**Project Details**

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| Project number | *2* |
| Project title | *Online Travel Reservation System* |
| Corresponding TA\LA | *Nahla Abd el-Latif* |
| Deliverable | *1* |

**Team Details**

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| --- | --- | --- |
| **Student ID** | **Student name** | **Lab Group** |
| 20180044 | Eslam Ramadan Abdo | 1 & 2 |
| 20180051 | Alamir Hassan Younis | 3 |
| 20180075 | Tawfik Yasser Tawfik | 3 |
| 20180154 | Abdelrahman Esmat Mohamed | 3 |
| 20180286 | Moaz Mahmoud Saad | 3 |

1. Use cases model:
   1. **Using Event Decomposition technique:**

Table - Types of Events

* + 1. Types of Events

|  |  |
| --- | --- |
| Event | Type  (External/State/temporal) |
| The passenger enters trip information. | External Event |
| The passenger asks for price quotes. | External Event |
| The system returns filtered list of quotes to the customer. | State Event |
| User selects the best of the quote | External Event |
| User selects detailed preference | External Event |
| User makes the initial reservation | External Event |
| Time for user to pay for the flight. | Temporal Event |
| The user cancels/changes hotel or car rental reservation. | External Event |
| The user enters his/her personal information. | External Event |
| The sales department checks if the ordered products are still available. | State Event |
| The sales department withdraws the product price from the customer credit card. | State Event |
| System updates user profile | State Event |
| System offers travel package | State Event |
| System offers additional discounts for frequent customers | State Event |

* + 1. Formalize events with use cases

Table 2- Formalizing Events to usecases

|  |  |  |
| --- | --- | --- |
| Event | Type  (External/State/temporal) | Use case |
| The passenger enters trip information. | External Event | Entering trip information. |
| The passenger asks for price quotes. | External Event | Asking for price quotes. |
| The system returns filtered list of quotes to the customer. | State Event | Returning filtered list of quotes. |
| User selects the best of the quote | External Event | Selecting best quote |
| User selects detailed preference | External Event | Selecting detailed preferences |
| User makes the initial reservation | External Event | Creating initial reservation |
| Time for user to pay for the flight. | Temporal Event | Notifying user to pay |
| The user cancels/changes hotel or car rental reservation. | External Event | Cancelling/Changing reservation |
| The user enters his/her personal information. | External Event | Adding personal information |
| The sales department checks if the ordered products are still available. | State Event | Checking products availability |
| The sales department withdraws the product price from the customer credit card. | State Event | Withdrawing product price |
| System updates user profile | State Event | Updating user profile |
| System offers travel package | State Event | Offering travel package |
| System offers additional discounts for frequent customers | State Event | Offering additional discount |

* + 1. Use case Descriptions:

Table 3 - Use cases descriptions

|  |  |  |
| --- | --- | --- |
| Use case name | Actor | Description |
| Entering trip information. | Passenger | The passenger enters the trip information (Source and Destination, Class of hotel, Car type, and Maximum price) for (flight, hotel and car rental). |
| Asking for price quotes. | Passenger | The passenger asks the system to show him the filtered list of price quotes to choose from it. |
| Returning filtered list of quotes. | Travel agent | The system displays the price quotes list after filtering it to the passenger to choose from it. |
| Selecting best quote | Passenger | When the system returns the filtered list of quotes the customer/actor/user select the best for him. |
| Selecting detailed preferences | Passenger | When the customer/actor/user selects the best quote, the system asks him to select preferences, meals, special assistance. In some cases, customer preferences, such as choosing aisle/window seat. |
| Creating initial reservation | Passenger | The customer/actor/user can make initial reservation of the flight for two days with the same quoted price without the need to pay or to enter credit card information. |
| Notifying user to pay | Travel Agent | Travel agent notifies the passenger to pay for the flight after two days from the initial reservation. |
| Cancelling/Changing reservation | Passenger | The customer/passenger/user can cancel/change the hotel/car rental reservation - with full refund - at least two days before the starting day, except for non-refundable quotes (Hotel/Car rental). |
| Adding personal information | Passenger | Passenger adding his/her personal information and the system then creating a new account for that Passenger. |
| Checking products availability | Sales department | After Customer/User/Actor choose the products (Aspects of the package) his/her wants to buy/book and after system validation of fully and correctly data entered by customer, system then makes double-check for availability. |
| Withdrawing product price | Sales department | After system validation for entered data and availability, and the validation of credit card information, finally system withdrawing the total price from the passenger credit card. |
| Updating user profile | Sales department | In this case system updates user profile with the trip Information that has been reserved/booked after processing and checking order. |
| Offering travel package | Travel agent | In this case system will offer travel package based on destination and user history. |
| Offering additional discount | Travel agent | In this case system shows special  offers for frequent users |

* + 1. Matrix that maps all domain classes to the set of use cases

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Use case  **Vs.**  Domain Class | Passenger | Travel agent | Sales Department | Trip |
| Entering trip information. | C | U |  |  |
| Asking for price quotes. | R (Report) |  |  |  |
| Returning filtered list of quotes. |  | R (Report) |  |  |
| Selecting best quote | R (Report) |  |  | C |
| Selecting detailed preferences | R (Report) |  |  | U |
| Creating initial reservation | C |  |  | C |
| Notifying user to pay |  | R (Report) |  |  |
| Cancelling/Changing reservation | U | U |  |  |
| Adding personal information | C |  | R (Read) |  |
| Checking products availability |  |  | R (Read) |  |
| Withdrawing product price |  |  | U |  |
| Updating user profile |  | U | U |  |
| Offering travel package |  | R (Report) |  |  |
| Offering additional discount |  | R (Report) |  |  |

* + 1. Use case Diagram:

