CS 306 Phase 3

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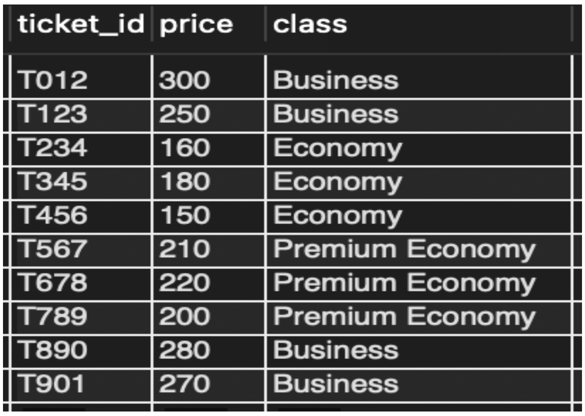
In phase 3 of this project, I have created 10 python functions to observe what are the outcomes in my local database. First function is used for ensuring connection to the database. Then, the second function is used to implement existing queries coming to the database from other functions. The rest of the functions are used for generating the required queries for updating, deleting, and inserting to the local database.

Tables and their states:

In this step I selected the tables, ticket and Entitled_baggage.

```
SELECT *
FROM ticket
```

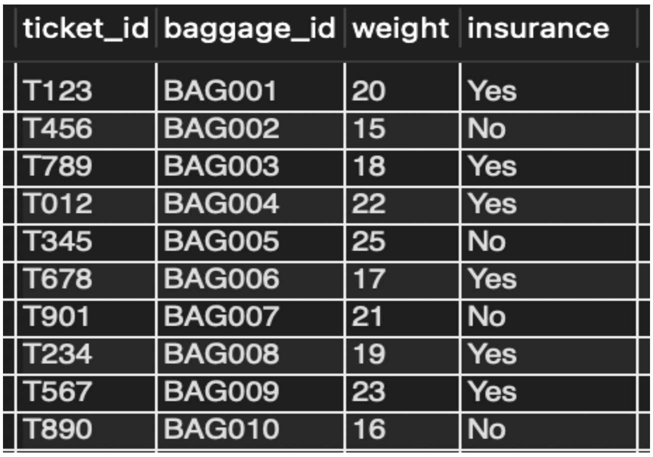
Given query above gives us the following result:



ticket_id	price	class
T012	300	Business
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T890	280	Business
T901	270	Business

```
SELECT *
FROM Entitled_baggage
```

Given query above gives us the following result:



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	23	Yes
T890	BAG010	16	No

Functions in the Python code:

1) **Reading from the ticket table:** The read_ticket function takes an input named 'connection' which is the database connection and prints out the entire ticket table.

2) **Inserting to the ticket table:** The insert_ticket function inserts a new passenger ticket info into the ticket table. The function takes the inputs of the connection to the database as 'connection' and a list of elements '(ticket_id, price, class)' as a 'data' tuple.

3) **Deleting From the ticket table:** The delete_ticket function is used for deleting a ticket info of a passenger based on the ticket_id whenever the passenger cancels the ticket, or the flight ends. The function takes two inputs first one is the database connection and the second one is the ticket_id.

4) **Updating an element in ticket table:** The update_ticket function takes three inputs ticket_id, class, and database connection. The only updateable element in the ticket table is the class information, so if a passenger wants to upgrade or downgrade their flight class, the ticket table is updated based on the given passenger ticket_id.
5) **Reading from the Entitled_baggage table:** The read_Entitled_baggage function takes an input named 'connection' which is the database connection and prints out the entire Entitled_baggage table.

6) **Inserting to the Entitled_baggage table:** The insert_Entitled_baggage function inserts a new passenger baggage info into the Entitled_baggage table. The function takes the inputs of the connection to the database as ‘connection’ and a list of elements ‘(ticket_id, baggage_id, weight, insurance)’ as a ‘data’ tuple.

