**PSQL Function and Procedure Calls for Demo**

*This guide outlines the procedures and functions needed to demonstrate the PSQL database operations, including resetting the booking status, finding ticket IDs, checking booking parameters, booking tickets, and managing cancellations.*

**Reset Procedure:**

* **Description: Resets fields for specific attributes to expedite testing and for demonstration purposes. It sets the booking period from the current date to a week from today. This procedure must be reset before the demo to avoid potential errors.**
* **Related file: SELECT1\_UPDATES\_Reset.sql**
* **Command: CALL reset\_and\_show\_booking\_status();**

**Ensure compatible parameters for booking procedure:**

* **Description: Simulates the requirements a passenger must provide, which is essential for the booking process to function correctly.**
* **Related file: SELECT3\_TrainRoutePassTicket\_Check.sql**
* **Command: SELECT \* FROM Booking\_Param\_Check();**

**Booking procedure:**

* **Description: Books tickets and creates a unique ticket ID, updates relevant fields based on parameters provided by the passenger or deduced from the booking parameter check.**
* **Related file: PROCEDURE1\_Booking.sql**
* **Command: CALL insert\_new\_tkt('TR5', 5, 160, (current\_date + interval '7 days')::DATE); CALL insert\_new\_tkt('TR5', 5, 132, (current\_date + interval '7 days')::DATE); SELECT \* FROM get\_ticket\_details('TR5', 5, 160, (current\_date + interval '7 days')::DATE);**

**Find Passenger by name guessing:**

* **Description: Finds a ticket ID using a partial character sequence of a passenger's name, which is useful when the exact spelling is uncertain.**
* **Related file: SELECT2\_Ticket\_ID\_via\_P.Name.sql**
* **Command: SELECT \* FROM get\_ticket\_details\_by\_name('ar');**

**Cancellation procedure:**

* **Description: Handles ticket cancellations, marks them as cancelled, and confirms the next waiting ticket for the same schedule.**
* **Related file: PROCEDURE2\_Cancellation.sql**
* **Command: CALL cancel\_ticket\_confirm\_waiting(516047); -- Replace (\_\_\_) with the actual ticket\_id you want to cancel; SELECT \* FROM cancel\_ticket\_details();**

**Find trainspecs and route details for calculations:**

* **Description: Retrieves train specifications and route details for specified train\_ID and route\_ID, useful for calculation purposes.**
* **Related file: SELECT4\_TrainSpecsRoute\_Details.sql**
* **Command: SELECT \* FROM get\_train\_and\_route\_details('TR1', 101);**

**Employee lookups:**

* **Description: To see all employees - Displays details of all employees in the database. To see a specific employee at a known station - Retrieves details for an employee located at a specific station. To see a specific employee with just employee number - Fetches details of an employee using only their employee number. To see all employees associated with a specific station - Lists all employees associated with a particular station.**
* **Related file: SELECT5\_Employee\_Details.sql**
* **Commands:**
  + **To see all employees:**

**SELECT \* FROM get\_employee\_details();**

* + **To see a specific employee at known station:**

**SELECT \* FROM get\_employee\_details('STA012', 1150);**

* + **To see a specific employee with just employee number:**

**SELECT \* FROM get\_employee\_details(NULL, 1150);**

* + **To see all employees associated with a specific station:**

**SELECT \* FROM get\_employee\_details('STA012', NULL);**

**Maintenance records lookups:**

* **Description: To see all maintenance records for a specific train - Shows all maintenance activities recorded for train(s).**
* **Related file: SELECT6\_Maintenance\_Details.sql**
* **Commands:**
  + **To see all maintenance records for a specific train:**

**SELECT \* FROM get\_train\_maintenance\_details('TR5', NULL);**

* + **To see a specific maintenance record for a specific train:**

**SELECT \* FROM get\_train\_maintenance\_details('TR5', 10027);**

* + **To see all records for a specific maintenance ID:**

**SELECT \* FROM get\_train\_maintenance\_details(NULL, 10027);**

* + **To see all maintenance records regardless of train or maintenance ID:**

**SELECT \* FROM get\_train\_maintenance\_details();**