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CECS 323

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<div align="center">Queries and Output</div>

1.) The list of all airlines for a given airport.

SELECT AirlineName, AFAAABBREV, DFAAABBREV FROM Airport

INNER JOIN Flight ON FAAABBRV = AFAAABBREV OR FAAABBRV = DFAAABBREV

WHERE FAAABBRV = 'ORD';

AIRLINENAME	AFAAABBREV	DFAAABBREV
Delta Airlines	ORD	SFO
Delta Connection	MCO	ORD
Southwest Airlines	IAH	ORD
Southwest Airlines	ORD	SFO
JetBlue	DFW	ORD
Allegiant	ORD	SFO

2.) The list of all flights for a given airline.

A.) ORDER BY Departure Aiport

SELECT FlightNumber, DFAAABBREV AS DepartureAirport, AFAAabbrev AS ArrivalAirport, AirlineName,

DepartureTime, ArrivalTime, TailName AS Plane

FROM Flight

WHERE AirlineName = 'JetBlue'

ORDER BY DepartureAirport;

#	FLIGHTNUMBER	DEPARTUREAIRPORT	ARRIVALAIRPORT	AIRLINENAME	DEPARTURETIME	ARRIVALTIME	PLANE
1	2876	ATL	MCO	JetBlue	05:46:00	08:02:00	YA-FAR
2	6661	DFW	ORD	JetBlue	10:16:00	13:45:00	YA-FAR
3	6713	IAH	PHX	JetBlue	14:31:00	17:55:00	YA-FAR
4	1167	PHX	JFK	JetBlue	02:31:00	09:11:00	YA-FAR

B.) ORDER BY Arrival Aiport

SELECT FlightNumber, DFAAABBREV AS DepartureAirport, AFAAabbrev AS ArrivalAirport, AirlineName,

DepartureTime, ArrivalTime, TailName AS Plane

FROM Flight

WHERE AirlineName = 'JetBlue'

ORDER BY ArrivalAirport;

#	FLIGHTNUMBER	DEPARTUREAIRPORT	ARRIVALAIRPORT	AIRLINENAME	DEPARTURETIME	ARRIVALTIME	PLANE
1	1167 PHX	JFK	JetBlue	02:31:00	09:11:00	YA-FAR
2	2876 ATL	MCO	JetBlue	05:46:00	08:02:00	YA-FAR
3	6661 DFW	ORD	JetBlue	10:16:00	13:45:00	YA-FAR
4	6713 IAH	PHX	JetBlue	14:31:00	17:55:00	YA-FAR

C.) ORDER BY Shortest Flight

SELECT FlightNumber, DFAAABBREV AS DepartureAirport, AFAAabbrev AS ArrivalAirport, AirlineName,

DepartureTime, ArrivalTime, {fn TIMESTAMPDIFF(SQL_TSI_HOUR, DepartureTime, ArrivalTime) } AS
"Flight Length in Hours"

FROM Flight

WHERE AirlineName = 'JetBlue'

ORDER BY "Flight Length in Hours";

#	FLIGHTNUMBER	DEPARTUREAIRPORT	ARRIVALAIRPORT	AIRLINENAME	DEPARTURETIME	ARRIVALTIME	FlightLength Hours
1	2876 ATL	MCO	JetBlue	05:46:00	08:02:00	2
2	6661 DFW	ORD	JetBlue	10:16:00	13:45:00	3
3	6713 IAH	PHX	JetBlue	14:31:00	17:55:00	3
4	1167 PHX	JFK	JetBlue	02:31:00	09:11:00	6

D.) ORDER BY Longest Flight

SELECT FlightNumber, DFAAABBREV AS DepartureAirport, AFAAabbrev AS ArrivalAirport, AirlineName,

DepartureTime, ArrivalTime, {fn TIMESTAMPDIFF(SQL_TSI_HOUR, DepartureTime, ArrivalTime) } AS
"FlightLength Hours"

FROM Flight

WHERE AirlineName = 'JetBlue'

ORDER BY "FlightLength Hours" DESC;

#	FLIGHTNUMBER	DEPARTUREAIRPORT	ARRIVALAIRPORT	AIRLINENAME	DEPARTURETIME	ARRIVALTIME	FlightLength Hours
1	1167 PHX	JFK	JetBlue	02:31:00	09:11:00	6
2	6661 DFW	ORD	JetBlue	10:16:00	13:45:00	3
3	6713 IAH	PHX	JetBlue	14:31:00	17:55:00	3
4	2876 ATL	MCO	JetBlue	05:46:00	08:02:00	2

3.) Flights that charge for extras (water, etc.)

SELECT FlightNumber, DFAAABBREV AS DepartureAirport, AFAAabbrev AS ArrivalAirport, AirlineName,

ServiceType, Cost

FROM FLIGHT

NATURAL JOIN Service

WHERE Cost != 0

ORDER BY Cost;

