

# GP03 - Design Review and Findings

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## Preface

The following paper was a composition of our notes and items from our team's design review meeting. Our agenda was to look at our previous projects in the past and recognize why there were changes from the original design, and why these changes are better for the future of this project.

## Did we meet our project requirements?

From the beginning, Ms. Hill gave our team specifications of what she wanted to be implemented into the Express Flights travel system (the software we were developing for her company). In the remainder of the document, we will compare the requirements given in Project Scenario (from GP01) and our current design of the Express Flights travel system.

### REQUIREMENT ( 1 ): Create New Customer Account

- Requires that customer gives an the agent a:

- Customer Name
- Customer Address
- Customer Phone Number
- Customer Credit Card Information
  - Holder's Name
  - Holder's Card Type
  - Holder's Card Number
  - Holder's Card's Expiration Date
  - Holder's Card's Card Security Value (CSV) Number
  - Holder's Billing Address
- Optional Requirement: Ask for Customer's Email

Did we meet the Requirements for REQUIREMENT ( 1 )?

- ✓ According to Team Echo's Preflight Use-Case Diagram, the Customer initiates the Creation of a Customer Profile through an Agent.
- ✓ According to Team Echo's Create New Customer Profile Use-Case Description, the pre-conditions are that the customer calls the agency or books in person and the customer has a name, address or residency, and a phone number.
- ✓ According to Team Echo's Create New Customer Profile Scenario, the customer will provide their information (name, address, phone number) as well as their credit card information (holder's name, card type, card number,

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card's expiration date, CSV number, billing address). Their credit card information will be validated against a credit card bureau.

### REQUIREMENT ( 2 ): Open Customer Profile to Create Itinerary Case for Customer

- Requires that a customer provide to the agency their/the:

- Arrival City
- Dates they will be Traveling
- Number of Travelers (up to 5)

- Additional Requirements include:

- Ask the Customer if they want the Cheapest Fare, Shortest Time, or Shortest Number of Flights is Preferred (default to Cheapest Fare)

Did we meet the Requirements for REQUIREMENT ( 2 )?

- ✓ According to Team Echo's Manage Customer Profile Use-Case Description, the agent is able to retrieve a customer profile based on customer name or customer phone number. This will obtain the customer's profile to be opened.
- ✓ According to Team Echo's Create New Itinerary Case Use-Case Description, the customer must provide to the agency their departure city, arrival city, the dates they will be traveling, and the number of travelers (up to 5). The agency will also ask if the customer wants the cheapest fare, shortest time or shortest number of flights to be listed amongst their preferences.
- ✓ According to Team Echo's Preflight Use-Case Diagram, the agent will ask the customer for the information required for creating a new flight itinerary case.
- ✓ According to Team Echo's Manage Existing Customer's Profile Scenario, the EFL travel system will query for an existing customer profile. This profile needs to exist in order to create a new itinerary case.
- ✓ According to Team Echo's Create New Itinerary Case Scenario, the agent will acquire the arrival city, dates the customer wishes to travel, the number of travels and obtain the customer's preferred fare (cheapest fare, shortest time, or shortest number of flights).

### REQUIREMENT ( 3 ): System Will Return Sorted List of Customer's Preferences

- Precondition: This may only happen after an agent enters data into the system.

Did we meet the Requirements for REQUIREMENT ( 3 )?

- ✓ According to Create New Itinerary Case Use-Case Description, the system will return a sorted list of options based on the customer's preferences.
- ✓ According to Create New Itinerary Case Scenario, the system will return a sorted list of options based on the customer's preferences.

REQUIREMENT ( 4 ): Customer Wants to Reserve a Flight

- Requires that agent obtain:
  - Name of each traveler.
  - Payment Information (credit card and billing address) from Customer if it is different than the information on the customer's profile in the system.
  - Optional Requirement if the Customer provides a mobile phone number and wants to receive update texts about flight status.
- Once reservation is made, system will generate a receipt that contains:
  - Customer information (name and contact information)
  - Flight Information (date, departure airport, airline and flight number, arrival airport, and flight time of each leg of the trip, and end with the total flight time).
- Requires that the agent will either:
  - Hand the receipt to the customer
  - Or send the receipt via email or postal mail (to billing address)

Did we meet the Requirements for REQUIREMENT ( 4 )?

