The system shall allow the passengers to communicate with customer service operators through live chat.

UC Name	UC - 701 Live Chat Communication
Summary	It provides a means of communication within the platform for the passenger to get help from experienced staff, enabling real-time interaction for inquiries, assistance, and support throughout the booking process.
Dependency	
Actors	Primary actor: Passenger Secondary actor: Operator
Preconditions	1. The airline booking system must be operational and accessible to passengers and operators. 2. The passenger must be logged in to their account to access the live chat functionality. 3. The operator must be logged in to their account and available to respond to passengers. 4. Live chat support should be available during specified operating hours as per the airline's customer service policy. 5. The system should provide a way for the operator to access the passenger’s booking by using booking details or booking code to locate it.
Description of the Main Sequence	Step 1: The operator logs in to their account during operating hours to be available to assist customers through live chat. Step 2: The passenger logs in to their account using their credentials. Step 3: The passenger accesses the live chat feature through their profile during operating hours. Step 4: Upon activating the live chat feature, the system connects the passenger with an available operator. Step 5: Once connected, the passenger provides the booking details and makes inquiries regarding the booking process for the operator to help them.

	Step 6: The available operator receives the passenger's requests and proceeds to help with the request in real-time.
Description of the Alternative Sequence	The passenger logs in to their account and accesses the live chat feature outside of operating hours. The system won't be able to connect the passenger with any operator since no one will be available. The system will show an informative popup to the passenger reminding them to try again within operating hours.
Non-functional requirements	Performance: The live chat system should have low latency to ensure quick response times between passengers and operators. Scalability: The live chat system should be scalable to accommodate increasing demand during peak periods without compromising performance. It should be capable of dynamically allocating resources to handle fluctuations in chat volume efficiently. Availability: The chat service depends on the number of operators working in different countries. If there are enough employers to have night shifts as well, the chat will be available 24/7 in that country, otherwise, the chat will be available from 7 pm to 10 pm. Security: The live chat communication should be encrypted to ensure the confidentiality and integrity of passenger data and conversations.
Postconditions	The passenger's query or issue is resolved satisfactorily, and they receive the necessary assistance or information from the customer service operator. The live chat session is successfully concluded, and both the passenger and the operator are disconnected from the chat interface. Relevant details of the live chat interaction, including the query, response, and any actions taken by the operator, are logged or documented for future reference.

The system shall provide updates in real-time to passengers regarding booking confirmations, changes and cancellations.

UC Name	UC - 702 Booking Updates Notifications
Summary	The system ensures that SMS and/or emails are sent in real-time to passengers to inform them regarding booking confirmation, any modifications or changes to their existing booking (such as flight changes or seat changes), booking cancellations, and different available upgrades or discounts.
Dependency	
Actors	Primary Actor: System Secondary Actor: Passenger
Preconditions	1. The passenger must have an existing booking with the airline for the system to provide updates. 2. The airline's booking system must support real-time modification capabilities for bookings, allowing changes such as flight rescheduling, seat upgrades, or cancellations. 3. Passengers must have access to communication channels through which they can receive updates, such as email or SMS. 4. Passengers must provide at least one form of communication (SMS or email) as information in their existing booking.
Description of the Main Sequence	Step 1: The system continuously monitors booking data and associated flight information for any changes. Step 2: Upon detection, the system generates update notifications containing relevant information about the modification, including the nature of the change and its impact on the passenger's itinerary. Step 3: The system checks the booking to see available/preferred forms of communication provided by the passenger. Step 4: The system dispatches the update notifications to the affected passengers in real-time via email and/or SMS.

	Step 5: Passengers receive the update notifications on their preferred communication devices, providing them with all important information. Step 6: Passengers acknowledge receipt of the update notification and may take further action based on the information provided, such as confirming the change, requesting assistance, or initiating alternative arrangements if necessary.
Description of the Alternative Sequence	The system continuously monitors the booking for any changes or available upgrades. Upon detection, the system generates the update notifications with the relevant information. The system then checks the booking for available forms of communication but doesn't find any provided. The system will terminate the process and the passenger won't be notified.
Non-functional requirements	Performance: The system should deliver update notifications to passengers within a specified timeframe, ensuring timely communication of booking changes. Reliability: The system should be highly reliable, ensuring that update notifications are delivered accurately and consistently to passengers without loss or delay. Availability: The system should be available 24/7 to provide real-time updates to passengers, regardless of time zone or location. Scalability: The system should be scalable to accommodate increasing numbers of passengers and booking modifications without impacting performance or reliability. Security: The system should ensure the security and confidentiality of passenger data and update notifications, protecting them from unauthorized access or interception. It should comply with industry standards and regulations for data protection and privacy.