#	FLIGHTNUMBER	DEPARTUREAIRPORT	ARRIVALAIRPORT	AIRLINENAME	SERVICETYPE	COST
1	3695 IAH	PHX	Allegiant	Water	1.15
2	2876 MCO	ATL	JetBlue	Water	1.15
3	1240 JFK	LAS	American Airlines	Water	1.15
4	3336 IAH	LAX	Southwest Airlines	Water	1.15
5	2290 SFO	ORD	Delta Airlines	Water	1.15
6	2200 DEN	PHX	United Express	Water	1.15
7	3006 JFK	EWR	Delta Connection	Water	1.15
8	2906 LAX	DEN	American Eagle	Water	1.15
9	3695 IAH	PHX	Allegiant	Pillow	1.5
10	2876 MCO	ATL	JetBlue	Pillow	1.5
11	1240 JFK	LAS	American Airlines	Pillow	1.5
12	3336 IAH	LAX	Southwest Airlines	Pillow	1.5
13	2290 SFO	ORD	Delta Airlines	Pillow	1.5
14	2200 DEN	PHX	United Express	Pillow	1.5
15	3006 JFK	EWR	Delta Connection	Pillow	1.5
16	8923 ORD	MCO	Delta Connection	Pillow	1.5
17	2906 LAX	DEN	American Eagle	Pillow	1.5
18	3695 IAH	PHX	Allegiant	Peanuts	1.75
19	2876 MCO	ATL	JetBlue	Peanuts	1.75
20	1240 JFK	LAS	American Airlines	Peanuts	1.75
21	3336 IAH	LAX	Southwest Airlines	Peanuts	1.75
22	2290 SFO	ORD	Delta Airlines	Peanuts	1.75
23	2200 DEN	PHX	United Express	Peanuts	1.75
24	3006 JFK	EWR	Delta Connection	Peanuts	1.75
25	8923 ORD	MCO	Delta Connection	Peanuts	1.75
26	2906 LAX	DEN	American Eagle	Peanuts	1.75
27	3695 IAH	PHX	Allegiant	Blanket	2
28	2876 MCO	ATL	JetBlue	Blanket	2
29	1240 JFK	LAS	American Airlines	Blanket	2
30	3336 IAH	LAX	Southwest Airlines	Blanket	2
31	2290 SFO	ORD	Delta Airlines	Blanket	2
32	2200 DEN	PHX	United Express	Blanket	2
33	3006 JFK	EWR	Delta Connection	Blanket	2
34	8923 ORD	MCO	Delta Connection	Blanket	2
35	2906 LAX	DEN	American Eagle	Blanket	2
36	3695 IAH	PHX	Allegiant	Meal	4
37	2876 MCO	ATL	JetBlue	Meal	4
38	2200 DEN	PHX	United Express	Meal	4
39	3006 JFK	EWR	Delta Connection	Meal	4
40	8923 ORD	MCO	Delta Connection	Meal	4
41	2906 LAX	DEN	American Eagle	Meal	4
42	1240 JFK	LAS	American Airlines	WIFI	10
43	3336 IAH	LAX	Southwest Airlines	WIFI	10
44	2290 SFO	ORD	Delta Airlines	WIFI	10
45	2200 DEN	PHX	United Express	WIFI	10
46	3006 JFK	EWR	Delta Connection	WIFI	10
47	8923 ORD	MCO	Delta Connection	WIFI	10
48	2906 LAX	DEN	American Eagle	WIFI	10
49	3695 IAH	PHX	Allegiant	Checking Ba...	12.15
50	2876 MCO	ATL	JetBlue	Checking Ba...	12.15
51	1240 JFK	LAS	American Airlines	Checking Ba...	12.15
52	3336 IAH	LAX	Southwest Airlines	Checking Ba...	12.15
53	2290 SFO	ORD	Delta Airlines	Checking Ba...	12.15
54	2200 DEN	PHX	United Express	Checking Ba...	12.15
55	8923 ORD	MCO	Delta Connection	Checking Ba...	12.15
56	2906 LAX	DEN	American Eagle	Checking Ba...	12.15

4.) The crew roster for each flight for each airline

SELECT DISTINCT FlightCrewName, FlightNumber, AirlineName, Crewmember.*

FROM FlightInstance

NATURAL JOIN Flight

NATURAL JOIN CrewMember;

#	FLIGHTCREWNAME	FLIGHTNUMBER	AIRLINENAME	FAAID	LASTNAME	FIRSTNAME	DOB
1	Alpha	174	Delta Airlines	1645	Fox	Rick	1991-07-24
2	Alpha	174	Delta Airlines	3478	Iverson	Allen	1995-01-06
3	Alpha	174	Delta Airlines	4396	Bond	James	1993-08-12
4	Alpha	174	Delta Airlines	7858	Doe	Jane	1993-10-02
5	Alpha	174	Delta Airlines	8573	Fisher	Derek	1991-08-09
6	Alpha	1111	Delta Connection	1645	Fox	Rick	1991-07-24
7	Alpha	1111	Delta Connection	3478	Iverson	Allen	1995-01-06
8	Alpha	1111	Delta Connection	4396	Bond	James	1993-08-12
9	Alpha	1111	Delta Connection	7858	Doe	Jane	1993-10-02
10	Alpha	1111	Delta Connection	8573	Fisher	Derek	1991-08-09
11	Alpha	5565	Air Canada	1645	Fox	Rick	1991-07-24
12	Alpha	5565	Air Canada	3478	Iverson	Allen	1995-01-06
13	Alpha	5565	Air Canada	4396	Bond	James	1993-08-12
14	Alpha	5565	Air Canada	7858	Doe	Jane	1993-10-02
15	Alpha	5565	Air Canada	8573	Fisher	Derek	1991-08-09
16	Alpha	7117	American Eagle	1645	Fox	Rick	1991-07-24
17	Alpha	7117	American Eagle	3478	Iverson	Allen	1995-01-06
18	Alpha	7117	American Eagle	4396	Bond	James	1993-08-12
19	Alpha	7117	American Eagle	7858	Doe	Jane	1993-10-02
20	Alpha	7117	American Eagle	8573	Fisher	Derek	1991-08-09
21	Alpha	7710	Japan Airlines	1645	Fox	Rick	1991-07-24
22	Alpha	7710	Japan Airlines	3478	Iverson	Allen	1995-01-06
23	Alpha	7710	Japan Airlines	4396	Bond	James	1993-08-12
24	Alpha	7710	Japan Airlines	7858	Doe	Jane	1993-10-02
25	Alpha	7710	Japan Airlines	8573	Fisher	Derek	1991-08-09
26	Alpha	8561	Delta Airlines	1645	Fox	Rick	1991-07-24
27	Alpha	8561	Delta Airlines	3478	Iverson	Allen	1995-01-06
28	Alpha	8561	Delta Airlines	4396	Bond	James	1993-08-12
29	Alpha	8561	Delta Airlines	7858	Doe	Jane	1993-10-02
30	Alpha	8561	Delta Airlines	8573	Fisher	Derek	1991-08-09
31	Alpha	9999	Japan Airlines	1645	Fox	Rick	1991-07-24
32	Alpha	9999	Japan Airlines	3478	Iverson	Allen	1995-01-06
33	Alpha	9999	Japan Airlines	4396	Bond	James	1993-08-12
34	Alpha	9999	Japan Airlines	7858	Doe	Jane	1993-10-02
35	Alpha	9999	Japan Airlines	8573	Fisher	Derek	1991-08-09
36	Bravo	15	Ryanair	1036	Kidd	Jason	1996-01-22
37	Bravo	15	Ryanair	2632	Stoudemire	Amare	1992-11-16

