

## Business Domain Study and Database Design

Business Domain: Airline

Company Name: Bangkok Airways Public Company Limited

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CSS325 Database System

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## **Abstract**

In this project, our team aims to study an airline business domain and design a database for the company of our choice which is Bangkok Airways Public Company Limited. The objective is to develop an organized system that enables business processes for an airline company like purchasing a ticket and transporting passengers to their desired destination. This airline database project consists mainly of two types of users. Firstly, the passenger who access the information such as flight schedules and purchase necessarily items to unable full-scaled services. The other type of user is the employees who modifies, update the information available in the system, and perform necessary tasks to support the business requirements. This report contains the details of business rules, constraints, and the EERD diagram of Bangkok Airways Public Company Limited.

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## **1 Introduction**

In the highly competitive business world these days, the data is extremely important and database initiative and development can support the organizations to perform business functions more efficiently and effectively. However, the database system should be developed from the understanding of the organization and should support the organizational goals. We can achieve those goals by developing a well as design database system and implement it for a specific application, using the DBMS concept. In this project, we will focus on studying the database by using the main domain is airline. The company we use to study is Bangkok Airways Public Company Limited, which is a company that manages database systems and business operations on an international level. Both are accepted internationally. The documents we use for the study are information from the websites, applications, and the airline's annual reports that are publicly available.

### **Company Profile and Background**

In this section, we will list key information regarding this project assignment and define the scope of our study. We will discuss our business domain of choice, the company we selected, its core business, and its subsidiary and associated company.

### **Business Domain**

In this project is focus on “Airline”

### **Company Name**

Bangkok Airways Public Company Limited

### **Core Business**

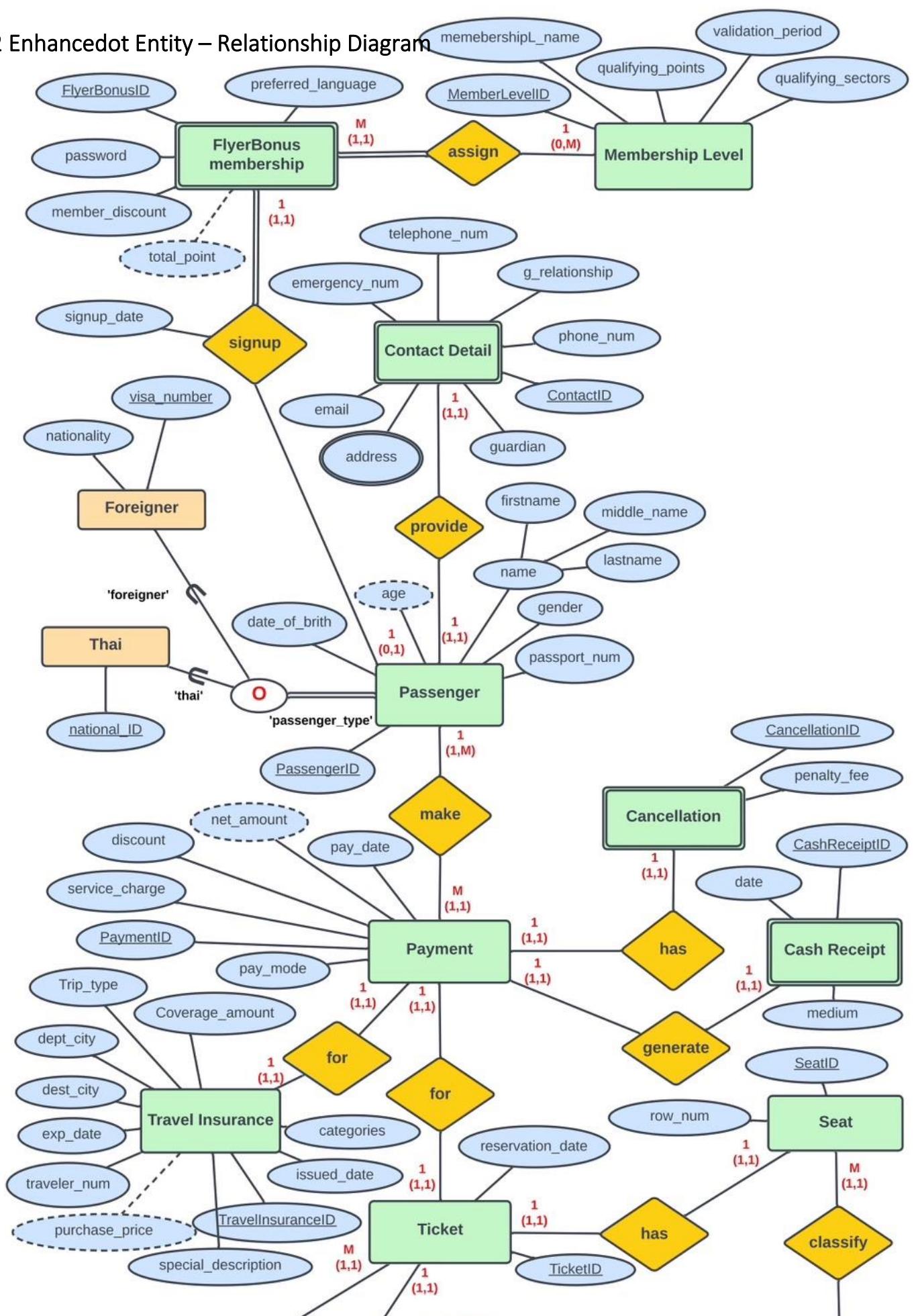
According to the company annual report from 2020 in the General Information page, Bangkok Airways has two core businesses.

1. Passengers' airline business including freight domestically and internationally
2. Establishment of a public airport and/or operate and manage public airport, rent out space including other activities relating to the establishment and operation of the airport.

