

C-SW312 Introduction to Software Engineering

Fall 2024-2025

Project 2: Online Travel Reservation System

TravelWithMe is a leader in travel industry. TravelWithMe used to be a classic tour operator website, which provides a web portal for making travel reservations online. TravelWithMe aims to provide the best prices for airline tickets, hotels, and car rental in the market, while maintaining users' profiles. TRS offers services in four major business process areas (i.e., Flights, Hotels, Car Rental, and Account Management). Flights, hotels and car rentals supports the users to ask for price quotes by collecting trip details from the customer, discovers travel agent service providers to get a price quote, and returns a filtered list of quotes to the customer.

If the customer is satisfied by one of the quotes, TravelWithMe allows the user to select the best of the quote for her, and then proceeds with selecting detailed preferences, meals, special assistance, etc. In some cases, customer preferences, such as choosing aisle/window seat, may involve several rounds of interaction with the travel agent. For flights and to keep TravelWithMe competitive, it enables the customer to make an initial reservation of the flight for two days with the same quoted price without the need to pay or to enter credit card information. For hotels and car rentals, in most cases they have a more relaxed cancellation/change policy with full refund if the cancellation/change is made at least two days before the start day. In other cases if the price quote is non-refundable, which is usually a lower price quote, but has restrictions in terms of cancellations/change, customers have to pay the full amount online by credit card, and the customer cannot cancel or change her booking.

This is followed by the customer registering her personal information, such as name, address, contact information, nationality, bank account number and authorization for credit worthiness check. The system then checks if everything has been fully and corrected filled. The Sales Department then sends the Credit Bureau a formal request to check the credit worthiness of the customer. The Credit Bureau verifies the authorization of handling the data and checks credibility of the customer. The official results are sent to the Sales Department. The Sales Department decides whether to proceed with the customer order and marks the initiator of the order as credible. The Sales Department then validates the order by checking whether all its fields are fully and correctly filled and the indicated price is correct. It also double-checks if the ordered products are still available. Finally, the order is digitally signed by the Sales Department inside the Order Application, and the product amount maybe charged from the customer credit card based on the customer's preference, requested product and payment conditions. Successful transactions result in updating the user profile, which is maintained for each customer, to determine future discounts and travel packages.

TravelWithMe also offers travel packages, which include comprehensive travel packages (i.e., from other business process areas) to the customer based on trip destination and user profile history. Frequent customers qualify for additional discounts on travel packages. The

processing of an order is conducted the same way as a single product described above.