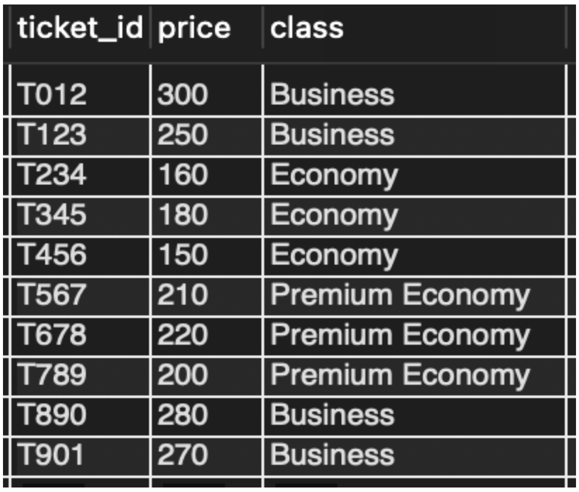
7) **Deleting From the Entitled_baggage table:** The delete_ Entitled_baggage function is used for deleting a baggage info of a passenger based on the baggage_id whenever the passenger cancels their baggage right. The function takes two inputs first one is the database connection and the second one is the baggage_id.

8) **Updating an element in Entitled_baggage table:** The update_Entitled_baggage function takes four inputs baggage_id, database connection, insurance, and weight. The function checks whether the insurance or weight info is ‘None’, if not updates the passenger baggage info based on the baggage_id.

The States of the Tables Before and After the Operations:

1) Inserting to the ticket table:

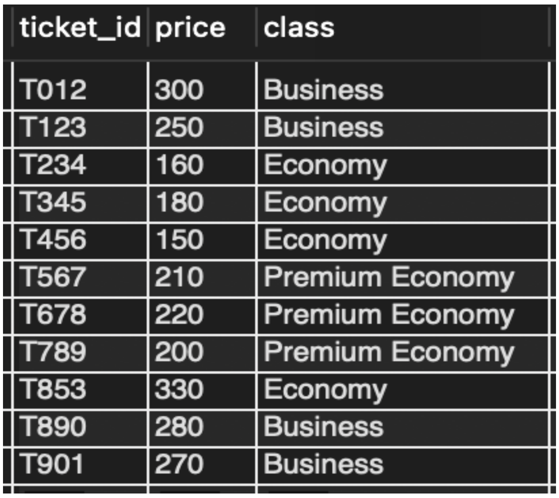
- Before:



ticket_id	price	class
T012	300	Business
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T890	280	Business
T901	270	Business

- After:

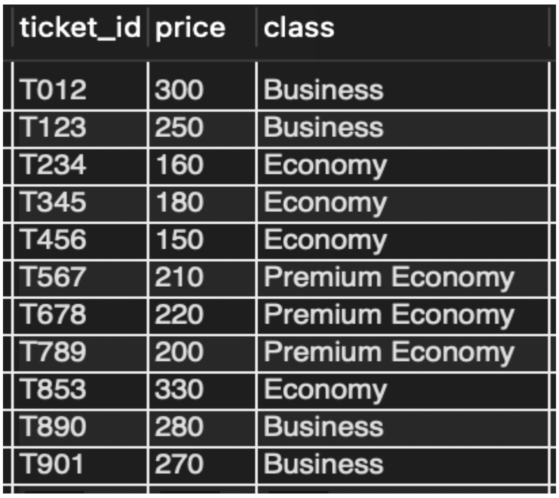
```
insert_ticket(connection, (“T853”,  330,  “Economy”))
```



ticket_id	price	class
T012	300	Business
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T853	330	Economy
T890	280	Business
T901	270	Business

2) **Deleting From the ticket table:**

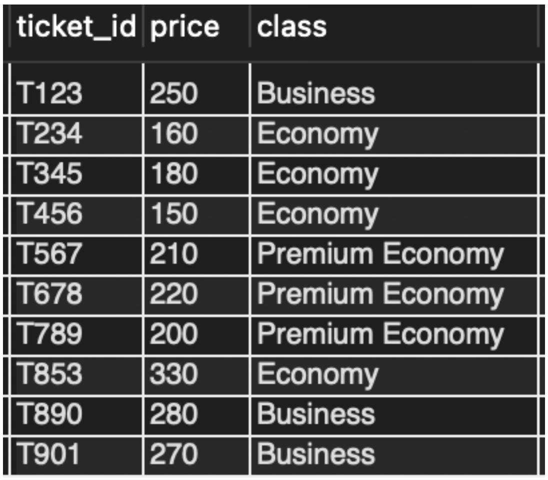
- Before:



ticket_id	price	class
T012	300	Business
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T853	330	Economy
T890	280	Business
T901	270	Business