### **Subsidiary and Associate Companies**

These are companies that have Bangkok Airways as their parent company. Their goals are mainly to facilitate the core business of Bangkok Airways. In this study, we will focus on 1. Bangkok Air Catering Company Limited (BAC): This is a catering service company based at Suvarnabhumi International Airport. BAC aims to be a world-class provider of exclusive and highest quality airline catering services. The company has dedicated kitchen facilities for different meals that require extra precaution like Halal and Kosher meals. 2. Bangkok Airways Ground Service Company Limited (PGGS): This is a ground service company operating at Samui International Airport. The company provides services such as charter flights, private jet, fast track, and VIP lounge service under the international safety standards. 3. Samui Airport Property Fund (SPF): This is a close-end property fund from Thailand that invested in the long-term leasehold rights in the Leased Assets, including: the leased land, runway, parking apron, and construction are being used from. Currently, the assets are being used to operate the Samui International Airport.

## 2 Enhanced Entity – Relationship Diagram



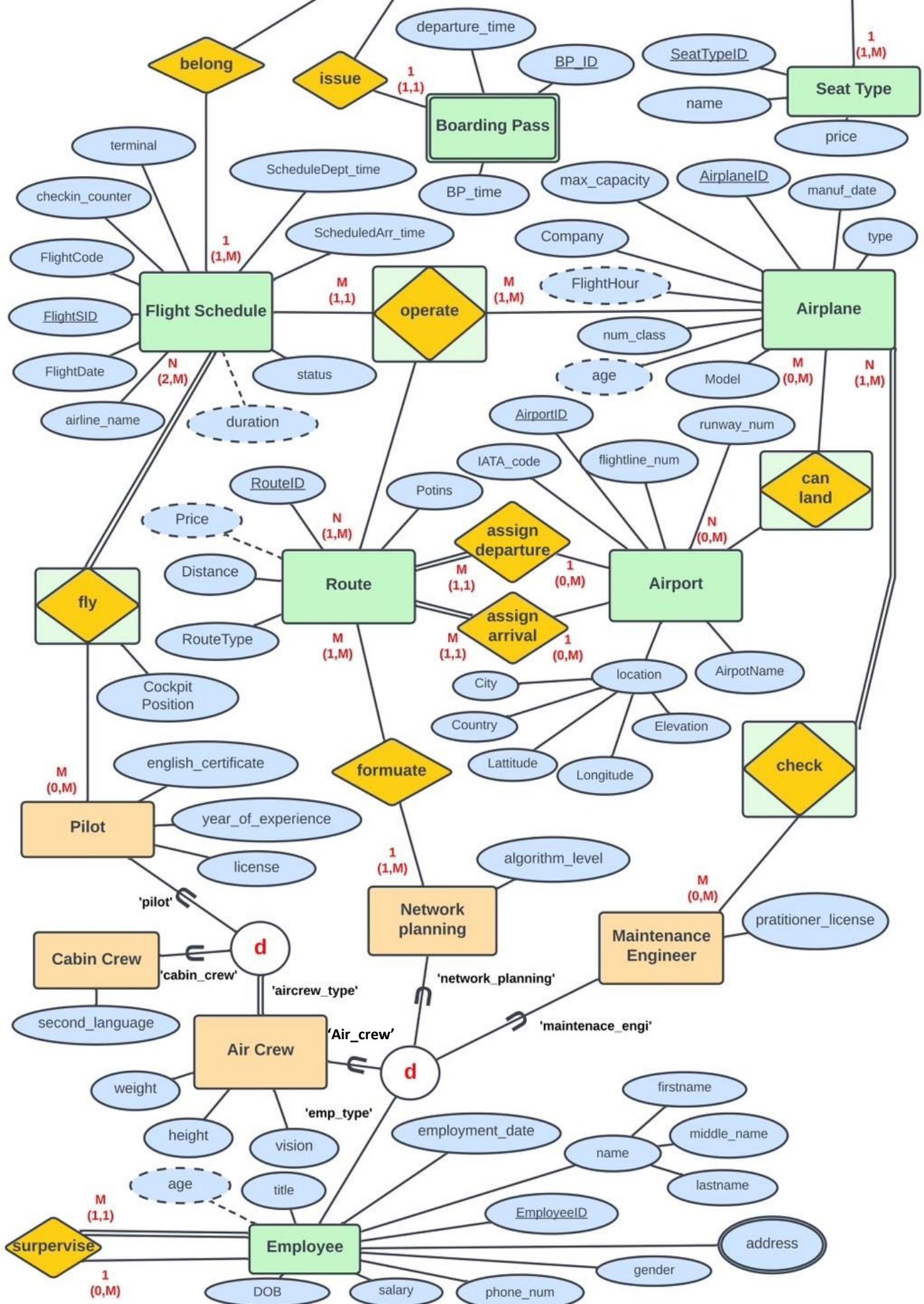


Figure 2 Entity – Relationship Diagram cont.

### 3 Relational Schema

#### Step 1: Transforming regular entity type (PK)

##### Passenger

PK

PAX_ID	FName	MName	LName	gender	passport_num	DOB
--------	-------	-------	-------	--------	--------------	-----

##### Membership Level

PK

ML_ID	Name	qualifying_point	qualifying_sector	validation_period
-------	------	------------------	-------------------	-------------------

##### Payment

PK

PYMT_ID	PYMT_datetime	PYMT_mode	service_charge	discount
---------	---------------	-----------	----------------	----------

##### Travel Insurance

PK

TI_ID	issued_date	travel_num	exp_date	TI_type	dept_city	dest_city	trip_type	coverage_amount	categories
-------	-------------	------------	----------	---------	-----------	-----------	-----------	-----------------	------------

##### Ticket

PK

TCK_ID	reservation_date
--------	------------------

##### Seat

PK

Seat_ID	row_num
---------	---------

##### Seat Type

PK

SeatT_ID	name	price
----------	------	-------

##### Airport

PK

AIRPT_ID	IATA_Code	flightline_num	city	country	latitude	longitude	altitude	runway_unm	AIRPT_name
----------	-----------	----------------	------	---------	----------	-----------	----------	------------	------------

##### Airplane

PK

AIRP_ID	company	model	max_capacity	num_class	type	manufacture_date
---------	---------	-------	--------------	-----------	------	------------------

##### Flight Schedule

PK

FLTS_ID	FLTCode	ScheduleDept_time	ScheduleArr_time	FLT_date	airline_name	terminal	checkin_counter	status
---------	---------	-------------------	------------------	----------	--------------	----------	-----------------	--------

