

Operation Contracts

UC1: Load file

Actors: Admin

Preconditions:

- File path exists
- A ConnectionCatalog has been instantiated

Postconditions:

- System accesses CSV file
- System reads each line and creates Connections
- ConnectionCatalog is populated with a list of Connection objects

UC2: Search for Trips

Actors: User

Preconditions:

- A departure and arrival city is provided by user
- A ConnectionCatalog exists and is populated

Postconditions:

- System finds all direct and indirect connections that match search parameters
- System calculates total prices and durations for trips
- SearchResult object is created with a list of all matching Trips

UC3: Search for Trips

Actors: User

Preconditions:

- A SearchResult exists

Postconditions:

- The system sorts the list of Trips according to specified sort logic
- The SearchResult is updated

UC4: Book a Trip

Actors: User

Preconditions:

- A connection has been selected through “Search for Trips”
- User provides each traveller’s name, age, and ID

Postconditions:

- System creates a new Trip object with a unique alphanumeric trip ID
- System creates one or more Reservation objects (one per traveller)
- Each reservation is documented by a unique Ticket (with unique ticket ID)
- All data are stored persistently in the database.
- System confirms the successful booking
- Client records are updated with reservation information

UC5: View Trips

Actors: User

Preconditions:

- User provides last name and ID
- User has previously booked one or more trips

Postconditions:

- System retrieves all trips associated with the user (past and current/future)
- System displays trips separated by “Current Trips” and “History Collection”
- User can view trip details and tickets