Postconditions	Update notifications regarding changes to the existing booking or available upgrades for the existing booking are successfully delivered to the passengers through the communication channels provided by them. Passengers have access to detailed information about the changes made to their booking, enabling them to understand the impact on their travel plans. Passengers may take appropriate actions based on the update notifications. The system records the successful delivery of update notifications.

The system shall allow operators to create new bookings for passengers.

UC Name	UC - 703 Customer Service New Booking
Summary	The system enables the operators to create a new booking, following the entire booking process, for passengers who might have difficulty booking flights on their own.
Dependency	
Actors	Primary Actor: Operator Secondary Actor: Passenger
Preconditions	1. The operators attempting to create new bookings must be logged in. 2. The booking system must be operational and accessible to operators to initiate the creation of new bookings. 3. Operators must have access to relevant passenger information required for booking creation, such as names, contact details, and travel preferences. 4. The system must have up-to-date information on flight availability, including schedules, seat availability, and pricing. 5. The system must be integrated with payment processing services to authorize and process transactions. 6. Operators must confirm that all booking conditions, such as fare rules, baggage allowances, and cancellation policies, are communicated accurately to passengers during the booking process.
Description of the Main Sequence	Step 1: The operator logs into the booking system using their credentials to access the booking creation functionality. Step 2: The operator enters the required passenger information into the booking system, including names, birthdays, and contact details.

	Step 3: The operator selects the desired flight(s) for the passenger(s), specifying the departure and arrival airports, dates, and flight class. Step 4: The operator may add additional services to the booking if the passenger requests it. Step 5: The system calculates the total price of the booking based on the selected flight(s), additional services, and any applicable taxes or fees. Step 6: The operator initiates the payment process using the selected payment method, such as credit card. Step 7: Once the payment is processed successfully, the system generates a booking confirmation containing the booking code, itinerary details, and payment receipt. Step 8: The system sends a confirmation email or SMS to the passenger(s), providing them with the booking details and instructions for managing their reservation. Step 9: The system updates the booking database with the newly created reservation, ensuring that it is reflected accurately in the airline's records for future reference and management.
Description of the Alternative Sequence	Alternative Sequence 1: The operator logs in to create a new booking. Some of the required passenger information is missing. The system will terminate the process and ask to start from the beginning providing all mandatory details. Alternative Sequence 2: The operator logs in to create a new booking. Provides all mandatory passenger information. There are no flights available meeting passenger criteria. The booking process is terminated. Alternative Sequence 3: The operator logs in to create a new booking. Provides all mandatory passenger information. The operator finds available desired flights. Calculates the total price. The passenger doesn’t accept the price or can’t provide a form of payment at the moment. The booking process is terminated.
Non-functional requirements	Performance: The system should respond promptly to operator actions, with minimal latency during the booking

	creation process. It should be able to handle concurrent booking requests from multiple operators without experiencing performance degradation. Scalability: The system should be scalable to accommodate increasing numbers of booking transactions as the airline's operations grow. Security: The system should ensure the security and confidentiality of passenger data and payment information entered during the booking process. It should implement encryption and other security measures to protect against unauthorized access, data breaches, and fraudulent activities.
Postconditions	The system confirms the successful creation of the booking and provides the operator with a unique booking code. The newly created booking is added to the airline's booking database, ensuring that it is accurately reflected in the system for future reference and management. The system sends a confirmation email or SMS to the passenger(s), providing them with the booking details, itinerary, payment receipt, and instructions for managing their reservation.

The system shall allow the operator to modify the passenger’s personal information with the manager's permission.

UC Name	UC - 704 Personal Information Modification
Summary	The system permits operators to modify passengers' personal information (such as full name, gender, and birthday), subject to managerial approval after receiving the necessary documentation, ensuring data accuracy and compliance with established protocols.
Dependency	
Actors	Primary Actor: Operator Secondary Actor: Manager, Passenger
Preconditions	1. The operator attempting the modification must be logged in to their account. 2. The system should provide a way for the operator to access the passenger’s booking by using booking details or booking code to locate it. 3. The passenger must provide the necessary legal documentation for the change of personal data. 4. The manager must check the documentation and permit for the change to happen. 5. Before proceeding with the modification, the system should require a confirmation from the manager (inputting the manager's unique code) to ensure that the requested changes are valid and authorized.
Description of the Main Sequence	Step 1: The operator logs in to their account. Step 2: The passenger provides the booking code or booking details and the necessary legal documentation for the change. Step 3: The operator locates passengers booking. Step 4: The manager checks the documents and permits the change. Step 5: The operator requests to modify specific personal information fields for the identified passenger, such as name, gender, and birthday).