##### Route

PK

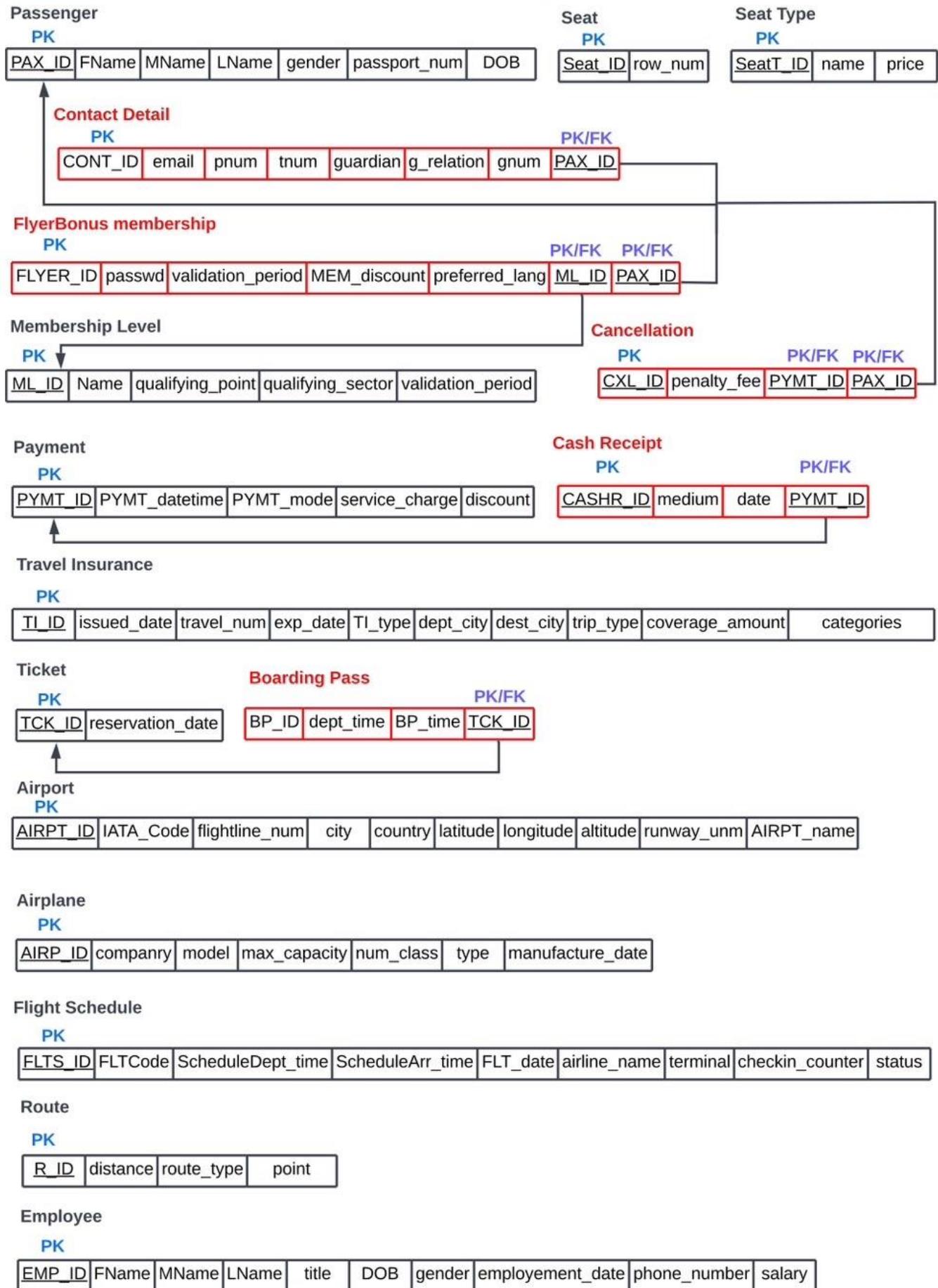
R_ID	distance	route_type	point
------	----------	------------	-------

##### Employee

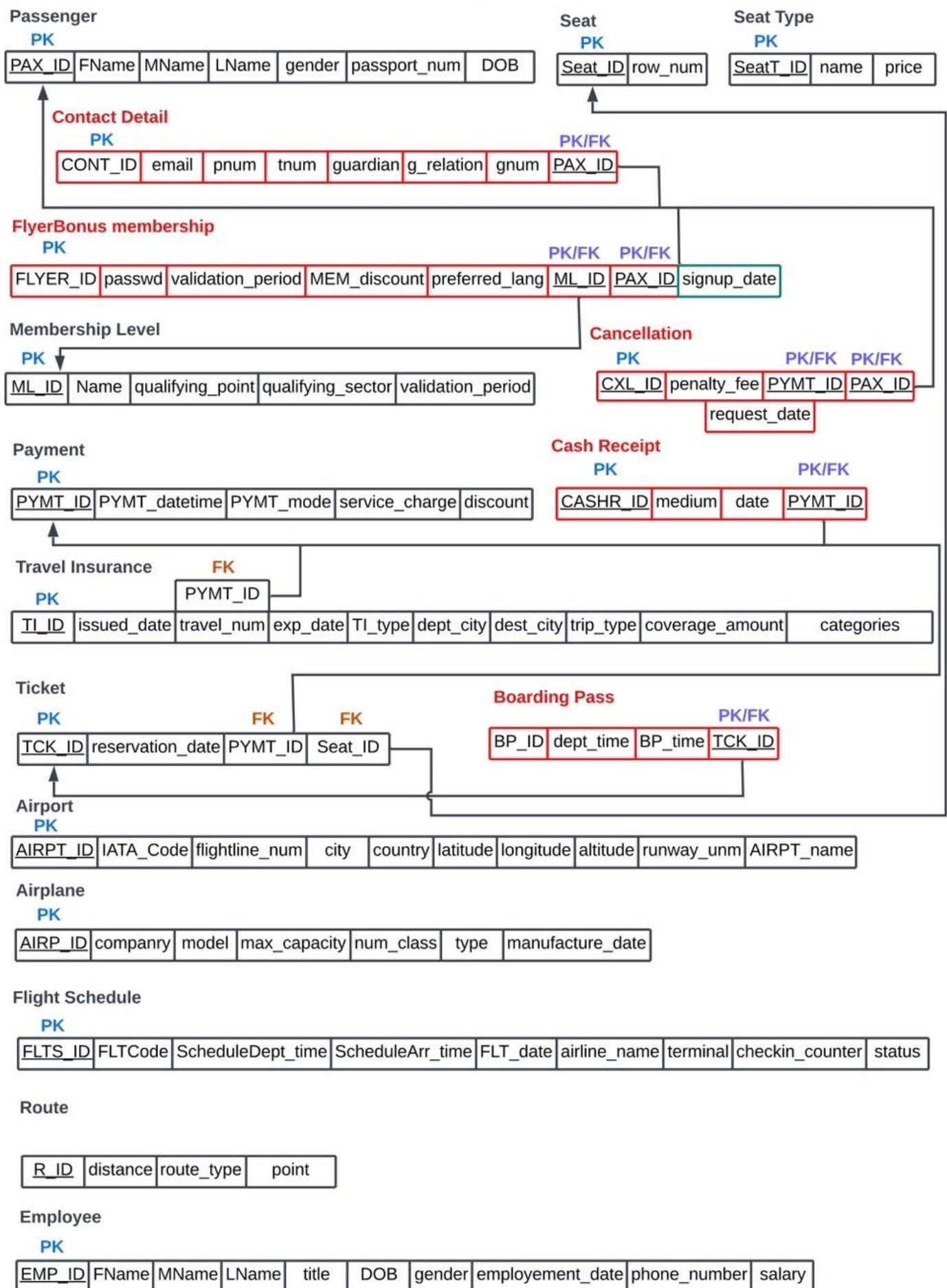
PK

EMP_ID	FName	MName	LName	title	DOB	gender	employment_date	phone_number	salary
--------	-------	-------	-------	-------	-----	--------	-----------------	--------------	--------

**Step 2: Transforming weak Entities (PK and PK/FK from strong)**



Step 3: Transforming binary 1:1 relationship types (FK)



Step 4: Transforming 1:N relationship types (FK)