#	Team	Flight		Player #	Last Name	First Name	Date
38	Bravo	15	Ryanair	5324	Parker	Tony	1992-09-23
39	Bravo	15	Ryanair	5726	Chandler	Tyson	1992-10-02
40	Bravo	15	Ryanair	7345	Nash	Steve	1993-03-02
41	Bravo	15	Ryanair	8923	Odom	Lamar	1992-05-09
42	Bravo	15	Ryanair	9434	Boozer	Carlos	1992-12-21
43	Bravo	2876	JetBlue	1036	Kidd	Jason	1996-01-22
44	Bravo	2876	JetBlue	2632	Stoudemire	Amare	1992-11-16
45	Bravo	2876	JetBlue	5324	Parker	Tony	1992-09-23
46	Bravo	2876	JetBlue	5726	Chandler	Tyson	1992-10-02
47	Bravo	2876	JetBlue	7345	Nash	Steve	1993-03-02
48	Bravo	2876	JetBlue	8923	Odom	Lamar	1992-05-09
49	Bravo	2876	JetBlue	9434	Boozer	Carlos	1992-12-21
50	Bravo	4238	Alaska Airlines	1036	Kidd	Jason	1996-01-22
51	Bravo	4238	Alaska Airlines	2632	Stoudemire	Amare	1992-11-16
52	Bravo	4238	Alaska Airlines	5324	Parker	Tony	1992-09-23
53	Bravo	4238	Alaska Airlines	5726	Chandler	Tyson	1992-10-02
54	Bravo	4238	Alaska Airlines	7345	Nash	Steve	1993-03-02
55	Bravo	4238	Alaska Airlines	8923	Odom	Lamar	1992-05-09
56	Bravo	4238	Alaska Airlines	9434	Boozer	Carlos	1992-12-21
57	Bravo	5235	Alaska Airlines	1036	Kidd	Jason	1996-01-22
58	Bravo	5235	Alaska Airlines	2632	Stoudemire	Amare	1992-11-16
59	Bravo	5235	Alaska Airlines	5324	Parker	Tony	1992-09-23
60	Bravo	5235	Alaska Airlines	5726	Chandler	Tyson	1992-10-02
61	Bravo	5235	Alaska Airlines	7345	Nash	Steve	1993-03-02
62	Bravo	5235	Alaska Airlines	8923	Odom	Lamar	1992-05-09
63	Bravo	5235	Alaska Airlines	9434	Boozer	Carlos	1992-12-21
64	Bravo	6661	JetBlue	1036	Kidd	Jason	1996-01-22
65	Bravo	6661	JetBlue	2632	Stoudemire	Amare	1992-11-16
66	Bravo	6661	JetBlue	5324	Parker	Tony	1992-09-23
67	Bravo	6661	JetBlue	5726	Chandler	Tyson	1992-10-02
68	Bravo	6661	JetBlue	7345	Nash	Steve	1993-03-02
69	Bravo	6661	JetBlue	8923	Odom	Lamar	1992-05-09
70	Bravo	6661	JetBlue	9434	Boozer	Carlos	1992-12-21
71	Bravo	8923	Delta Connection	1036	Kidd	Jason	1996-01-22
72	Bravo	8923	Delta Connection	2632	Stoudemire	Amare	1992-11-16
73	Bravo	8923	Delta Connection	5324	Parker	Tony	1992-09-23
74	Bravo	8923	Delta Connection	5726	Chandler	Tyson	1992-10-02
75	Bravo	8923	Delta Connection	7345	Nash	Steve	1993-03-02
76	Bravo	8923	Delta Connection	8923	Odom	Lamar	1992-05-09
77	Bravo	8923	Delta Connection	9434	Boozer	Carlos	1992-12-21
78	Bravo	9012	Alaska Airlines	1036	Kidd	Jason	1996-01-22
79	Bravo	9012	Alaska Airlines	2632	Stoudemire	Amare	1992-11-16
80	Bravo	9012	Alaska Airlines	5324	Parker	Tony	1992-09-23
81	Bravo	9012	Alaska Airlines	5726	Chandler	Tyson	1992-10-02
82	Bravo	9012	Alaska Airlines	7345	Nash	Steve	1993-03-02
83	Bravo	9012	Alaska Airlines	8923	Odom	Lamar	1992-05-09
84	Bravo	9012	Alaska Airlines	9434	Boozer	Carlos	1992-12-21
85	Charlie	2906	American Eagle	1111	Jordan	Deandre	1992-08-16
86	Charlie	2906	American Eagle	1938	Anthony	Carmello	1995-05-22
87	Charlie	2906	American Eagle	5027	Wade	Dwyane	1992-04-21
88	Charlie	2906	American Eagle	7047	Johsnon	Joe	1991-06-29
89	Charlie	2906	American Eagle	7756	Irving	Kyrie	1990-02-12
90	Charlie	2906	American Eagle	7964	Smith	Jonathan	1993-11-04
91	Charlie	2906	American Eagle	8262	Harris	Joe	1991-09-06
92	Charlie	2906	American Eagle	8888	Dinwiddie	Spencer	1993-04-06
93	Charlie	4231	Air China	1111	Jordan	Deandre	1992-08-16
94	Charlie	4231	Air China	1938	Anthony	Carmello	1995-05-22
95	Charlie	4231	Air China	5027	Wade	Dwyane	1992-04-21
96	Charlie	4231	Air China	7047	Johsnon	Joe	1991-06-29
97	Charlie	4231	Air China	7756	Irving	Kyrie	1990-02-12
98	Charlie	4231	Air China	7964	Smith	Jonathan	1993-11-04
99	Charlie	4231	Air China	8262	Harris	Joe	1991-09-06
100	Charlie	4231	Air China	8888	Dinwiddie	Spencer	1993-04-06
101	Charlie	5674	Emirates	1111	Jordan	Deandre	1992-08-16
102	Charlie	5674	Emirates	1938	Anthony	Carmello	1995-05-22
103	Charlie	5674	Emirates	5027	Wade	Dwyane	1992-04-21
104	Charlie	5674	Emirates	7047	Johsnon	Joe	1991-06-29
105	Charlie	5674	Emirates	7756	Irving	Kyrie	1990-02-12
106	Charlie	5674	Emirates	7964	Smith	Jonathan	1993-11-04
107	Charlie	5674	Emirates	8262	Harris	Joe	1991-09-06
108	Charlie	5674	Emirates	8888	Dinwiddie	Spencer	1993-04-06
109	Charlie	8267	Air China	1111	Jordan	Deandre	1992-08-16
110	Charlie	8267	Air China	1938	Anthony	Carmello	1995-05-22

