel partner, travel guide). On the other hand, level 1 diagram includes 5 processes - travel package, buy package, update package, feedback/suggestion, payment and 4 external agents as before. This data flow diagram represents the travel package managing system where packages can be added, updated and bought by the customers. Travel partners here add their travel packages with details and pictures, add offers and in time they can update any package which requires admin approval. Tour guides can provide guidance and give suggestions. Customers here can roam around the package system and buy their desirable package through different payment methods.

3rd DFD:**Communication System Flow Diagram:**

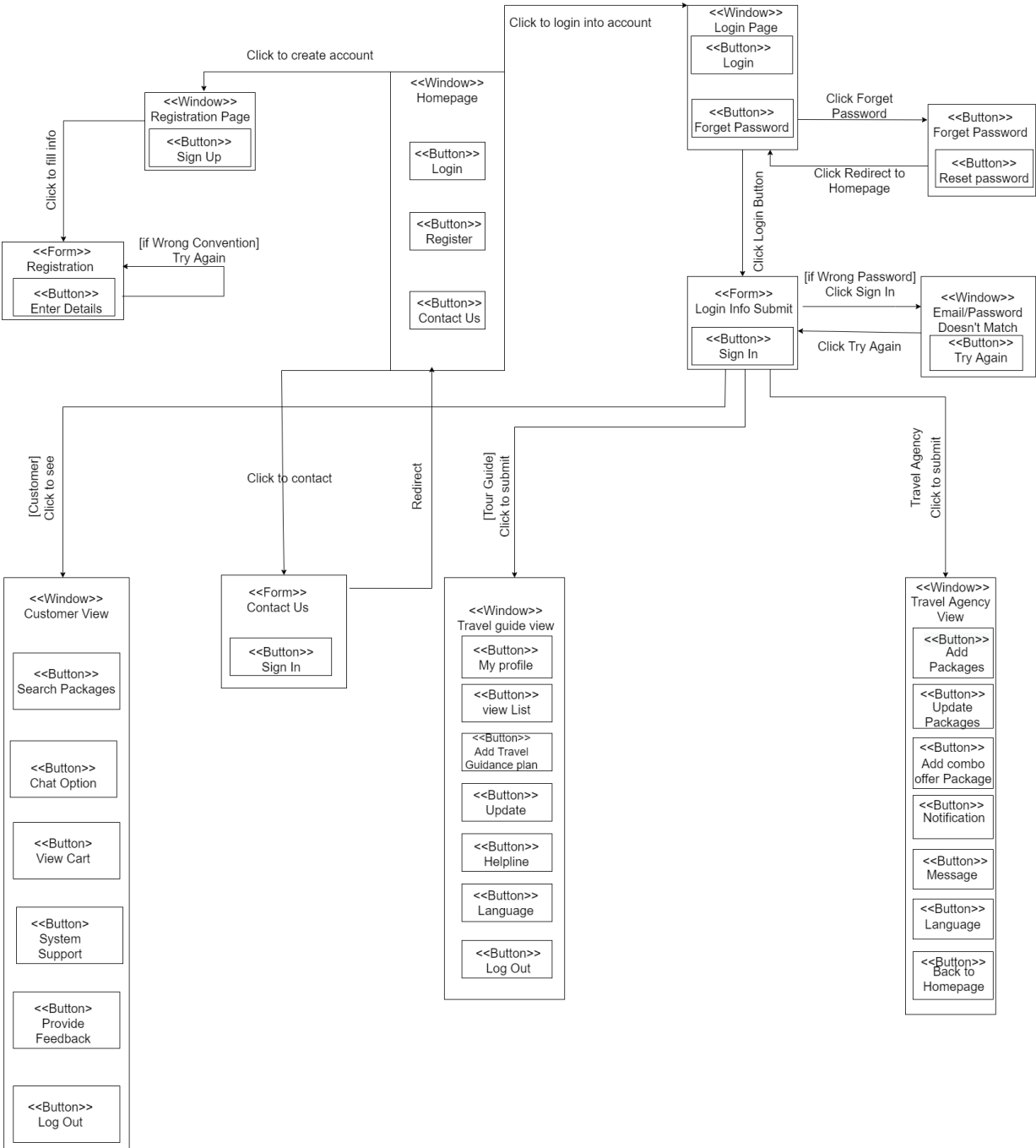
In the same way as before, we have drawn 2 DFD diagrams - level 0 and level 1 diagram. Here, level 0 diagram has 1 main process (Communication system) as well as 3 external agents (customer, travel partner, travel guide). On the other hand, level 1 diagram includes 2 processes - chat box and message notification and 3 external agents as before. The Communication system flow diagram shows the interaction between travel partners, tour guides and customers through system. Customers can directly chat with agencies and guides by chat bot or direct message option. Each of the users will get notification each time they receive any message.