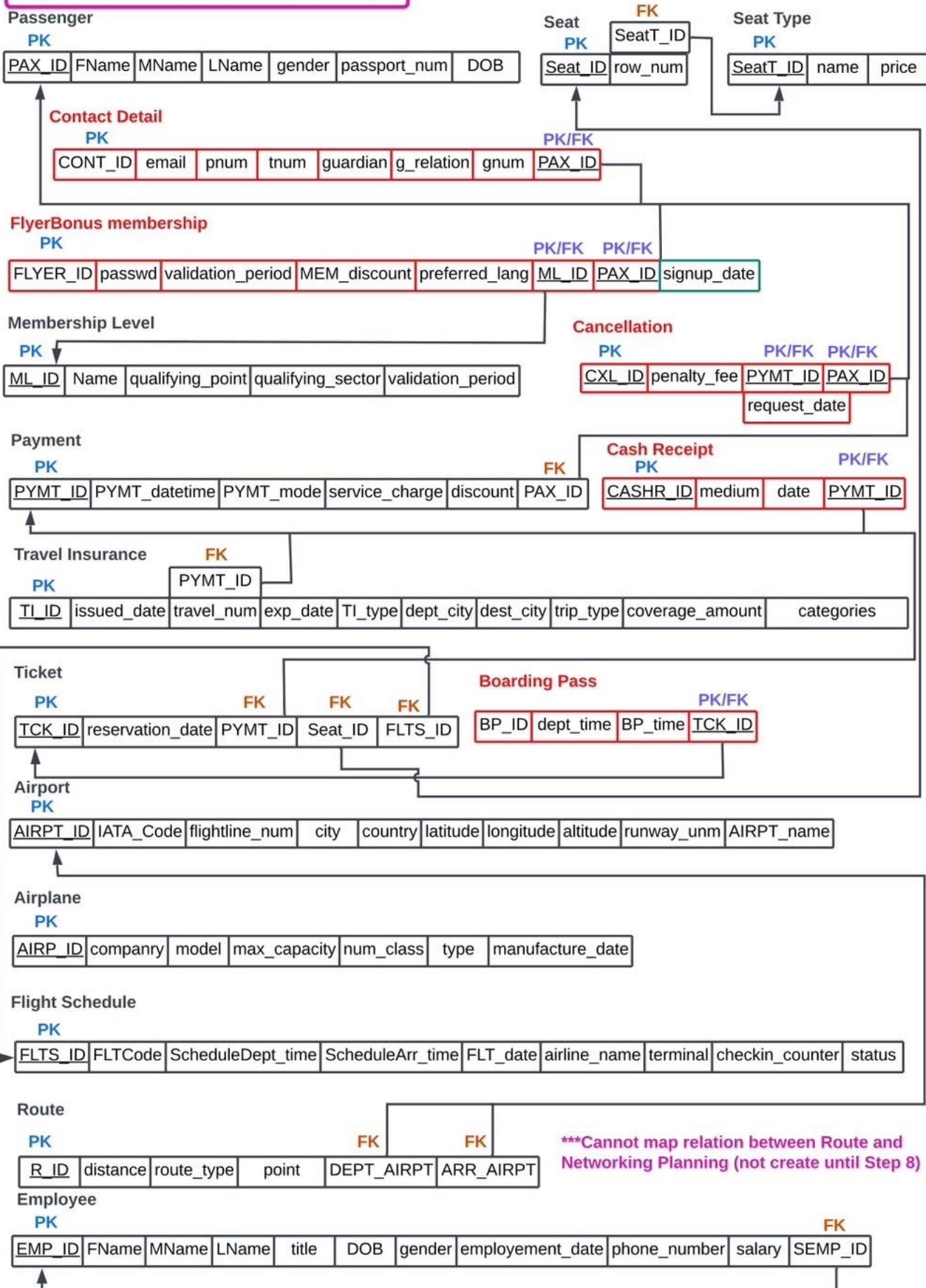
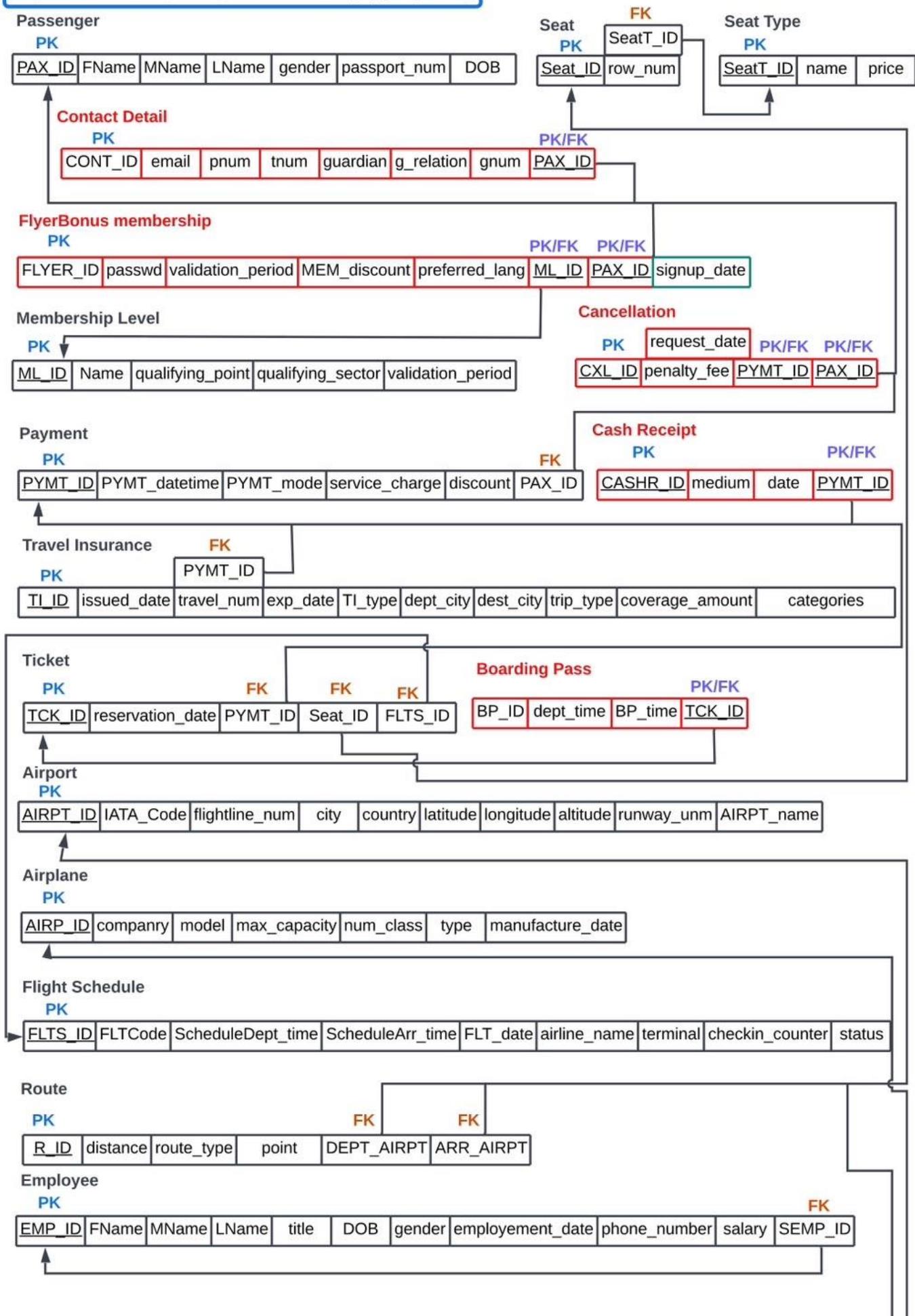