#	FLIGHTCREWNAME	FLIGHTNUMBER	AIRLINENAME	FAAID	LASTNAME	FIRSTNAME	DOB
110	Charlie	8267	Air China	1938	Anthony	Carmello	1995-05-22
111	Charlie	8267	Air China	5027	Wade	Dwyane	1992-04-21
112	Charlie	8267	Air China	7047	Johsnon	Joe	1991-06-29
113	Charlie	8267	Air China	7756	Irving	Kyrie	1990-02-12
114	Charlie	8267	Air China	7964	Smith	Jonathan	1993-11-04
115	Charlie	8267	Air China	8262	Harris	Joe	1991-09-06
116	Charlie	8267	Air China	8888	Dinwiddie	Spencer	1993-04-06
117	Charlie	9148	Ryanair	1111	Jordan	Deandre	1992-08-16
118	Charlie	9148	Ryanair	1938	Anthony	Carmello	1995-05-22
119	Charlie	9148	Ryanair	5027	Wade	Dwyane	1992-04-21
120	Charlie	9148	Ryanair	7047	Johsnon	Joe	1991-06-29
121	Charlie	9148	Ryanair	7756	Irving	Kyrie	1990-02-12
122	Charlie	9148	Ryanair	7964	Smith	Jonathan	1993-11-04
123	Charlie	9148	Ryanair	8262	Harris	Joe	1991-09-06
124	Charlie	9148	Ryanair	8888	Dinwiddie	Spencer	1993-04-06
125	Delta	1018	LATAM Airlines	1515	Artest	Ron	1994-11-13
126	Delta	1018	LATAM Airlines	1616	Gasol	Pau	1990-07-06
127	Delta	1018	LATAM Airlines	1717	Bynum	Andrew	1997-10-27
128	Delta	1018	LATAM Airlines	1818	Vujacic	Sasha	1990-03-08
129	Delta	1018	LATAM Airlines	2424	Bryant	Kobe	1990-08-23
130	Delta	1018	LATAM Airlines	4000	Walton	Luke	1990-03-22
131	Delta	1323	Southwest Airlines	1515	Artest	Ron	1994-11-13
132	Delta	1323	Southwest Airlines	1616	Gasol	Pau	1990-07-06
133	Delta	1323	Southwest Airlines	1717	Bynum	Andrew	1997-10-27
134	Delta	1323	Southwest Airlines	1818	Vujacic	Sasha	1990-03-08
135	Delta	1323	Southwest Airlines	2424	Bryant	Kobe	1990-08-23
136	Delta	1323	Southwest Airlines	4000	Walton	Luke	1990-03-22
137	Delta	2290	Delta Airlines	1515	Artest	Ron	1994-11-13
138	Delta	2290	Delta Airlines	1616	Gasol	Pau	1990-07-06
139	Delta	2290	Delta Airlines	1717	Bynum	Andrew	1997-10-27
140	Delta	2290	Delta Airlines	1818	Vujacic	Sasha	1990-03-08
141	Delta	2290	Delta Airlines	2424	Bryant	Kobe	1990-08-23
142	Delta	2290	Delta Airlines	4000	Walton	Luke	1990-03-22
143	Delta	2483	LATAM Airlines	1515	Artest	Ron	1994-11-13
144	Delta	2483	LATAM Airlines	1616	Gasol	Pau	1990-07-06
145	Delta	2483	LATAM Airlines	1717	Bynum	Andrew	1997-10-27
146	Delta	2483	LATAM Airlines	1818	Vujacic	Sasha	1990-03-08
147	Delta	2483	LATAM Airlines	2424	Bryant	Kobe	1990-08-23
148	Delta	2483	LATAM Airlines	4000	Walton	Luke	1990-03-22
149	Delta	3336	Southwest Airlines	1515	Artest	Ron	1994-11-13
150	Delta	3336	Southwest Airlines	1616	Gasol	Pau	1990-07-06
151	Delta	3336	Southwest Airlines	1717	Bynum	Andrew	1997-10-27
152	Delta	3336	Southwest Airlines	1818	Vujacic	Sasha	1990-03-08
153	Delta	3336	Southwest Airlines	2424	Bryant	Kobe	1990-08-23
154	Delta	3336	Southwest Airlines	4000	Walton	Luke	1990-03-22
155	Delta	3416	Air China	1515	Artest	Ron	1994-11-13
156	Delta	3416	Air China	1616	Gasol	Pau	1990-07-06
157	Delta	3416	Air China	1717	Bynum	Andrew	1997-10-27
158	Delta	3416	Air China	1818	Vujacic	Sasha	1990-03-08
159	Delta	3416	Air China	2424	Bryant	Kobe	1990-08-23
160	Delta	3416	Air China	4000	Walton	Luke	1990-03-22
161	Delta	3673	Allegiant	1515	Artest	Ron	1994-11-13
162	Delta	3673	Allegiant	1616	Gasol	Pau	1990-07-06
163	Delta	3673	Allegiant	1717	Bynum	Andrew	1997-10-27
164	Delta	3673	Allegiant	1818	Vujacic	Sasha	1990-03-08
165	Delta	3673	Allegiant	2424	Bryant	Kobe	1990-08-23
166	Delta	3673	Allegiant	4000	Walton	Luke	1990-03-22
167	Delta	3695	Allegiant	1515	Artest	Ron	1994-11-13
168	Delta	3695	Allegiant	1616	Gasol	Pau	1990-07-06
169	Delta	3695	Allegiant	1717	Bynum	Andrew	1997-10-27
170	Delta	3695	Allegiant	1818	Vujacic	Sasha	1990-03-08
171	Delta	3695	Allegiant	2424	Bryant	Kobe	1990-08-23
172	Delta	3695	Allegiant	4000	Walton	Luke	1990-03-22
173	Delta	3723	American Eagle	1515	Artest	Ron	1994-11-13
174	Delta	3723	American Eagle	1616	Gasol	Pau	1990-07-06
175	Delta	3723	American Eagle	1717	Bynum	Andrew	1997-10-27
176	Delta	3723	American Eagle	1818	Vujacic	Sasha	1990-03-08
177	Delta	3723	American Eagle	2424	Bryant	Kobe	1990-08-23
178	Delta	3723	American Eagle	4000	Walton	Luke	1990-03-22
179	Delta	4689	Air Canada	1515	Artest	Ron	1994-11-13
180	Delta	4689	Air Canada	1616	Gasol	Pau	1990-07-06
181	Delta	4689	Air Canada	1717	Bynum	Andrew	1997-10-27
182	Delta	4689	Air Canada	1818	Vujacic	Sasha	1990-03-08
183	Delta	4689	Air Canada	2424	Bryant	Kobe	1990-08-23

