# Test Cases

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| **Test Cases** | **Test Data** | **Expected Result** | **Test Result** | **Pass/Fail** |
| **Test Case 1.**  Check function with valid inputs | ("20/10/2025", "syd", true, "25/10/2025", "mel", "economy", 1, 0, 0)  ("21/10/2025", "del", false, "30/10/2025", "pvg", "first", 1, 0, 1)  ("25/10/2025", "syd", false, "01/11/2025", "lax", "premium economy", 7, 2, 0)  ("22/10/2025", "lax", false, "28/10/2025", "cdg", "economy", 4, 1, 4) | The function should return “true” and initialize the attributes. | The function returns “true” and initialized the attributes. | PASS |
| **Test Case 2.**  Check function with invalid total number of passengers | ("20/10/2025", "syd", false, "25/10/2025", "mel", "economy", 0, 0, 0)  ("22/10/2025", "lax", false, "28/10/2025", "cdg", "economy", 5, 1, 4) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 3.**  Check function with children seated in emergency row seating or first class. | ("20/10/2025", "syd", false, "25/10/2025", "mel", "first", 1, 2, 0)  ("25/10/2025", "syd", true, "01/11/2025", "lax", "economy", 3, 6, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 4.**  Check function with infants seated in emergency row seating or business class. | ("21/10/2025", "del", false, "30/10/2025", "pvg", "business", 1, 0, 1)  ("22/10/2025", "lax", true, "28/10/2025", "cdg", "economy", 4, 0, 4) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 5.**  Check function with invalid number of child passengers per adult. | ("20/10/2025", "syd", false, "25/10/2025", "mel", "economy", 0, 1, 0)  ("25/10/2025", "syd", false, "01/11/2025", "lax", "premium economy", 2, 6, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 6.**  Check function with invalid number of infants per adult. | ("20/10/2025", "syd", false, "25/10/2025", "mel", "economy", 0, 0, 1)  ("20/10/2025", "syd", false, "25/10/2025", "mel", "economy", 4, 0, 5) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 7.**  Check function with departure date in the past. | ("10/10/2025", "syd", false, "25/10/2025", "mel", "economy", 1, 0, 0)  ("05/10/2025", "syd", false, "06/10/2025", "mel", "economy", 1, 0, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 8.**  Check function with invalid date format. | ("12/31/2025", "syd", false, "31/12/2026", "mel", "economy", 1, 0, 0)  ("31/12/2025", "syd", false, "12/31/2026", "mel", "economy", 1, 0, 0)  ("2025/13/31", "syd", false, "31/12/2026", "mel", "economy", 1, 0, 0)  ("31/12/2025", "syd", false, "2026/13/31", "mel", "economy", 1, 0, 0)  ("29/02/2026", "syd", false, "01/03/2026", "mel", "economy", 1, 0, 0)  ("28/02/2026", "syd", false, "29/02/2026", "mel", "economy", 1, 0, 0)  ("1/01/2026", "syd", false, "31/12/2026", "mel", "economy", 1, 0, 0)  ("01/1/2026", "syd", false, "31/12/2026", "mel", "economy", 1, 0, 0)  ("01/01/2026", "syd", false, "1/01/2027", "mel", "economy", 1, 0, 0)  ("01/01/2026", "syd", false, "01/1/2027", "mel", "economy", 1, 0, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 9.**  Check function with invalid return dates. | ("20/10/2025", "syd", false, "19/10/2025", "mel", "economy", 1, 0, 0)  ("20/10/2025", "syd", false, "", "", "economy", 1, 0, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 10.**  Check function with invalid seating classes. | ("20/10/2025", "syd", true, "25/10/2025", "mel", "", 1, 0, 0)  ("20/10/2025", "syd", true, "25/10/2025", "mel", "scum", 1, 0, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 11.**  Check function with invalid emergency row seating. | ("20/10/2025", "syd", true, "25/10/2025", "mel", "premium economy", 1, 0, 0)  ("20/10/2025", "syd", true, "25/10/2025", "mel", "business", 1, 0, 0)  ("20/10/2025", "syd", true, "25/10/2025", "mel", "first", 1, 0, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |
| **Test Case 12.**  Check function with invalid departure and destination airports. | ("20/10/2025", "byd", true, "25/10/2025", "mel", "economy", 1, 0, 0)  ("20/10/2025", "mel", true, "25/10/2025", "lpd", "economy", 1, 0, 0) | The function should return “false” and should not initialize the attributes. | The function returns “false” and initialized the attributes. | PASS |

# User Stories

**User Story 1.** As a customer, I want to be able to use a calendar so that I can easily enter departure and arrival dates for my holiday.

**User Story 2.** As a customer, I want to receive a confirmation email and itinerary so that I know when my flight is departing and which airport to go.

**User Story 3.** As a customer, I want to see detailed information (company, price, take off/touch down, day, time, duration, stopover locations, number of stopovers) from multiple flight results so that I can find the cheapest flight available with the least number of stopovers.

**User Story 4.** As a customer, I want to be able to filter available car options (by makes, models, transmission, engine type (electric/petrol/diesel), and capacity) as I am interested in hiring a Mini Cooper with a manual transmission.

**User Story 5.** As a customer, I want to be able to chat with a staff member so that they can assist me with troubleshooting.

# Acceptance Criteria for each User Story

### User Story 1.

1. When the customer selects departure/arrival date input boxes, the system should prompt an interactive calendar for the customer to select a date.
2. The system should prevent the customer from entering invalid dates (departure dates in the past, setting the arrival date as the departure date).
3. The system should automatically input the dates in the format DD/MM/YYYY

### User Story 2.

1. The customer must be logged using their email address before making any bookings.
2. The system should be able to send a confirmation email and itinerary to the customer’s email address within 30 seconds after the customer has made a booking and payment confirmation.
3. The confirmation email and itinerary should contain details of each booking (if it’s a flight booking, it should include departure time, airport, seating, class, etc).

### User Story 3.

1. The system should display at least 10 flight results per page.
2. The individual flight results should be displayed in a tile format that includes critical flight details (price, airline, seating class, destination/arrival, departure times, number of stops, and time). The customer should select a fight to view more information.
3. By default, the flight results should be sorted by price in ascending order.

### User Story 4.

1. The system should first present the user with a filter search menu that would allow the customer to select make, models, transmission, engine type (electric/petrol/diesel), and capacity.
2. The system should only display available car hires that matches the filter options.
3. If the system could not find a car hire that have the specified vehicle models, then it should display no results and have a “quick search” button for the customer to search for all vehicle hires.

### User Story 5.

1. The customer should be logged on to the system before initializing a livechat with staff.
2. The system should reliably deliver messages on livechat between the customer and staff with less than 2 seconds delay after a message has been sent.
3. The system should allow the customer to chat with three types of staff: customer service, travel agents, and technical support.