Figure 6 Relational Schema step4

**Step 5: Transforming binary M:N relationship types (PK/FK)**



Airplane\_CAN\_LAND\_Airport

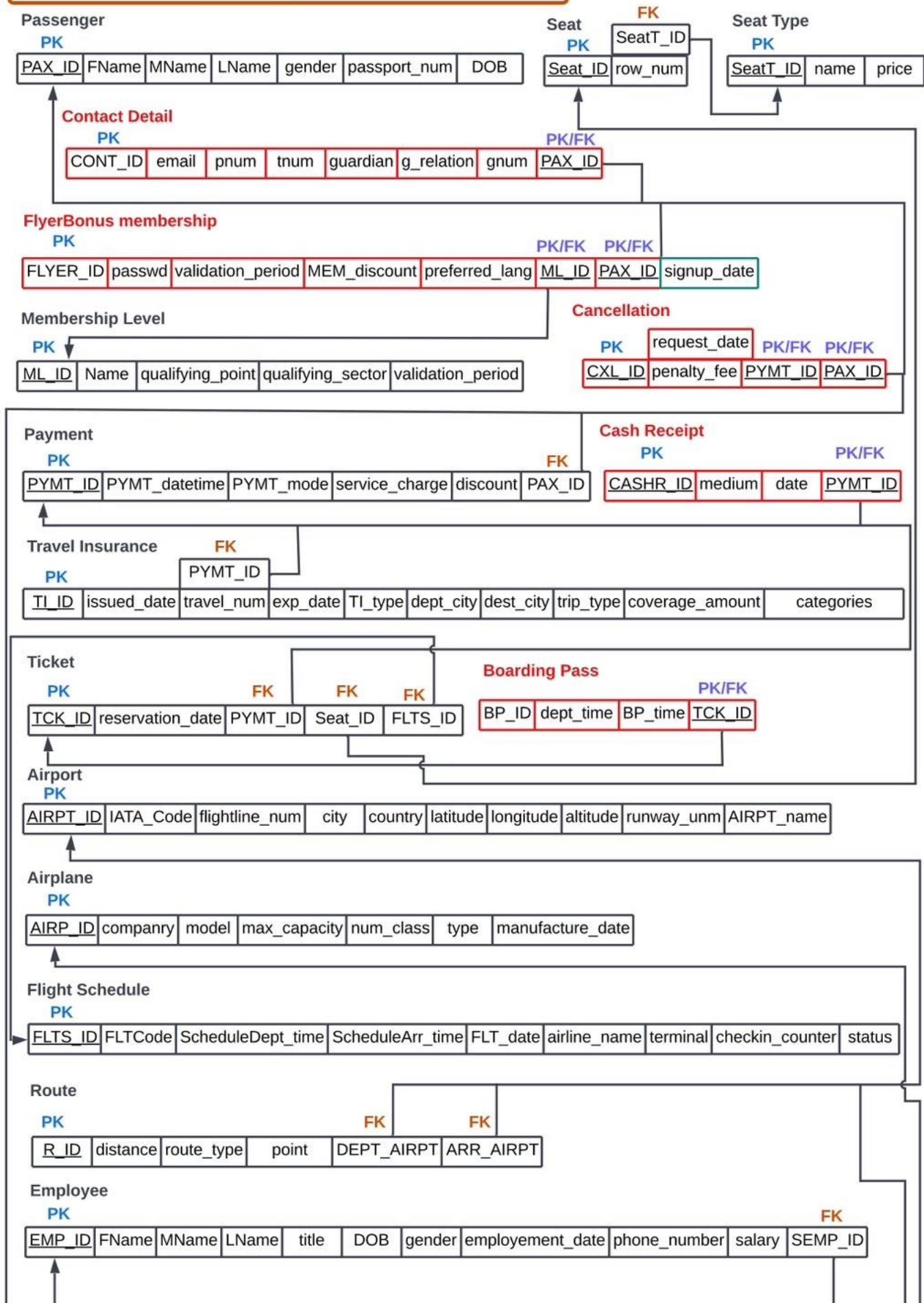
PK/FK PK/FK  
AIRP\_ID AIRPT\_ID

\*\*\* Cannot map relation between Flight Schedule and Pilot (not create until Step 8)