- After:

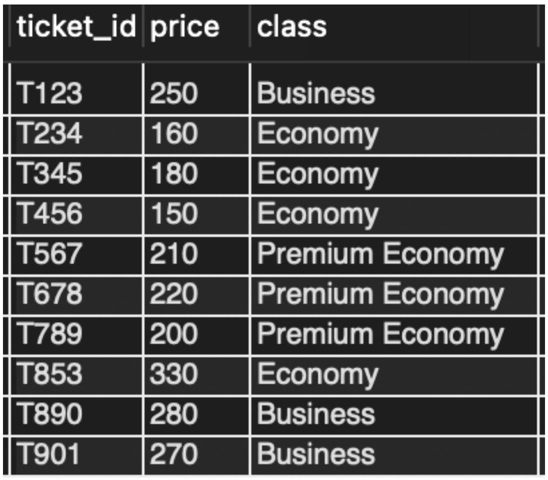
delete_ticket (connection, “T012”)



ticket_id	price	class
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T853	330	Economy
T890	280	Business
T901	270	Business

3) **Updating an element in ticket table:**

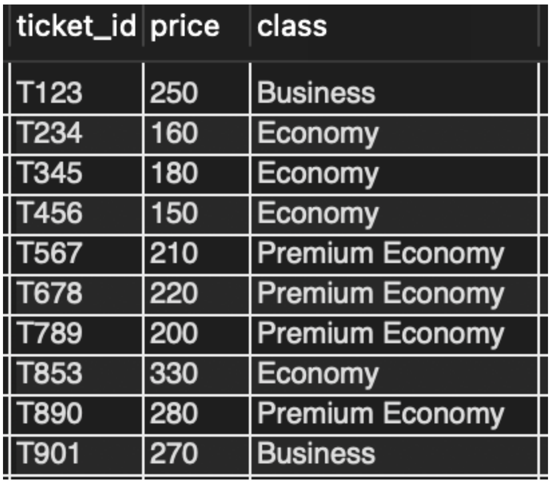
- Before:



ticket_id	price	class
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T853	330	Economy
T890	280	Business
T901	270	Business

- After:

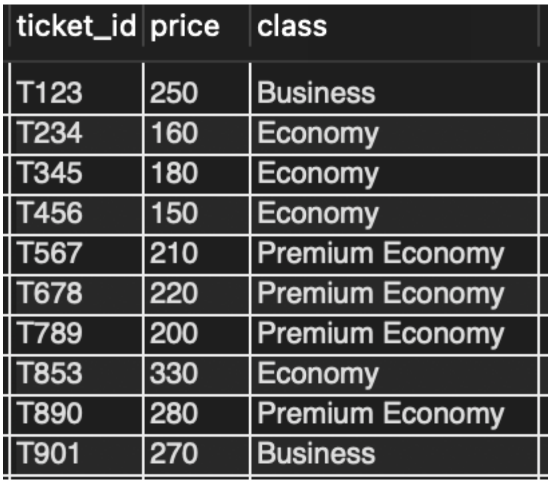
```
update_ticket (connection, (“T890”, “Premium Economy”))
```



ticket_id	price	class
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T853	330	Economy
T890	280	Premium Economy
T901	270	Business

4) **Reading from the ticket table:**

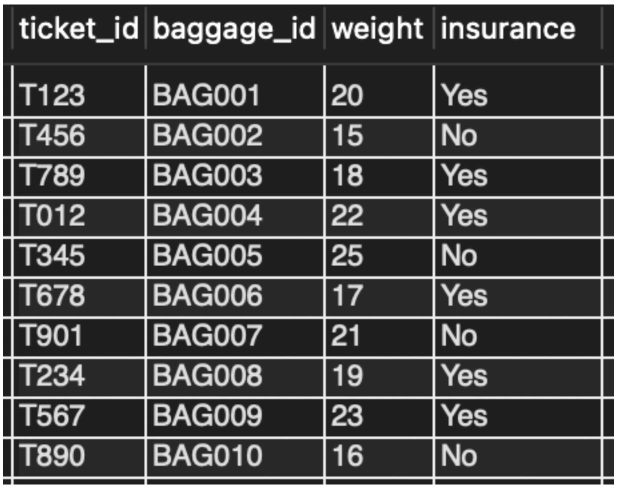
- There is not before or after in this part:



ticket_id	price	class
T123	250	Business
T234	160	Economy
T345	180	Economy
T456	150	Economy
T567	210	Premium Economy
T678	220	Premium Economy
T789	200	Premium Economy
T853	330	Economy
T890	280	Premium Economy
T901	270	Business

5) **Inserting to the Entitled_baggage table:**

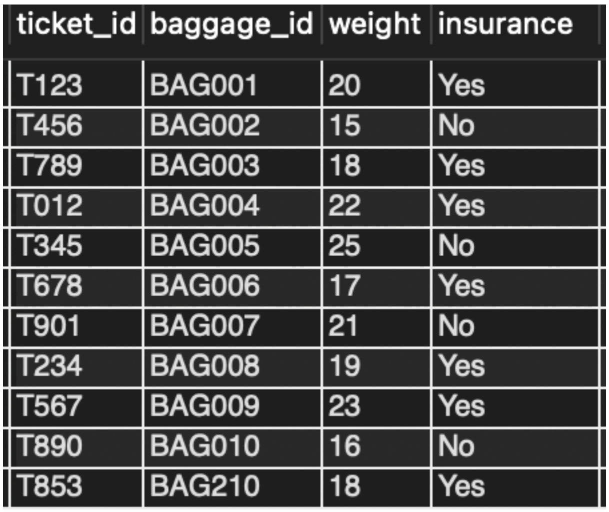
- Before:



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	23	Yes
T890	BAG010	16	No

- After:

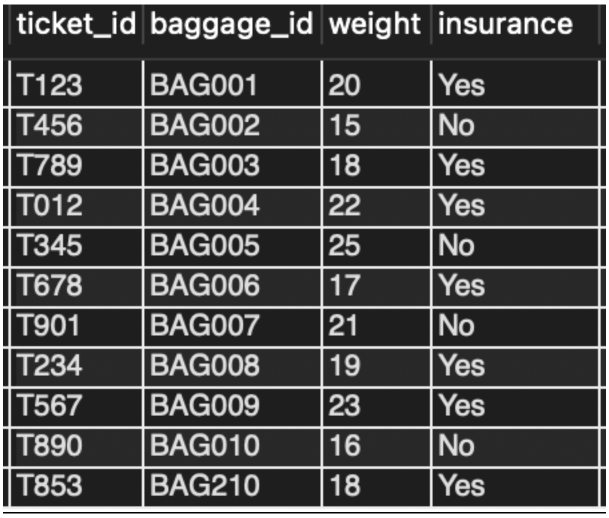
```
insert_Entitled_baggage(connection, (“T853”, “BAG210”, 18, “Yes”))
```



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	23	Yes
T890	BAG010	16	No
T853	BAG210	18	Yes

6) **Deleting From the Entitled_baggage table:**

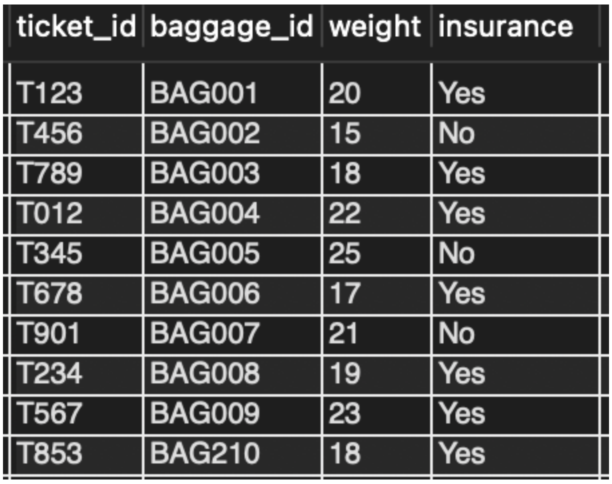
- Before:



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	23	Yes
T890	BAG010	16	No
T853	BAG210	18	Yes

- After:

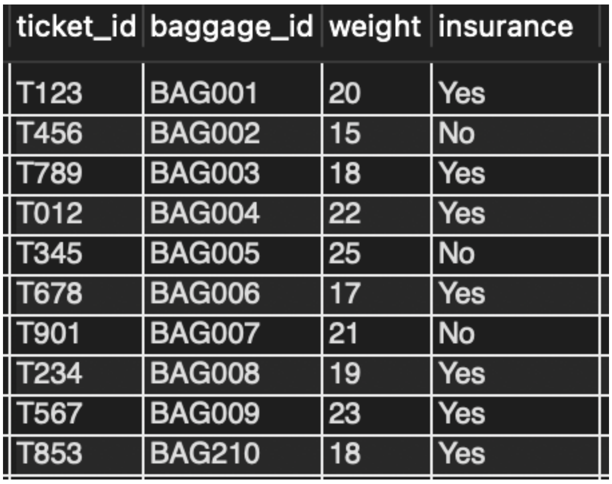
delete_Entitled_baggage(connection, “BAG010”)



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	23	Yes
T853	BAG210	18	Yes

7) **Updating an element in Entitled_baggage table:**

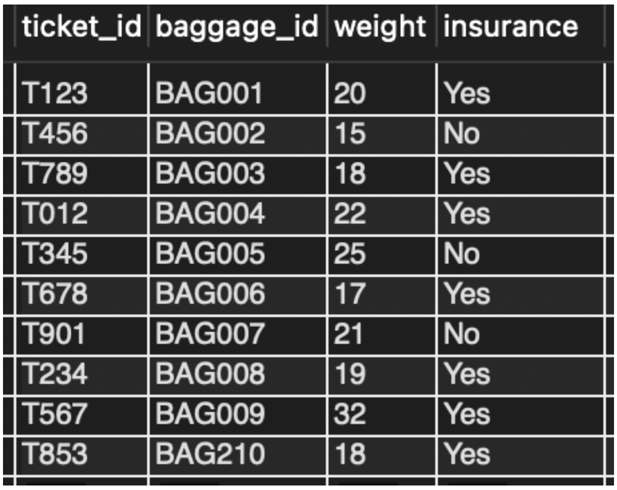
- Before:



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	23	Yes
T853	BAG210	18	Yes

- After:

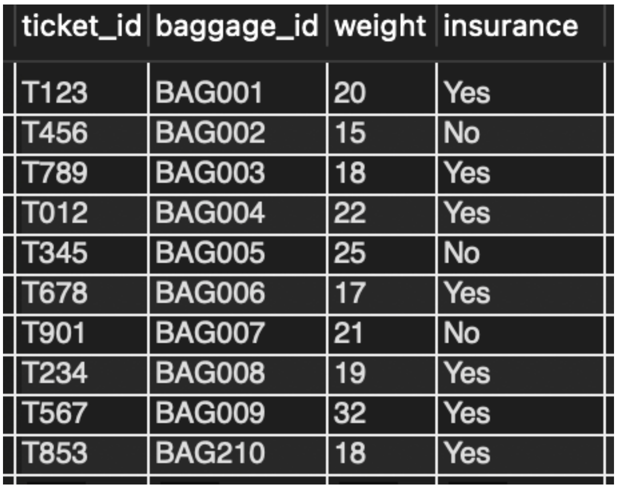
update_Entitled_baggage(connection,("BAG009", 32))



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	32	Yes
T853	BAG210	18	Yes

8) **Reading from the Entitled_baggage table:**

- There is not before or after in this part:



ticket_id	baggage_id	weight	insurance
T123	BAG001	20	Yes
T456	BAG002	15	No
T789	BAG003	18	Yes
T012	BAG004	22	Yes
T345	BAG005	25	No
T678	BAG006	17	Yes
T901	BAG007	21	No
T234	BAG008	19	Yes
T567	BAG009	32	Yes
T853	BAG210	18	Yes