Windows Navigation Diagram:

LOGIN SYSTEM:

For this windows navigation system, whenever a user enters into our system, s/he has different buttons for log in, register, contact us. To create a new account, our system has a sign up button. By clicking the sign up button, the user will be able to find a form and by filling that form s/he will be able to do registration to the system. If the user click to the login button, a login page will appear and by filling that up and pressing the sign in button the user will be able to log in successfully. If the information is incorrect, the system will show an error message and there will be a button 'try again'. By clicking that button, the user will be able to input information again. Moreover, if a user forgets the password, there is a button 'forget password'. By pressing that user can reset password using 'reset password button'.

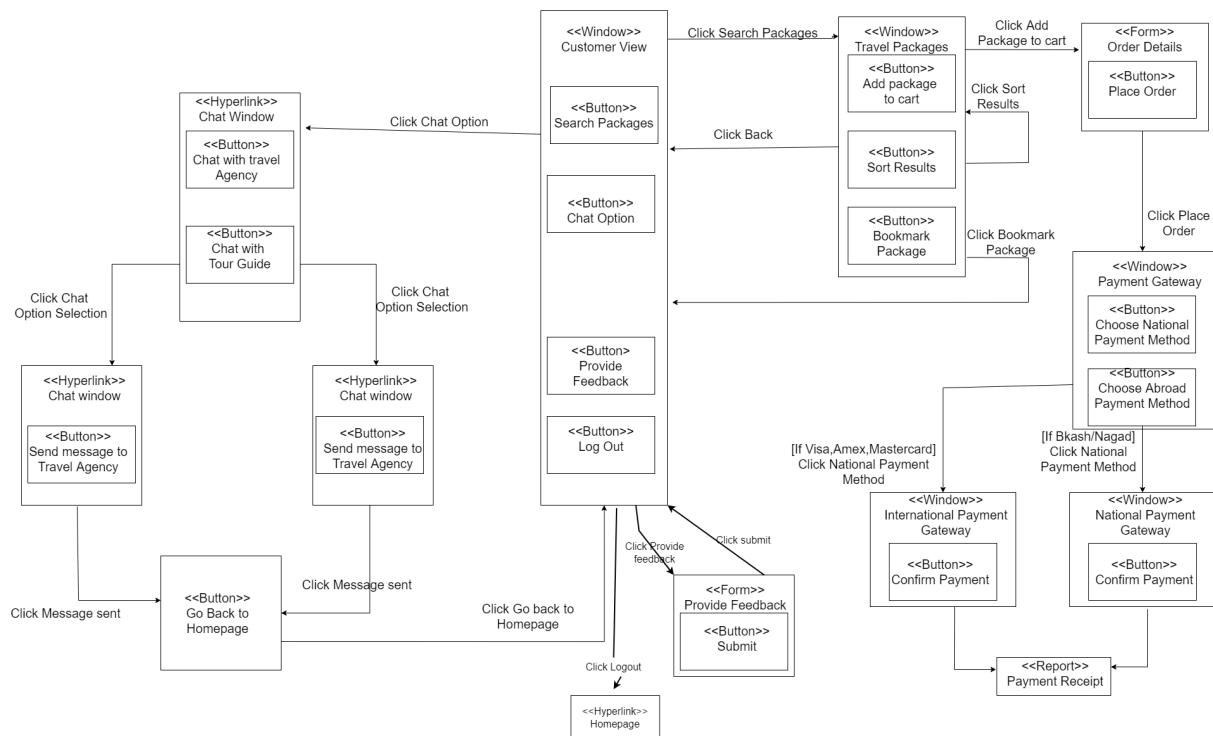
Project for CSE471



For Customer:

Short Description:

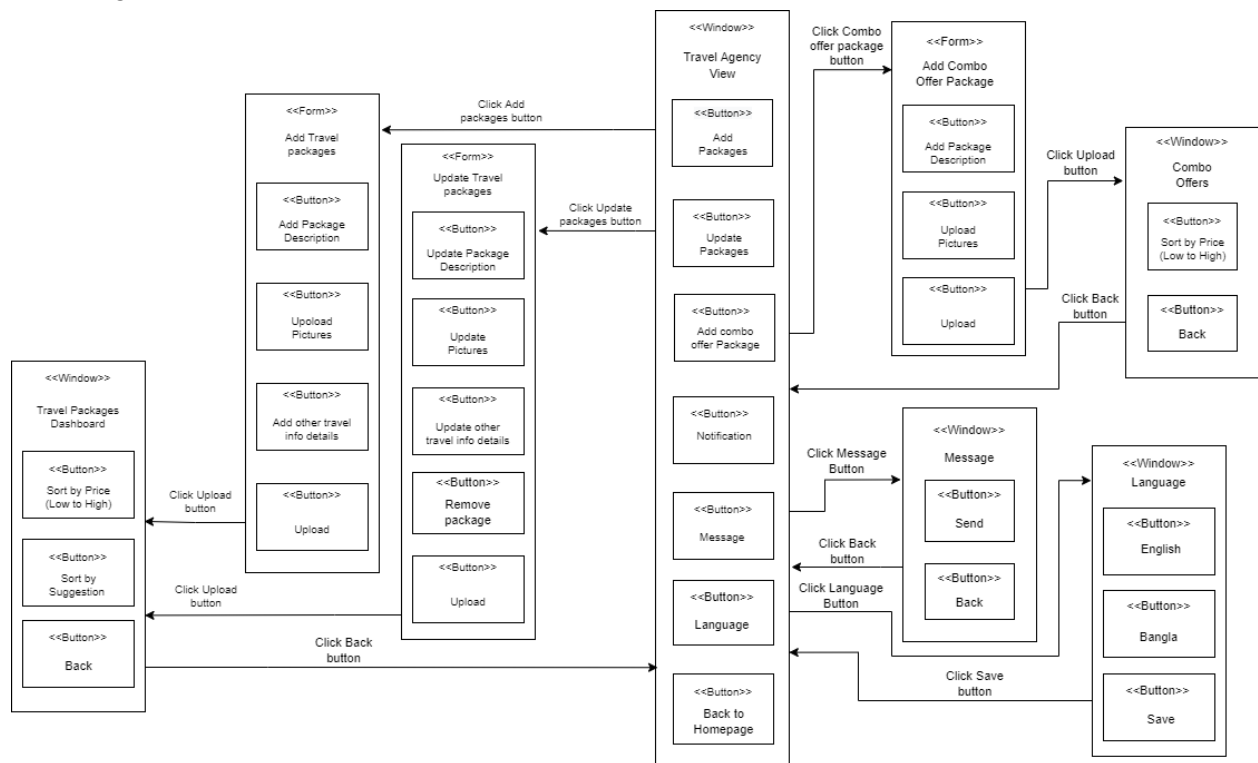
In this system, customers have different buttons after entering into the page - 'search package', 'chat', 'provide feedback', 'log out'. After pressing 'chat' button, customer will have 'chat with travel agency button' for sending message to agency as well as 'chat with travel guide button' for sending message to travel partner. After clicking any chat button the customer will have to send a message button for both cases and then back to the home page button after sending the message. However, after pressing 'search package', customers will have 'add package to cart' button, 'sort result' and 'bookmark package' and after pressing any button customer can click back to the home page. After clicking the 'add package to cart' button, the system will view the 'place order' button and then 'choose payment method'. After choosing the method, there will be a button to confirm payment and after that a button for getting payment receipt.



For Travel Agency:

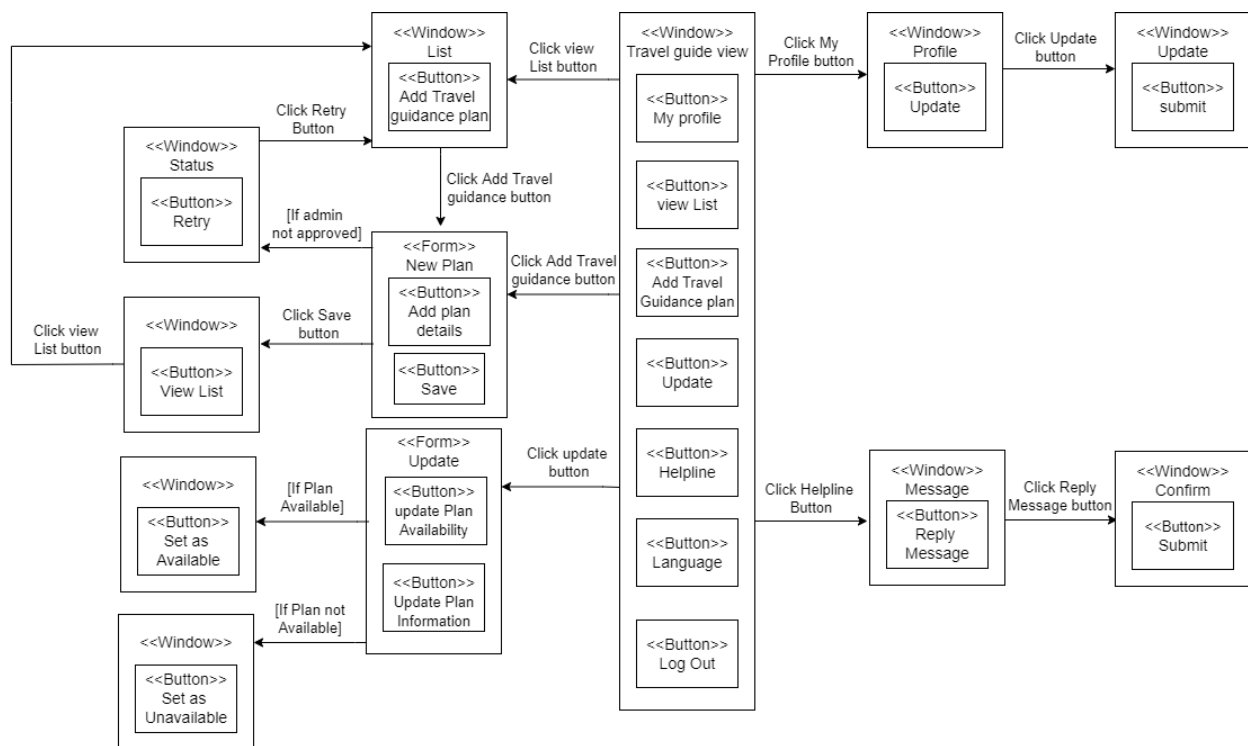
Short Description:

In this windows navigation system, "Travel Agency" has different buttons - 'add packages', 'update packages', 'add combo offer packages', 'notification', 'message', 'language', 'back to homepage'. Travel agencies can add packages with details ,pictures, description via 'add packages' button and the upload using 'upload' button. After uploading travel packages dashboard will appear where s/he can sort packages via different buttons and back to homepage as well via 'Back' button. Travel agencies can update those packages as well via the 'update packages' button and after correcting information by clicking the 'upload' button and after pressing this button the system will view the user travel package dashboard as before. In the same way, s/he can add combo offers via 'add combo offer packages', then 'upload' after filling up all the information, then 'sort by price', 'back'. By the way, travel agencies can also reply to the message via the 'message' button , then send the message back to the home page. S/he has a 'language' button as well. After clicking that the system will show the language window where s/he will find different language button and save button and can go back to the homepage.



For Travel Guide: Short Description:

In this windows navigation system, "Travel guide" has different buttons where he can use different buttons for opening new windows. Here, the Travel Guide can view his own profile and update as well. He can view the available travel guidance plan list via "view List" button and can add a new plan via "Add Travel guidance plan" button. He can also check if the added plan has been approved by an admin or not. If not approved, he can retry using the "Retry" button. Moreover, there's a button for checking plan availability. If plans are available he can set the plan as available and if not available he can set that as well so that customers can easily find available plans. Travel guide has another button to check the requested list that is placed by the customer. He can check and confirm the package if he wants. Moreover, he can communicate with customers via "Inquiry" Button and reply to messages from customers.



Conclusion

The global economy and many developing countries like Bangladesh benefit greatly from tourism, which is a dynamic and profitable sector. Among Bangladesh's many tourism attractions are natural, cultural, historical, archaeological, religious, and man-made wonders. While here, tourists can learn about the local tribes and their distinctive cultures and traditions through interaction with tribal peoples, as well as experience a wide range of wildlife and other natural attractions through a variety of tourism-related activities such as water skiing and rafting. For many developing countries, the tourism industry is seen as a booming one. New jobs for men and women, alleviating poverty, increasing local community participation, and generating foreign money via foreign tourists all contribute to Bangladesh's GDP growth rate. It also improves the economic standards of locals, making individuals economically and socially stable.