\*\*\* Cannot map relation between Airplane and Maintenance Engineer (not created until Step 8)

Figure 7 Relational Schema step5

Step 6: Transforming multi-valued attribute A in relation K (PK/FK)



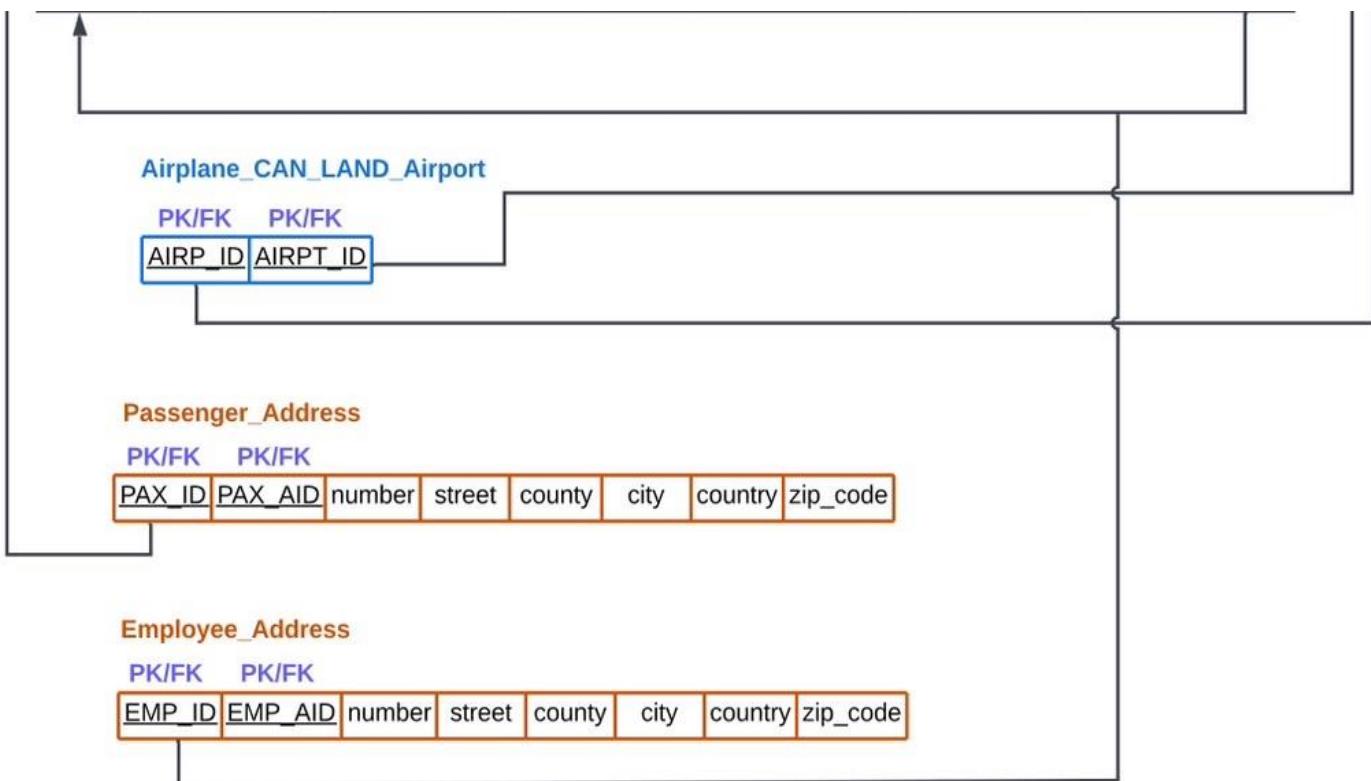
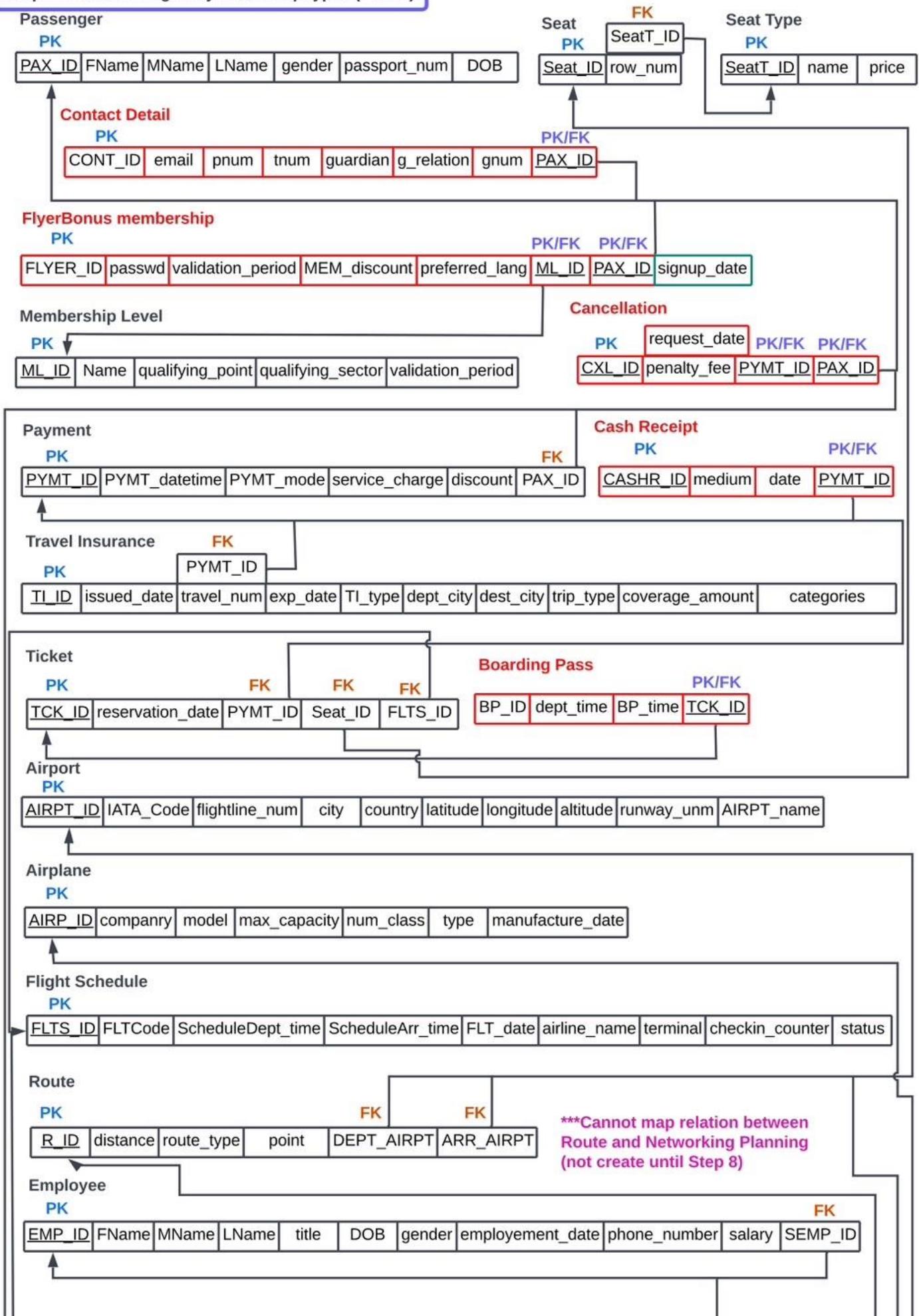


