# System Description

Our product is a Flight Reservation Web-Application (FRW) which is intended to allow users to browse, select, and book desired flights. The application serves users with varying levels of security access to a common database, for example, a simple user with no security access may select their desired seat on a flight they are booking, whereas an airline agent with higher security access may browse the passenger list of a selected flight. Some key features of the FRW not specific to any user include, but are not limited to:

* Browsing available flights
* Select desired seat (Ordinary, Comfort, or Business)
* Opting in for ticket cancellation insurance
* Receiving ticket via email
* Browsing list of flights
* Registering for membership
* The addition or removal of:
  + Destinations
  + Crew
  + Aircraft

Upon completion of the FRW, all users regardless of security clearance can expect to receive a product which is designed to be easily implemented, efficient, and user friendly with a simple GUI to navigate.

# Use-Case Diagram



# System Scenarios

## Scenario 1: Passenger

Sarah, a User, decides to book a flight to Paris. She opens the Flight Reservation Web Application on her laptop and begins by searching for flights. She inputs her travel details into the Flight Search Tool, including her departure city, destination (Paris), travel dates, and preferences. The system displays a list of available Flights, showing Departure Times, Arrival Times, and Ticket Prices, which Sarah may sort flights by.

Sarah selects a suitable Flight that fits her schedule and budget. She proceeds to the Seat Selection interface, where she views the Aircraft Seat Map. Here, she chooses a Comfort Seat near the window. The system updates her choice and directs her to the optional Travel Insurance section. After reviewing the terms, Sarah opts for travel insurance, adding it to her booking.

Sarah proceeds to the Payment Gateway. She securely enters her Credit Card Details and completes the transaction. The system confirms her payment and booking, then generates her E-Ticket and a detailed Payment Receipt. Both documents are sent to Sarah by Email.

## Scenario 2: Tourism Agent

John, a Tourism Agent, logs into the Flight Reservation System. He uses the Flight Search functionality to find flights for a client traveling from New York to London. John inputs the destination, date, and preferences into the Search Interface. The system displays a list of available Flights with details such as Departure Times, Arrival Times, Flight Duration, and Prices. He selects a suitable Flight and proceeds to Seat Selection, where he chooses a Business-Class Seat for his client. After confirming the selection, John is taken to the Payment Gateway where he enters the client's Payment Details and completes the transaction. The system generates an E-Ticket and Payment Receipt, which are automatically sent to both John and his client via Email.