184	Delta	4689	Air Canada	4000	Walton	Luke	1990-03-22
185	Delta	5012	Emirates	1515	Artest	Ron	1994-11-13
186	Delta	5012	Emirates	1616	Gasol	Pau	1990-07-06
187	Delta	5012	Emirates	1717	Bynum	Andrew	1997-10-27
188	Delta	5012	Emirates	1818	Vujacic	Sasha	1990-03-08
189	Delta	5012	Emirates	2424	Bryant	Kobe	1990-08-23
190	Delta	5012	Emirates	4000	Walton	Luke	1990-03-22
191	Delta	5555	Southwest Airlines	1515	Artest	Ron	1994-11-13
192	Delta	5555	Southwest Airlines	1616	Gasol	Pau	1990-07-06
193	Delta	5555	Southwest Airlines	1717	Bynum	Andrew	1997-10-27
194	Delta	5555	Southwest Airlines	1818	Vujacic	Sasha	1990-03-08
195	Delta	5555	Southwest Airlines	2424	Bryant	Kobe	1990-08-23
196	Delta	5555	Southwest Airlines	4000	Walton	Luke	1990-03-22
197	Delta	7131	Air Canada	1515	Artest	Ron	1994-11-13
198	Delta	7131	Air Canada	1616	Gasol	Pau	1990-07-06
199	Delta	7131	Air Canada	1717	Bynum	Andrew	1997-10-27
200	Delta	7131	Air Canada	1818	Vujacic	Sasha	1990-03-08
201	Delta	7131	Air Canada	2424	Bryant	Kobe	1990-08-23
202	Delta	7131	Air Canada	4000	Walton	Luke	1990-03-22
203	Delta	8823	Japan Airlines	1515	Artest	Ron	1994-11-13
204	Delta	8823	Japan Airlines	1616	Gasol	Pau	1990-07-06
205	Delta	8823	Japan Airlines	1717	Bynum	Andrew	1997-10-27
206	Delta	8823	Japan Airlines	1818	Vujacic	Sasha	1990-03-08
207	Delta	8823	Japan Airlines	2424	Bryant	Kobe	1990-08-23
208	Delta	8823	Japan Airlines	4000	Walton	Luke	1990-03-22
209	Echo	2200	United Express	1425	Bowen	Bruce	1993-06-14
210	Echo	2200	United Express	2020	Ginobli	Manu	1993-07-28
211	Echo	2200	United Express	2121	Duncan	Tim	1990-04-25
212	Echo	2200	United Express	3131	Rose	Malik	1992-11-20
213	Echo	2200	United Express	5005	Horry	Robert	1993-08-25
214	Echo	2200	United Express	5065	Robinson	David	1993-12-30
215	Echo	2200	United Express	8080	Mills	Patty	1995-08-11
216	Echo	2389	United Express	1425	Bowen	Bruce	1993-06-14
217	Echo	2389	United Express	2020	Ginobli	Manu	1993-07-28
218	Echo	2389	United Express	2121	Duncan	Tim	1990-04-25
219	Echo	2389	United Express	3131	Rose	Malik	1992-11-20
220	Echo	2389	United Express	5005	Horry	Robert	1993-08-25
221	Echo	2389	United Express	5065	Robinson	David	1993-12-30
222	Echo	2389	United Express	8080	Mills	Patty	1995-08-11
223	Echo	3006	Delta Connection	1425	Bowen	Bruce	1993-06-14
224	Echo	3006	Delta Connection	2020	Ginobli	Manu	1993-07-28
225	Echo	3006	Delta Connection	2121	Duncan	Tim	1990-04-25
226	Echo	3006	Delta Connection	3131	Rose	Malik	1992-11-20
227	Echo	3006	Delta Connection	5005	Horry	Robert	1993-08-25
228	Echo	3006	Delta Connection	5065	Robinson	David	1993-12-30
229	Echo	3006	Delta Connection	8080	Mills	Patty	1995-08-11
230	Echo	3741	Delta Connection	1425	Bowen	Bruce	1993-06-14
231	Echo	3741	Delta Connection	2020	Ginobli	Manu	1993-07-28
232	Echo	3741	Delta Connection	2121	Duncan	Tim	1990-04-25
233	Echo	3741	Delta Connection	3131	Rose	Malik	1992-11-20
234	Echo	3741	Delta Connection	5005	Horry	Robert	1993-08-25
235	Echo	3741	Delta Connection	5065	Robinson	David	1993-12-30
236	Echo	3741	Delta Connection	8080	Mills	Patty	1995-08-11
237	Echo	9021	Ryanair	1425	Bowen	Bruce	1993-06-14
238	Echo	9021	Ryanair	2020	Ginobli	Manu	1993-07-28
239	Echo	9021	Ryanair	2121	Duncan	Tim	1990-04-25
240	Echo	9021	Ryanair	3131	Rose	Malik	1992-11-20
241	Echo	9021	Ryanair	5005	Horry	Robert	1993-08-25
242	Echo	9021	Ryanair	5065	Robinson	David	1993-12-30
243	Echo	9021	Ryanair	8080	Mills	Patty	1995-08-11
244	Echo	9118	American Airlines	1425	Bowen	Bruce	1993-06-14
245	Echo	9118	American Airlines	2020	Ginobli	Manu	1993-07-28
246	Echo	9118	American Airlines	2121	Duncan	Tim	1990-04-25
247	Echo	9118	American Airlines	3131	Rose	Malik	1992-11-20
248	Echo	9118	American Airlines	5005	Horry	Robert	1993-08-25
249	Echo	9118	American Airlines	5065	Robinson	David	1993-12-30
250	Echo	9118	American Airlines	8080	Mills	Patty	1995-08-11
251	Foxtrot	2216	Emirates	1100	Bradley	Avery	1990-11-26
252	Foxtrot	2216	Emirates	1200	Howard	Dwight	1996-02-21
253	Foxtrot	2216	Emirates	1414	Green	Danny	1997-02-13
254	Foxtrot	2216	Emirates	2323	James	Lebron	1992-12-30
255	Foxtrot	2216	Emirates	3333	Davis	Anthony	1993-03-11