- ✓ According to Team Echo's Flight Reservation Use-Case Diagram, the customer will contact the agent in order to reserve a flight. The Agent will be able to reserve a flight through Managing Flights. The agent will also be able to produce a receipt and flight list through Produce Document.
- ✓ According to Team Echo's Reserve Flights Use-Case Description, the customer must have an existing profile. The customer must provide valid traveling and billing information as well as their preference of flight (cheapest fare, shortest time, or shortest number of flights).
- ✓ According to Team Echo's Reserve Flight Scenario, the agent will obtain information from the customer, and asks the customer for changes in their information (such as billing address).
- ✓ According to Team Echo's Produce Flight Receipt Scenario, a receipt with customer information and flight information will be printed and given to the customer.
- ❖ We did however, miss the requirement of acquiring the name of each traveler. This is a simple case that we will implement into our design. There is an array of strings for names of customers.

REQUIREMENT ( 5 ): Agent Assist Customer with Modifying/Cancelling Reservation

-Note: No additional fees will be charged by the travel agency, but airline fees will still apply

- If Cancellation of Flight
  - New trip advice will require creating a new itinerary case.
  - If declining a flight based upon cost, agent can create a "watch" for if the price of a flight drops below a certain threshold. This watch will remain in effect for 30 days or until a reservation is

place. If reservation is made from a watch, no additional service fees will be charged by the travel agency.

Did we meet Requirements for REQUIREMENT ( 5 )?

- ✓ According to Team Echo's Flight Reservation Use-Case Diagram, the customer will contact the agent in order to modify or cancel a flight reservation. The agent will be able to do this through the Manage Flights case.
- ✓ According to Team Echo's Cancel Reservation Use-Case Description, the customer must have already reserved a flight through the agency. The Agent will Cancel the Flight Reservation and CRATD is updated with changed information.
- ✓ According to Team Echo's Create Price Watch Use-Case Description, the customer must have a profile created with the agency, asked if they want to reserve a flight, asked if the customer has made a flight list, and ask if the customer has decided to opt out of a flight due to the price. The agent will inform customer about price watch if they decline a flight reservation due to price. If the customer wants a watch, the agent will create one and it will remain in effect for 30 days or until a reservation is placed.
- ✓ According to Team Echo's Modify Flights Scenario, the agent will modify the customer's flight requirements as needed. Updated information will be saved and updated to the CRATD.
- ✓ According to Team Echo's Cancel Reservation Scenario, the customer may request to cancel a flight reservation. As a result an agent will remove the flight reservation from the system.

REQUIREMENT ( 6 ): Obtain Information from CRATD/Update CRATD

- Requirements include: Obtain information from a database of flight information containing data such as airport codes, airlines, departure times, airline mileage, airport fees, etc. The database will also store the agencies information such as agent IDs, a summary of search results, and watch scenarios. Updates come in the form of one or more text files that must be converted and loaded into the database.

Did we meet the Requirements for REQUIREMENT ( 6 )?

- ✓ According to Team Echo's Get Updates from CRATD Use-Case Description, the manager will be able to check CRATD for updates, and if there are updates the Manager will download the updates to the Express Flights Travel System.
- ✓ According to Team Echo's Update EFL Database Use-Case Description, the Manager will update the EFL Database from the downloaded updates from CRATD. Manager checks to see if a need for free structure management exists.
- ✓ According to Team Echo's

REQUIREMENT ( 7 ): EFL Prints Report At Beginning of Day

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-Requirements include: Provide report of all watch scenarios that have met threshold values. The agent will contact the customer with the new watch threshold values in order to get the customer to make reservation. Once the customer makes a reservation, the watch will be removed. If the customer declines to make a reservation, the agent will ask the customer if they want to watch removed. If the customer wants the watch removed, the agent removes it from the system immediately.