	Step 6: The system prompts the manager to review and approve the request by entering the manager's unique code. Step 7: With managerial approval obtained, the system goes through with the changes and saves the new information in the booking. Step 8: Once the modification is successfully processed, the system generates a notification regarding the changes made in the booking. Step 9:The system sends a confirmation email or SMS to the passenger.
Description of the Alternative Sequence	Alternative Sequence 1: The operator logs in to their account. The passenger provides the booking code or booking details and the necessary legal documentation for the change. The operator locates passengers booking. The manager checks the documents but doesn't permit the change. The process is terminated.
Non-functional requirements	Security: The system should ensure the confidentiality and integrity of passenger data during the modification process, implementing measures such as encryption and access controls to prevent unauthorized access or data breaches. Authorization and Authentication: The system should authenticate operators and managers securely before granting access to modify passenger information, ensuring that only authorized personnel can initiate and approve changes. Error Handling: The system should provide clear error messages and guidance to operators and managers in case of invalid or unauthorized modification requests, helping them rectify issues and proceed with the correct procedures. Compliance: The system should comply with data protection regulations and privacy laws governing the handling of passenger personal information, ensuring that modification processes adhere to legal requirements and industry standards.

Postconditions	The system confirms the successful modification of the passenger's personal information, providing feedback to the operator that the changes have been applied. The passenger's record within the system is updated with the modified personal information, ensuring that the changes are accurately reflected for future reference and management. The system sends a notification to inform the passenger of the changes made to their personal information, ensuring transparency and accountability.

The system shall allow the operator to rebook an existing booking as per the passenger's request.

UC Name	UC - 705 Rebooking
Summary	The system enables the operator to modify the itinerary on an existing booking as per passenger request, therefore assisting passengers having difficulties rebooking on their own.
Dependency	
Actors	Primary Actor: Operator Secondary Actor: Passenger
Preconditions	1. The operator attempting the rebooking process must be logged in to their account. 2. There must be an existing booking for the passenger making the rebooking request. 3. The system should provide a way for the operator to access the passenger's booking by using booking details or booking code to locate it. 4. The booking system must be operational and accessible to operators to initiate the rebooking process. 5. The system must have up-to-date information on flight availability, including schedules, seat availability, and pricing. 6. The system must be integrated with payment processing services to authorize and process transactions. 7. Operators must confirm all rebooking conditions, such as fare rules, before proceeding and must accurately communicate them to passengers during the rebooking process.
Description of the Main Sequence	Step 1: The operator logs in to their account. Step 2: The passenger provides the booking code or booking details. Step 3: The operator locates the booking.

	Step 4: The operator confirms all ticket rules to check if the ticket is rebookable and if there are any penalty fees to be paid. Step 5: The operator selects the desired flight(s) for the passenger(s), specifying the departure and arrival airports, dates, and flight class. Step 6: The system calculates the total price of the rebooking based on the selected flight(s), and any applicable taxes or fees. Step 7: If applicable, the operator initiates the payment process using the selected payment method, such as credit card. Step 8: Once the payment is processed successfully, the system generates a rebooking confirmation containing the booking code, itinerary details, and payment receipt. Step 9: The system sends a confirmation email or SMS to the passenger(s), providing them with the rebooking details. Step 10: The system updates the booking database with the modified reservation, ensuring that it is reflected accurately in the airline's records for future reference and management.
Description of the Alternative Sequence	Alternative Sequence 1: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator checks ticket rules. Ticket rules don’t allow rebooking. The process is terminated. Alternative Sequence 2: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator confirms all ticket rules. There are no available flights that meet passenger criteria. The process is terminated. Alternative Sequence 3: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator confirms all ticket rules. The operator selects the desired flight(s). The system calculates the total price of the rebooking. The passenger doesn’t accept the price or can’t provide a form of payment at the moment. The rebooking process is terminated.

Non-functional requirements	Performance: The system should respond promptly to operator actions, with minimal latency during the booking creation process. It should be able to handle concurrent booking requests from multiple operators without experiencing performance degradation. Scalability: The system should be scalable to accommodate increasing numbers of booking transactions as the airline's operations grow. Security: The system should ensure the security and confidentiality of passenger data and payment information entered during the booking process. It should implement encryption and other security measures to protect against unauthorized access, data breaches, and fraudulent activities.
Postconditions	The booking associated with the passenger's request is updated successfully with the new itinerary details, reflecting any changes made during the rebooking process. The system calculates any fare differences, fees, or penalties associated with the rebooking, providing accurate pricing information to the operator and passenger. The system sends a confirmation email or SMS to the passenger, providing them with the updated booking details and itinerary information. The system adds an entry to the audit log indicating the successful completion of the rebooking process, including details such as the date, time, user, and nature of the changes.