256	Foxtrot		2216	Emirates	7282	Rondo	Rajon	1997-04-17
257	Foxtrot		2216	Emirates	8803	Mcgee	Javale	1997-05-15
258	Foxtrot		2216	Emirates	9523	Kuzma	Kyle	1995-12-02
259	Golf		1240	American Airlines	1313	George	Paul	1993-10-23
260	Golf		1240	American Airlines	2000	Leonard	Kawhi	1992-07-08
261	Golf		1240	American Airlines	3232	Williams	Lou	1992-09-05
262	Golf		1240	American Airlines	5000	Harrel	Montrezl	1994-01-26
263	Golf		1240	American Airlines	6666	Beverly	Patrick	1991-01-30
264	Golf		1260	American Airlines	1313	George	Paul	1993-10-23
265	Golf		1260	American Airlines	2000	Leonard	Kawhi	1992-07-08
266	Golf		1260	American Airlines	3232	Williams	Lou	1992-09-05
267	Golf		1260	American Airlines	5000	Harrel	Montrezl	1994-01-26
268	Golf		1260	American Airlines	6666	Beverly	Patrick	1991-01-30
269	Golf		8619	Delta Connection	1313	George	Paul	1993-10-23
270	Golf		8619	Delta Connection	2000	Leonard	Kawhi	1992-07-08
271	Golf		8619	Delta Connection	3232	Williams	Lou	1992-09-05
272	Golf		8619	Delta Connection	5000	Harrel	Montrezl	1994-01-26
273	Golf		8619	Delta Connection	6666	Beverly	Patrick	1991-01-30

5.) The trips that are available if you make one stop over

SELECT

   f1.AirlineName,

   f1.TailName,

   F1.Dfaaabbrev AS "Departing from",

   f1.Afaaabbrev AS "Arriving to",

   F2.AFAAABBREV AS "Next Possible Stop Location",

   F2.TailName AS "FlightNumber to Take",

   F2.DepartureTime AS "Departing Time"

FROM

   Flight f1

     INNER JOIN

   flight F2 ON F1.Afaaabbrev = F2.DFAAABBREV

     AND F1.AirlineName = F2.AIRLINENAME

ORDER BY F1.AIRLINENAME;

#	AIRLINENAME	TAILNAME	Departing from	Arriving to	Next Possible Stop Location	FlightNumber to Take	Departing Time
1	Air Canada	A5183	IAH	YYZ	FCO	A7649	16:33:00
2	Air Canada	A5183	IAH	YYZ	LAX	A8417	12:33:00
3	Air Canada	A5183	IAH	YYZ	FRA	A8417	12:33:00
4	Air China	LW-SML	TPE	SYD	ICN	LQ-CGK	12:33:00
5	Alaska Airlines	MW360	MEX	LAX	MEX	MW420	12:32:00
6	Alaska Airlines	MW420	MEX	LAX	MEX	MW420	12:32:00
7	Alaska Airlines	MW420	LAX	MEX	LAX	MW360	16:55:00
8	Alaska Airlines	MW420	LAX	MEX	SFO	MW248	16:33:00
9	Alaska Airlines	MW420	LAX	MEX	LAX	MW420	11:55:00
10	Alaska Airlines	MW420	LAX	MEX	SFO	MW248	16:33:00
11	Allegiant	R2496	ORD	SFO	JFK	R2496	08:11:00
12	American Airlines	WV505	LAX	ATL	IAH	WV372	21:25:00
13	American Airlines	WV720	LAX	ATL	IAH	WV372	21:25:00
14	American Eagle	A5587	DFW	DEN	LAX	A5587	03:11:00
15	American Eagle	A6513	LAX	DEN	LAX	A5587	03:11:00
16	American Eagle	A5587	DEN	LAX	SFO	A1594	21:21:00
17	American Eagle	A5587	DEN	LAX	DEN	A6513	21:21:00
18	Delta Airlines	L1467	PHX	SEA	PHX	L1467	18:33:00
19	Delta Airlines	L1467	SEA	PHX	SEA	L1467	09:52:00
20	Delta Airlines	L7258	JFK	DFW	DEN	L6103	06:33:00
21	Delta Airlines	L6103	SFO	JFK	DFW	L7258	18:11:00
22	Delta Airlines	L7258	ORD	SFO	JFK	L6103	18:33:00
23	Delta Connection	ZXI-7	LAS	MCO	ORD	ZSL-5	13:16:00
24	Delta Connection	ZXI-7	PHX	EWR	JFK	ZMC-2	16:12:00
25	Emirates	ZD-3	DEL	DXB	CDG	ZR-1	05:51:00
26	Emirates	ZD-3	DEL	DXB	HND	ZA-8	07:11:00
27	Emirates	ZD-3	DEL	DXB	SYD	ZD-3	08:15:00
28	Emirates	ZR-1	SYD	DXB	CDG	ZR-1	05:51:00
29	Emirates	ZR-1	SYD	DXB	HND	ZA-8	07:11:00
30	Emirates	ZR-1	SYD	DXB	SYD	ZD-3	08:15:00
31	Emirates	ZD-3	DXB	SYD	DXB	ZR-1	12:53:00
32	Japan Airlines	MW339	TPE	HND	DEN	MW339	11:15:00
33	Japan Airlines	MW339	TPE	HND	DEL	MW720	04:25:00
34	Japan Airlines	MW228	TPE	HND	DEN	MW339	11:15:00
35	Japan Airlines	MW228	TPE	HND	DEL	MW720	04:25:00
36	Japan Airlines	MW720	LAX	HND	DEN	MW339	11:15:00
37	Japan Airlines	MW720	LAX	HND	DEL	MW720	04:25:00
38	Japan Airlines	MW720	LAX	HND	DEN	MW339	11:15:00
39	Japan Airlines	MW720	LAX	HND	DEL	MW720	04:25:00
40	JetBlue	YA-FAR	IAH	PHX	JFK	YA-FAR	02:31:00
41	LATAM Airlines	L4326	CDG	MAD	MCO	L4326	11:21:00
42	LATAM Airlines	L4326	CDG	MAD	MCO	L4326	11:21:00
43	Ryanair	ES-63535	AMS	JFK	MAD	ES-63535	08:02:00
44	Ryanair	EK-32009	DEL	SYD	MAD	EK-32009	02:33:00
45	Ryanair	EY-78231	ICN	DEL	SYD	EK-32009	10:17:00
46	Southwest Airlines	K2729	IAH	ORD	SFO	K2729	15:02:00
47	Southwest Airlines	K2729	LAX	IAH	ORD	K2729	17:25:00
48	Southwest Airlines	K2729	JFK	LAX	IAH	K2729	09:02:00
49	United Express	XE521	LAX	PHX	DEN	XE521	07:34:00