Did we meet Requirements for REQUIREMENT ( 7 )?

- ✓ According to Team Echo's Manager Responsibilities Use-Case Diagram, the manager will get a report from the EFL.
- ✓ According to Team Echo's Provide Met Watch Scenario, the agency will be notified if a customer's price watch as been met. The agency will then contact the customer and ask if they want to reserve the flight with the new price.
- ✓ According to Team Echo's Cancel Watch Scenario, an agent is able to cancel a watch if the customer desires to not reserve a flight.

REQUIREMENT ( 8 ): Manager Prints Daily Report

8. At the end of the day, the manager will run a daily report, and update the database information and modify the travel agency's fee structure (if necessary). The daily report will contain a financial section and a contact section.

- Financial Section
  - In the financial section, the system reports how many service fees were assessed that day, the cost per fee, and the total income for the agency of the day.
- Contact Section
  - In the contact section, the report lists the number of customers that were serviced that day, the number of new customers the agency gained, and how many reservations were made that day.
  - It also reports how many cancellations were made that day and how many watches were started as well as how many watches were cancelled.

Did we meet the Requirements for REQUIREMENT ( 8 )?

- ✓ According to Team Echo's Produce Daily Report Scenario, the manager will gets and implements the financial section and contact section of the report. The manager will update the database information to the EFL

REQUIREMENT ( 9 ): Manager Checks CRATD Nightly For Updates

-Requirements include: The manager will check the CRATD (Central Repository of Air Travel Data) for updates nightly. If updates are available, manager will download them and provides it to the travel system to process and update the flight database. Ms. Hill wants this whole procedure to take no more than 5 minutes!

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Did we meet the Requirements for REQUIREMENT ( 9 )?

- ✓ According to Team Echo's Produce Daily Report Use-Case Description, the manager will update the EFL Database with CRATD information if necessary.
- ✓ According to Team Echo's Get Updates from CRATD Use-Case Description, the manager will be able to check CRATD for updates, and if there are updates the Manager will download the updates to the Express Flights Travel System.
- ✓ According to Team Echo's Update EFL Database Use-Case Description, the Manager will update the EFL Database from the downloaded updates from CRATD. Manager checks to see if a need for free structure management exists.

### REQUIREMENT ( 10 ) : CRATD Will Update EFL Travel System

-Requirements include: CRATD will provide all airline and airport cost information, but the agency will apply their fees on top of the airline fees.

- CRATD Provides
  - Cost per mile, per airline, and airport fee assessed by each departure airport against each traveler.
- Agency Fees
  - The agency assesses a \$50 "plan to go" fee for every case. If a customer has reserved at least 2 trips through the agency, then the fee drops to \$45 "plan to go" fee. After ten or more reservations, the fee drops to \$40 "plan to go" fee.
  - If a customer is referred to the travel agency by an existing customer, then the referring customer receives a \$5 credit towards the travel agency's fee (kind of like \$5 off). A customer may have an unlimited credit balance, but can only receive one credit per each referral.
  - The travel system will adjust the customer's agency fee based upon the historical record with the company. Agents may add credit, but only Managers may modify the basic fee structure for the entire system or a specific customer's fee.

Did we meet the Requirements for REQUIREMENT ( 10 )?

- ✓ According to Team Echo's Compute Cost Scenario, the cost per airline fee is computed, the airport fee is computed by summing the airport service fees, the agency's fee is computed and the customer balance and total cost is updated.
- ✓ According to Team Echo's Add Credit to Customer's Profile Scenario, the agent asks the new customer if they were referred to the agency by an existing customer, the customer (if existent) who recommended the new customer will then obtain a credit to the account.
- ❖ The one thing we noticed that was missing was the lack of updating the customer's agency fee based upon their historical record with the company.

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As a team, our design is flexible to accept this change and addition to our Express Flights system. This however is updated in a generalized add credit function.