

Question 1: Which fields in the Flights table can be used as the Primary Key? Why?

The ID field could be used as a Primary Key because it is a unique number.

Question 2: Display all fields of table Flights.

```
[12] for row in cursor.execute("SELECT * FROM Flights;"): print(row)

(20, 'UA', 'San Jose', 'London')
(21, 'UB', 'New York', 'London')
(22, 'UC', 'San Jose', 'London')
(23, 'UD', 'San Diego', 'Singapore')
(24, 'UE', 'Orlando', 'Miami')
(25, 'UF', 'Los Angeles', 'Miami')

[17] for row in cursor.execute("PRAGMA table_info('Flights');"): print(row)

(0, 'ID', 'INTEGER', 0, None, 1)
(1, 'Name', 'TEXT', 0, None, 0)
(2, 'Origin', 'TEXT', 0, None, 0)
(3, 'Destination', 'TEXT', 0, None, 0)
```

Question 3: Display all fields of table Specification.

```
▶ for row in cursor.execute("SELECT * FROM Specification;"): print(row)

↳ (1, 500, 'Commercial', 20)
   (2, 200, 'Commercial', 21)
   (3, 100, 'Charter', 22)
   (4, 10, 'Private', 23)

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▶ for row in cursor.execute("PRAGMA table_info('Specification');"): print(row)

(0, 'specID', 'INTEGER', 0, None, 1)
(1, 'SeatQuantity', 'INTEGER', 0, None, 0)
(2, 'Type', 'TEXT', 0, None, 0)
(3, 'ID', 'INTEGER', 0, None, 0)
```

Question 4: Write an inner join on the Flights and Specification table.

Write a left join for the same. Is there a difference?

The first one is inner join and second is left. The difference is that left join contains the last two rows while inner join doesn't.

```
[14] q = '''SELECT Flights.Name, Flights.Origin, Flights.Destination, Specification.specID, Specification.SeatQuantity, Speci
FROM Flights INNER JOIN Specification ON Flights.ID=Specification.ID'''

[15] for row in cursor.execute(q):print(row)

('UA', 'San Jose', 'London', 1, 500, 'Commercial')
('UB', 'New York', 'London', 2, 200, 'Commercial')
('UC', 'San Jose', 'London', 3, 100, 'Charter')
('UD', 'San Diego', 'Singapore', 4, 10, 'Private')

▶ q = '''SELECT Flights.Name, Flights.Origin, Flights.Destination, Specification.specID, Specification.SeatQuantity, Speci
FROM Flights LEFT JOIN Specification ON Flights.ID=Specification.ID'''

▶ for row in cursor.execute(q):print(row)

('UA', 'San Jose', 'London', 1, 500, 'Commercial')
('UB', 'New York', 'London', 2, 200, 'Commercial')
('UC', 'San Jose', 'London', 3, 100, 'Charter')
('UD', 'San Diego', 'Singapore', 4, 10, 'Private')
('UE', 'Orlando', 'Miami', None, None, None)
('UF', 'Los Angeles', 'Miami', None, None, None)
```

Question 5: Write a Query to find all the flights with seats greater than 100.

```
[18] q = '''SELECT Flights.Name, Flights.Origin, Flights.Destination, Specification.specID, Specification.SeatQuantity, Speci
FROM Flights LEFT JOIN Specification ON Flights.ID=Specification.ID
WHERE Specification.SeatQuantity>100;'''

▶ for row in cursor.execute(q): print(row)

('UA', 'San Jose', 'London', 1, 500, 'Commercial')
('UB', 'New York', 'London', 2, 200, 'Commercial')
```

Only the first two flights have greater than 100 seats.