6.) Management Reports of Mifly Information

-A.) Arriving flights per city

SELECT AirportLocation, COUNT(FAAABBRV) AS "Arriving Flights"

FROM Airport

NATURAL JOIN Flight

WHERE FAAABBRV = AFAAABBREV

GROUP BY AirportLocation

ORDER BY "Arriving Flights";

#	AIRPORTLOCATION	Arriving Flights
1	Toronto	1
2	Seoul	1
3	Seattle	1
4	Rome	1
5	Mexico City	1
6	Beijing	1
7	Paris	2
8	Newark	2
9	Frankfurt	2
10	Dubai	2
11	Dallas	2
12	Atlanta	2
13	Sydney	3
14	Phoenix	3
15	New Delhi	3
16	Madrid	3
17	Houston	3
18	Chicago	3
19	Orlando	4
20	Tokyo	5
21	Los Angeles	5
22	Denver	5
23	New York	7
24	San Francisco	9

B.) Departing flights per city

SELECT AirportLocation, COUNT(FAAABBRV) AS "Departing Flights"

FROM Airport

NATURAL JOIN Flight

WHERE FAAABBRV = DFAAABBREV

GROUP BY AirportLocation

ORDER BY "Departing Flights";

#	AIRPORTLOCATION	Departing Flights
1	Seoul	1
2	Rome	1
3	Paris	1
4	Orlando	1
5	Newark	1
6	Tokyo	2
7	Seattle	2
8	San Francisco	2
9	Madrid	2
10	Denver	2
11	Atlanta	2
12	Amsterdam	2
13	Toronto	3
14	Sydney	3
15	Paradise	3
16	New Delhi	3
17	Houston	3
18	Dubai	3
19	Dallas	3
20	Chicago	3
21	Taipei	4
22	New York	4
23	Mexico City	4
24	Phoenix	5
25	Los Angeles	11

C.) List of airlines in each service category

SELECT AirlineName, Region

FROM Airline;

#	AIRLINENAME	REGION
1	JetBlue	Domestic
2	Allegiant	Domestic
3	American Airlines	Domestic
4	Delta Airlines	Domestic
5	Southwest Airlines	Domestic
6	American Eagle	Local
7	Delta Connection	Local
8	United Express	Local
9	Emirates	International
10	Air China	International
11	Ryanair	International
12	Japan Airlines	International
13	Air Canada	International
14	Alaska Airlines	International
15	LATAM Airlines	International

D.) Crews that fly multiple flights in a single day

SELECT FlightCrewName, FlightDate, COUNT(FlightDate) AS "Total Flights"

FROM FlightCrew

NATURAL JOIN FlightInstance

GROUP BY FlightCrewName, FlightDate

HAVING COUNT(FlightDate) > 1;

#	FLIGHTCREWNAME	FLIGHTDATE	Total Flights
1	Alpha	2020-05-13	2
2	Bravo	2020-05-08	2
3	Echo	2020-05-08	2

7.) A list of all incident reports by flight

SELECT * FROM IncidentReport;

#	FLIGHTNUMBER	FLIGHTDATE	INCIDENTTYPE	DESCRIPTION	WRITERFAAID	REPORTEDFAAID
1	5235	2020-04-01	Good Service	Jason Kidd helped a passenger with their lu...	2632	1036
2	2290	2020-04-02	Concern	Luke Walton was found sleeping on the job	2424	4000
3	3741	2020-04-03	Emergency	Robert Horry preformed the heimlich on a p...	3131	5005
4	1240	2020-04-04	Problem	Patrick Beverly yelled at a passenger who a...	5000	6666
5	9148	2020-04-06	Good Service	Kyrie Irving assisted a child in finding their p...	1111	7756
6	1323	2020-03-25	Good Service	Ron Artest helped an elderly man to his seat	1818	1515
7	9999	2020-04-07	Problem	James Bond was found slacking and aggre...	1645	4396
8	2906	2020-04-08	Concern	Joe Harris spilled drinks all over an elderly ...	7964	8262
9	3416	2020-04-17	Emergency	Sasha Vujacic helped a passenger with first...	4000	1818
10	5565	2020-04-18	Good Service	Derek Fisher helped a passenger with usin...	1645	8573
11	2216	2020-04-09	Problem	Rajon Rondo got into an altercation with an ...	8803	7282
12	2200	2020-04-11	Good Service	Patty Mills is energetic and goes out of his ...	1425	8080
13	6661	2020-04-29	Emergency	Tyson Chandler helped a passenger with fir...	9434	5726
14	1018	2020-04-22	Concern	Andrew Bynum was late to his post 3 times i...	1515	1717
15	3695	2020-04-25	Good Service	Kobe Bryant made sure to greet every pass...	1616	2424