The system shall allow the operator to cancel an existing booking as per the passenger's request.

UC Name	UC - 706 Cancellation
Summary	The system enables the operator to cancel the itinerary of an existing booking as per passenger request and give a refund if applicable, therefore assisting passengers having difficulties canceling on their own.
Dependency	
Actors	Primary Actor: Operator Secondary Actor: Passenger
Preconditions	1. The operator attempting the cancellation process must be logged in to their account. 2. There must be an existing booking for the passenger making the cancellation request. 3. The system should provide a way for the operator to access the passenger's booking by using booking details or booking code to locate it. 4. The booking system must be operational and accessible to operators to initiate the cancellation process. 5. The system must be integrated with payment processing services to authorize and process refund transactions. 6. Operators must confirm all cancellation policies, before proceeding and must accurately communicate them to passengers during the cancellation process.
Description of the Main Sequence	Step 1: The operator logs in to their account. Step 2: The passenger provides the booking code or booking details. Step 3: The operator locates the booking. Step 4: The operator confirms all ticket rules to check if the ticket is fully, partially, or not at all refundable. Step 5: The system calculates the total amount that will be refunded.

	Step 6: If applicable, the operator initiates the refund transaction to be paid back to the original form of payment that was provided in the creation of the booking. Step 7: Once the refund is initiated, the itinerary is completely canceled from the booking. Step 8: The system generates a cancellation confirmation containing the booking code, the canceled itinerary, and the refund receipt. Step 9: The system sends a confirmation email or SMS to the passenger(s). Step 10: The system updates the booking database with the modified reservation, ensuring that it is reflected accurately in the airline's records for future reference and management.
Description of the Alternative Sequence	Alternative Sequence 1: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator checks ticket rules. Ticket rules state the ticket is not refundable or the refund amount isn't full. The passenger doesn't want to cancel any more. The process is terminated.
Non-functional requirements	Performance: The system should respond promptly to cancellation requests, ensuring minimal latency in processing time to provide a seamless user experience for operators and passengers. Reliability: The system should be highly reliable, ensuring that cancellation transactions are processed accurately and consistently without errors or data loss. Security: The system should ensure the security and confidentiality of passenger data during the cancellation process, implementing encryption and access controls to prevent unauthorized access or data breaches. Compliance: The system should comply with industry regulations and standards governing cancellation processes, ensuring that cancellation transactions adhere to legal requirements and industry best practices.

Postconditions	The booking is successfully canceled. The booking associated with the canceled reservation is updated within the system to reflect its cancellation status, ensuring that it is accurately recorded and no longer active. If a refund is due to the passenger, the system initiates the refund process, processing the refund amount to the original payment method used for the booking. The system sends a confirmation email or SMS to the passenger, informing them that their booking has been successfully canceled and providing any relevant details regarding refunds or penalties.

The system shall allow the operator to add/modify additional services (such as seat assignment, pet, special meal, extra baggage, etc.) to an existing booking as per passenger request.

UC Name	UC - 707 Additional Services
Summary	The system enables operators to add or modify additional services to existing bookings based on passenger requests. The additional services available are seat assignment, pet in cabin or cargo, special meal, extra baggage (including sports equipment), cabin baggage (eg. musical instruments or works of art), weapon, and wheelchair assistance. For these kinds of requests, the passengers don't have access to add them by themselves in the booking (except the seat assignment) so they need to be fulfilled by the customer service operators.
Dependency	
Actors	Primary Actor: Operator Secondary Actor: Passenger
Preconditions	1. The operator attempting to add additional services must be logged in to their account. 2. There must be an existing booking for the passenger making the request. 3. The system should provide a way for the operator to access the passenger's booking by using booking details or booking code to locate it. 4. The booking system must be operational and accessible to operators to fulfill the request. 5. The system must be integrated with payment processing services to authorize and process transactions if needed.
Description of the Main Sequence	Step 1: The operator logs in to their account. Step 2: The passenger provides the booking code or booking details. Step 3: The operator locates the booking.

