CONCORDIA UNIVERSITY

DEPARTMENT OF COMPUTER SCIENCE AND SOFTWARE ENGINEERING

SOEN 342 – Sections H and II:

Software Requirements and Deployment

Fall 2025

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Project Description: Iteration 4 (final iteration)

Date posted: Friday, 7 November 2025

Deadline for completion: Monday, 1 December 2025 at 23:59.

WHAT SHOULD HAVE BEEN DONE SO FAR

Functional Requirements

Use Case Load Records: The system loads routes from a database (csv file) and keeps them in a catalog of routes in working memory.

Use Case Search for Connections: A client enters criteria for a trip. The system consults the routes catalog and suggests viable connections, if any exist. In doing that the system presents direct connections (corresponding to direct routes) or indirect connections (1-stop and 2-stop, if any), which are computed from the routes available.

Use Case Book a Trip: A client is able to search, identify and select a desired connection and proceed to book a trip. The system should avoid suggesting connections with unconditional layover durations. You must build some policy (feel free to build your own).

Use Case View Trips: A client should be able to enter their last name and id and view all their <u>current</u> trips (i.e. for today's or future connections) and <u>past</u> trips, where the latter are placed in some 'history collection', also viewable by the client.

Non-Functional Requirements

The system provides persistence through a relational data model.

DESCRIPTION OF THE CURRENT ITERATION

In this final iteration you are expected to do the following:

1. OCL expressions to capture requirements:

   Specify an OCL expression for the method that creates a reservation.
   Specify an OCL expression for the class that represents a reservation.

2. Create a UML state machine that illustrates the behavior of the system under **Use Case Book a Trip**.

3. A 5-minute video demonstrating your interaction with your application.

Please note that your Github workspace should be locked at the end of this iteration.

End of Iteration 4 (final iteration)