8.) Flights departing in 3 days

SELECT * FROM FLIGHTINSTANCE

WHERE FlightDate = CAST({fn TIMESTAMPADD (SQL_TSI_DAY, 3, CURRENT_TIMESTAMP) } AS DATE);

#	FLIGHTNUMBER	FLIGHTDATE	ACTUALDEPARTURETIME	ACTUALARRIVALTIME	FLIGHTCREWNAME
1	5674	2020-05-07	13:24:00	21:31:00	Charlie

9.) All flights that arrived in the busiest airport in the last week

SELECT * FROM FlightInstance

NATURAL JOIN Flight

WHERE AFAAabbrev IN

(SELECT AFAAabbrev

FROM FlightInstance

NATURAL JOIN Flight

WHERE FlightDate

BETWEEN CAST({fn TIMESTAMPADD(SQL_TSI_DAY, -7, CURRENT_TIMESTAMP)} AS DATE)

AND CAST({fn TIMESTAMPADD(SQL_TSI_DAY, 1, CURRENT_TIMESTAMP)} AS DATE)

GROUP BY AFAAabbrev

ORDER BY COUNT(AFAAabbrev) DESC

FETCH FIRST ROW ONLY)

AND FlightDate

BETWEEN CAST({fn TIMESTAMPADD(SQL_TSI_DAY, -7, CURRENT_TIMESTAMP)} AS DATE)

AND CAST({fn TIMESTAMPADD(SQL_TSI_DAY, 1, CURRENT_TIMESTAMP)} AS DATE);

#	FLIGHTNUMBER	FLIGHTDATE	ACTUALDEPARTURETIME	ACTUALARRIVALTIME	FLIGHTCREWNAME	AFAAABBREV	DFAAABBREV	AIRLINENAME	DEPARTURETIME	ARRIVALTIME
1	1111	2020-05-04	04:48:00	10:23:00	Alpha	EWR	PHX	Delta Connection	04:41:00	10:16:00
2	5555	2020-05-01	15:02:00	01:00:00	Delta	EWR	DEN	Southwest Airlines	15:02:00	01:00:00

10.) Flights that departed more than 30 minutes late.

SELECT FlightNumber, AirlineName, DepartureTime, ActualDepartureTime

FROM FLIGHT

NATURAL JOIN FLIGHTINSTANCE

WHERE {fn TIMESTAMPDIFF(SQL_TSI_MINUTE, DepartureTime, ActualDepartureTime)} > 30;

#	FLIGHTNUMBER	AIRLINENAME	DEPARTURETIME	ACTUALDEPARTURETIME
1	8561	Delta Airlines	18:33:00	19:36:00
2	8923	Delta Connection	13:16:00	14:16:00
3	3416	Air China	12:33:00	13:04:00
4	5674	Emirates	12:53:00	13:24:00

11.) Business Rules

-- A.) This is to display our first business rule to show that a meal should be free for where the condition was met

SELECT FlightNumber, Region, ServiceType, Cost, {fn TIMESTAMPDIFF(SQL_TSI_HOUR, ActualDepartureTime, ActualArrivalTime)} AS "Length of flight"

FROM Service

NATURAL JOIN FlightInstance

NATURAL JOIN Flight

NATURAL JOIN Airline

WHERE ServiceType = 'Meal'

AND Region = 'Domestic'

ORDER BY "Length of flight";

#	FLIGHTNUMBER	REGION	SERVICETYPE	COST	Length of flight
1	2876	Domestic	Meal	4	2
2	3695	Domestic	Meal	4	3
3	3336	Domestic	Meal	0	4
4	2290	Domestic	Meal	0	7
5	1240	Domestic	Meal	0	7

B.) This is to display our third business rule to show that water should be free for where the condition was met

SELECT FlightNumber, Region, ServiceType, Cost, {fn TIMESTAMPDIFF(SQL_TSI_HOUR, DepartureTime, ActualDepartureTime)} AS "Delay in hours"

FROM Service

NATURAL JOIN FlightInstance

NATURAL JOIN Flight

NATURAL JOIN Airline

WHERE ServiceType = 'Water'

AND Region = 'Local'

ORDER BY "Deleay in hours";

#	FLIGHTNUMBER	REGION	SERVICETYPE	COST	Delay in hours
1	2200	Local	Water	1.15	0
2	3006	Local	Water	1.15	0
3	2906	Local	Water	1.15	0
4	8923	Local	Water	0	1

C.) This is to display our second business rule to show that WIFI should be free for where the condition is met

SELECT FlightNumber, Region, ServiceType, Cost, {fn TIMESTAMPDIFF(SQL_TSI_HOUR, ActualDepartureTime, ActualArrivalTime)} AS "Length of flight"

FROM Service

NATURAL JOIN FlightInstance

NATURAL JOIN Flight

NATURAL JOIN Airline

WHERE ServiceType = 'WIFI'

AND Region = 'Domestic'

ORDER BY "Length of flight";

#	FLIGHTNUMBER	REGION	SERVICETYPE	COST	Length of flight
1	2876	Domestic	WIFI	0	2
2	3695	Domestic	WIFI	0	3
3	3336	Domestic	WIFI	10	4
4	2290	Domestic	WIFI	10	7
5	1240	Domestic	WIFI	10	7

D.) This is to display our fourth business rule to show that checking bags should be free for where the condition is met

SELECT FlightNumber, Region, ServiceType, Cost, {fn TIMESTAMPDIFF(SQL_TSI_HOUR, ActualDepartureTime, ActualArrivalTime)} AS "Length of flight"

FROM Service

NATURAL JOIN FlightInstance

NATURAL JOIN Flight

NATURAL JOIN Airline

WHERE ServiceType = 'Checking Bags'

AND Region = 'Local'

ORDER BY "Length of flight";

#	FLIGHTNUMBER	REGION	SERVICETYPE	COST	Length of flight
1	3006	Local	Checking Bags	0	1
2	2200	Local	Checking Bags	12.15	2
3	8923	Local	Checking Bags	12.15	3
4	2906	Local	Checking Bags	12.15	4