For our project, we have selected the domain of the Airline Ticket Reservation System.

Specifications: -

Entity classes –

Travel information class - travel information such as arrival/departure dates and arrival/departure destinations, number of travelers (for a grp)

User Information class - Stores personal information of the user (such as name, age, gender, disability issues/special accommodations)

Flight Class – Stores the name of a particular flight. Total number of seats. Total number of seats booked/ available (Along with seat numbers). Lists number of seats available/booked in first/business/economy class. Travelling dates of the flight, duration of the flight, departure/arrival destination.

Ticket Class – Contains the personal information of the user, travel details, meal preferences, extra luggage information, total fare/amount of the ticket, Total amount paid/left to pay, gate number, can the ticket be rescheduled/cancelled

Member class – Is the user a member of the airline. Category of member - Silver/Gold/Platinum. Membership number. Membership date. Any membership fee (Can later be added to the price of ticket). Benefits for each category of member (i.e., discounts/lounge access etc.). If not a member, a feature to sign up as a member.

Meal Class – Meal preference Veg/Non-veg/Vegan/Halal etc. (Hot or cold food). Beverage preferences wine/coffee/tea/alcohol. (Would determine if alcohol is allowed by comparing the age) Has total price of selected preferences

Baggage Class – Number of baggage, type of baggage (check-in/cabin), size width/height/breadth of baggage, weight of baggage. No of extra baggage (type, size, weight etc.)

<We would later implement several interfaces to allow for commonality of features amongst classes>

Use Cases –

Calculate price of meal preferences

Calculate price of baggage

Apply discounts if member

Book a ticket based on seat preference – First/Business/Economy

Sign-up as member

Reschedule/Cancel ticket

Update flight data with remaining seats etc.

Display relevant messages if all seats are booked or if economy is full but business is empty etc. via the Interface adapter

The interface adapter would take inputs from the user (The Framework and Drivers) and help in the automation of the system by sending the user data to the Use Cases to perform some tasks and produce an output which would again be transferred to the UI (Framework and Drivers) via the Interface Adapter.