

Sample Problem Domains

This section provides a summary use case that briefly describes some problem domains that may be used for in-class discussions.

Airline reservation & seat assignment

An individual may reserve one or more flights where each flight has a from-airport with a departure date/time and a to-airport with an arrival date/time. For each flight reservation, the individual may reserve one or more seats. Each flight reservation represents a one-way ticket. To complete the purchase of the flight reservations, the individual must provide the name of each passenger, a billing address and phone number, and credit card information.

Automated teller machine (ATM)

An individual may deposit or withdraw funds from a bank account, transfer funds between two bank accounts, or obtain the balance of a bank account. An individual may perform as many transactions as they like, and may request a receipt that shows the results of each transaction. Before transactions can start, the individual must provide a valid bank card and pin number. The individual indicates when no more transactions are needed.

Online retail shopping cart

An individual may add and remove items from an electronic shopping cart. Each item in the shopping cart has a price and quantity purchased. To complete the purchase of the items in the shopping cart, the individual must identify the type of shipping requested, and provide their name, shipping address and phone number, billing address and phone number, and credit card information.

Travel itinerary

An individual needs to create a travel plan to visit N cities or destinations. The individual will identify travel time, distance and route to get to each city/destination based on visiting the N locations in a specified order. The individual will also indicate the duration they will stay in each city/destination. An individual may have the need to create many distinct travel plans.