	Step 4: The operator checks availability and all criteria for the additional service(s). Step 5: The system calculates the total amount that will need to be paid for the service(s). Step 6: If applicable, the operator initiates the payment process using the selected payment method, such as credit card. Step 7: Once the payment goes through, the system generates an update confirmation containing the booking code, the itinerary, the added service(s), and the payment receipt. Step 9: The system sends a confirmation email or SMS to the passenger(s). Step 10: The system updates the booking database with the modified reservation, ensuring that it is reflected accurately in the airline's records for future reference and management.
Description of the Alternative Sequence	Alternative Sequence 1: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator checks the availability and criteria for the additional service. One of the two (or both) conditions aren't satisfied. The passenger can't book the additional service. The process is terminated. Alternative Sequence 1: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator checks the availability and criteria for the additional service. The system calculated the total amount to be paid. The passenger doesn't accept the price or can't provide a form of payment at the moment. The booking process is terminated.
Non-functional requirements	Performance: The system should respond promptly to the requests, ensuring minimal latency in processing time to provide a seamless user experience for operators and passengers. Security: The system should ensure the security and confidentiality of passenger data during the process,

	implementing encryption and access controls to prevent unauthorized access or data breaches. Compliance: The system should comply with industry regulations and standards governing payment processes, ensuring that transactions adhere to legal requirements and industry best practices.
Postconditions	The additional service(s) is/are successfully added to the booking. The booking is updated within the system to keep track of data for future reference. The system calculates additional prices, providing accurate pricing information to the operator and passenger. The system sends a confirmation email or SMS to the passenger, providing them with the updated booking details and payment receipt.

The system shall allow the operator to upgrade the passenger(s).

UC Name	UC - 708 Flight Upgrade
Summary	The system permits the operator to give an upgrade of the compartment (when available) on the flight(s) that the passenger(s) want.
Dependency	
Actors	Primary Actor: Operator Secondary Actor: Passenger
Preconditions	1. The operator must be authenticated and authorized to access the upgrade functionality within the system. 2. There must be an existing booking for the passenger making the request. 3. The system should provide a way for the operator to access the passenger's booking by using booking details or booking code to locate it. 4. The upgrade functionality within the system must be operational and accessible to operators to facilitate the upgrade process. 5. There must be available upgrade options, such as class upgrades, that meet the passenger's preferences and the airline's offerings. 6. The passenger(s) requesting upgrades must meet the eligibility criteria set by the airline, such as loyalty status, fare class, or available inventory for upgrades.
Description of the Main Sequence	Step 1: The operator logs in to their account. Step 2: The passenger provides the booking code or booking details. Step 3: The operator locates the booking. Step 4: The operator confirms upgrade availability and all criteria. Step 5: The operator selects the desired flight(s) and the desired compartment to be upgraded to.

	Step 6: The system calculates the total price of the upgrade based on the selected flight(s), and any applicable taxes or fees. Step 7: If applicable, the operator initiates the payment process using the selected payment method, such as credit card. Step 8: Once the payment is processed successfully, the system generates an upgrade confirmation containing the booking code, itinerary details, and payment receipt. Step 9: The system sends a confirmation email or SMS to the passenger(s), providing them with the upgrade details. Step 10: The system updates the booking database with the modified reservation, ensuring that it is reflected accurately in the airline's records for future reference and management.
Description of the Alternative Sequence	Alternative Sequence 1: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator checks upgrade availability and criteria for the desired flight(s) and compartment. One, if not both, of the conditions aren't met. The upgrade isn't possible. The process is terminated. Alternative Sequence 2: The operator logs in. The passenger provides the booking code. The operator locates the booking. The operator confirms upgrade availability and criteria for the desired flight(s) and compartment. The system calculates the total price for the upgrade. The passenger doesn't accept the price or can't provide a form of payment at the moment. The upgrade process is terminated.
Non-functional requirements	Performance: The system should respond promptly to upgrade requests, ensuring minimal latency in processing time to provide a seamless user experience for operators and passengers. Security: The system should ensure the security and confidentiality of passenger data during the upgrade process, implementing encryption and access controls to prevent unauthorized access or data breaches.

	Compliance: The system should comply with industry regulations and standards governing upgrade processes, ensuring that upgrade transactions adhere to legal requirements and industry best practices.
Postconditions	The passenger(s) is/are successfully upgraded as requested. The booking associated with the upgraded passenger(s) is updated within the system to reflect the changes. If there are additional costs associated with the upgrade, the system calculates the total amount and adjusts the booking accordingly. The system sends a confirmation email or SMS to the passenger, informing them of the successful upgrade and providing details of the upgraded services. The system updates the booking database with the upgrade details, including the date, time, operator, and nature of the upgrade, ensuring accurate record-keeping for future reference and management.