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 2

Date posted: Friday 10 October, 2025

Deadline for completion: Friday 24 October, 2025 at 23:59.

WHAT SHOULD HAVE BEEN DONE SO FAR

Use Case Load Records: The system loads routes from a database (cvs 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.

DESCRIPTION OF THE CURRENT ITERATION

Use Case Book a Trip: A client is able to search, identify and select a desired connection and proceed to book a trip.

A trip is a holder of one or more reservations, where each reservation is documented by a ticket. A ticket has a unique numerical id. A trip may hold a single reservation as when one is travelling alone, or it will hold possibly several reservations in the case of travelling with a family, or partner.

For a given connection, a client may only have a single reservation under their name. If, for instance, a client is booking a trip for a family, then for a single trip they will have multiple reservations, where each reservation would be under a different name. Once created, a trip is assigned a unique alphanumeric ID.

To initiate a booking for a trip, the system requires each traveller's name, age, and id, together with a desired connection, which is selected during Use Case Search for Connections. Note that we will use some generic id type (which in reality would

correspond to state-id or passport number). The system would acknowledge the successful booking of a trip. Note also that the system maintains records of all clients who make reservations.

Scenario 1: A family of four enter their credentials (names, ages, and id's) and their desired connection. The system proceeds to book a single trip, consisting of four reservations. A ticket documents each reservation. The system can uniquely identify each ticket. The system can also uniquely identify the trip.

Scenario 2: A person travelling alone enters their credentials and the desired connection. The system proceeds to book a trip. The trip contains a single reservation. There is a single ticket issued for this trip.

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

End of Iteration 2