Figure 8 Relational Schema step6

### Step 7: Transforming n-ary relationships (PK/FK)



Airplane\_CAN\_LAND\_Airport

PK/FK PK/FK

AIRP_ID	AIRPT_ID
---------	----------

Passenger\_Address

PK/FK PK/FK

PAX_ID	PAX_AID	number	street	county	city	country	zip_code
--------	---------	--------	--------	--------	------	---------	----------

Employee\_Address

PK/FK PK/FK

EMP_ID	EMP_AID	number	street	county	city	country	zip_code
--------	---------	--------	--------	--------	------	---------	----------

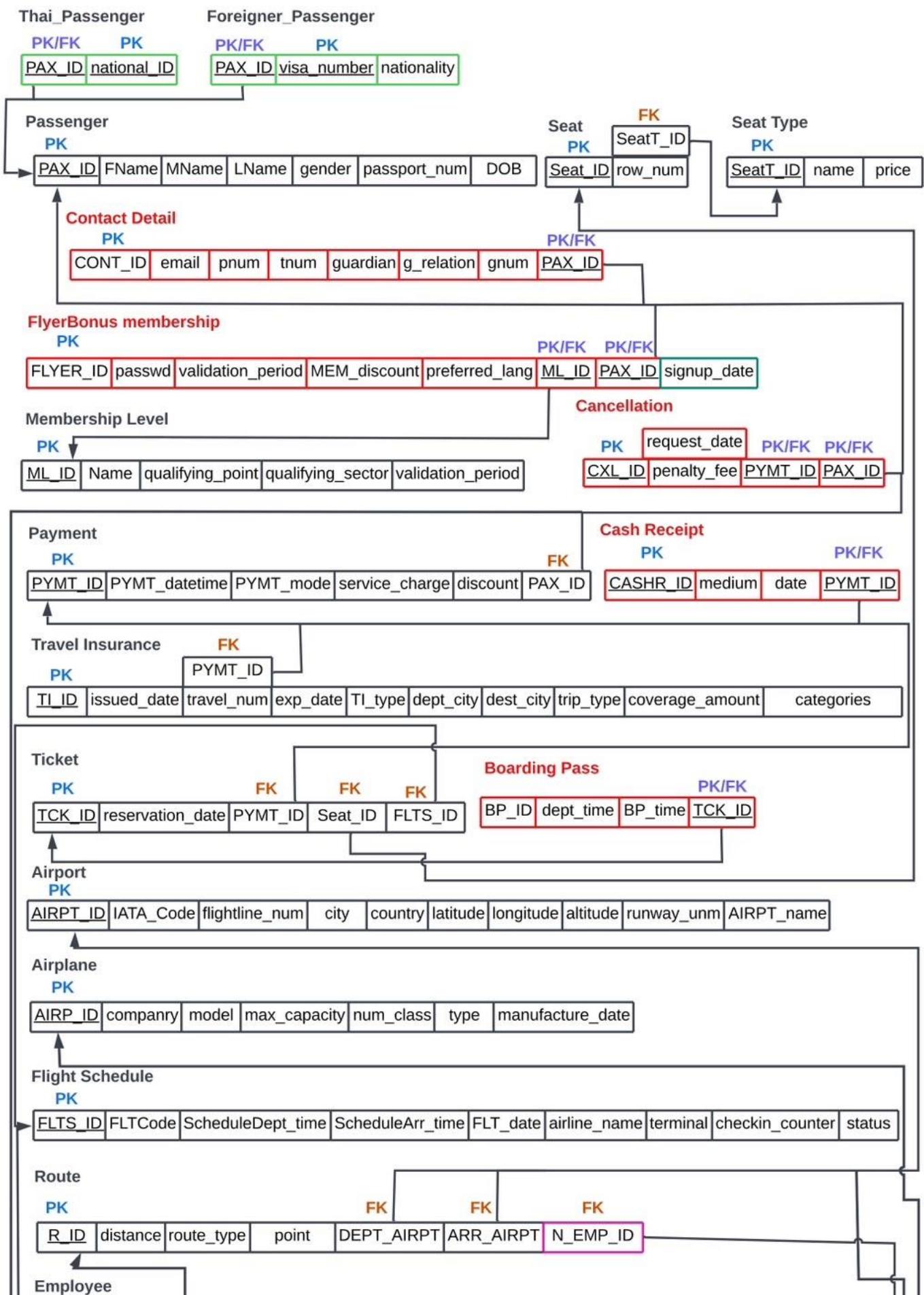
Airplane\_Operation\_FS\_Route

PK/FK PK/FK PK/FK

FLTS_ID	R_ID	AIRP_ID
---------	------	---------

Figure 9 Relational Schema step7

Step 8: Transforming specialization or generalization



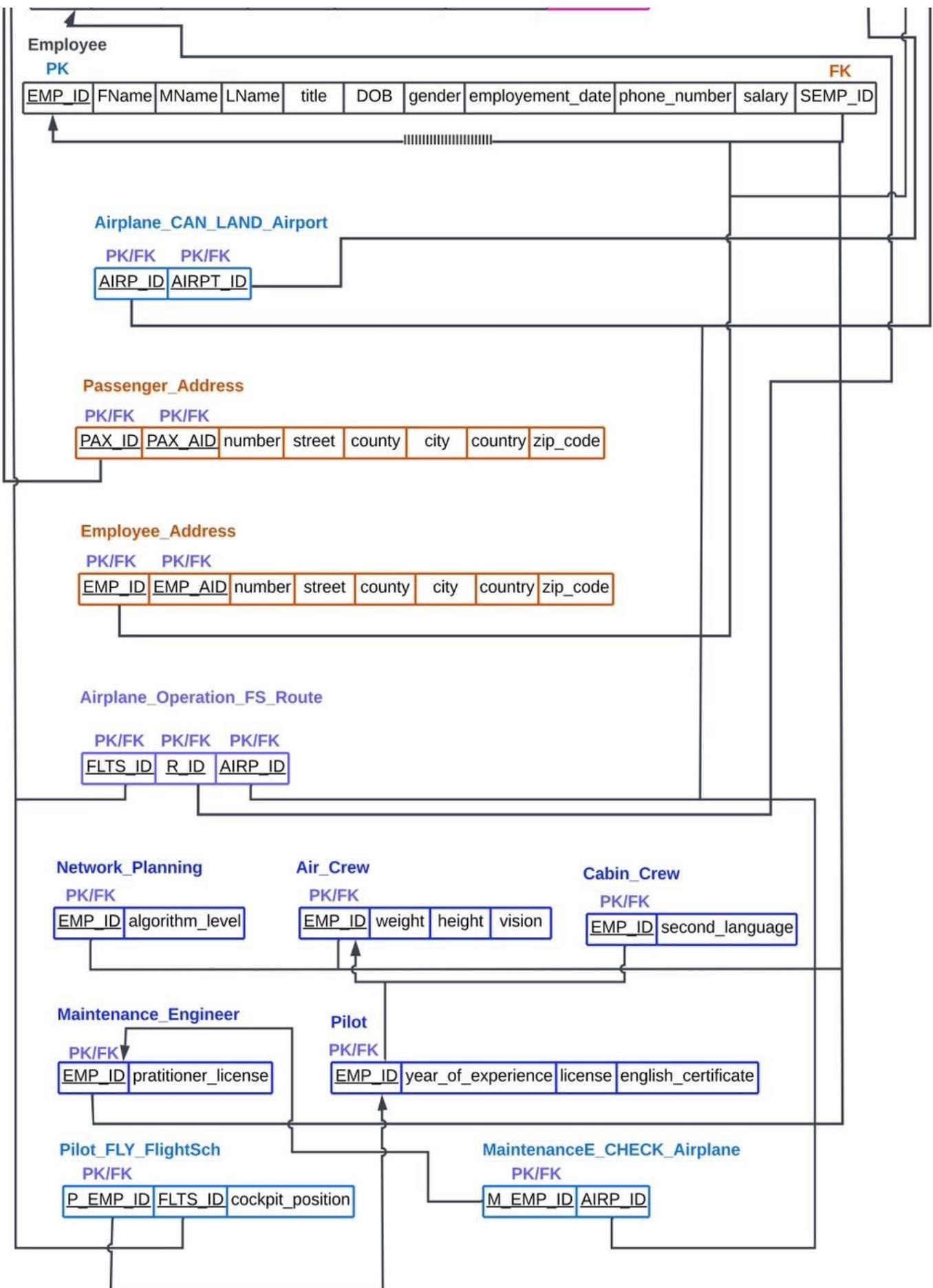
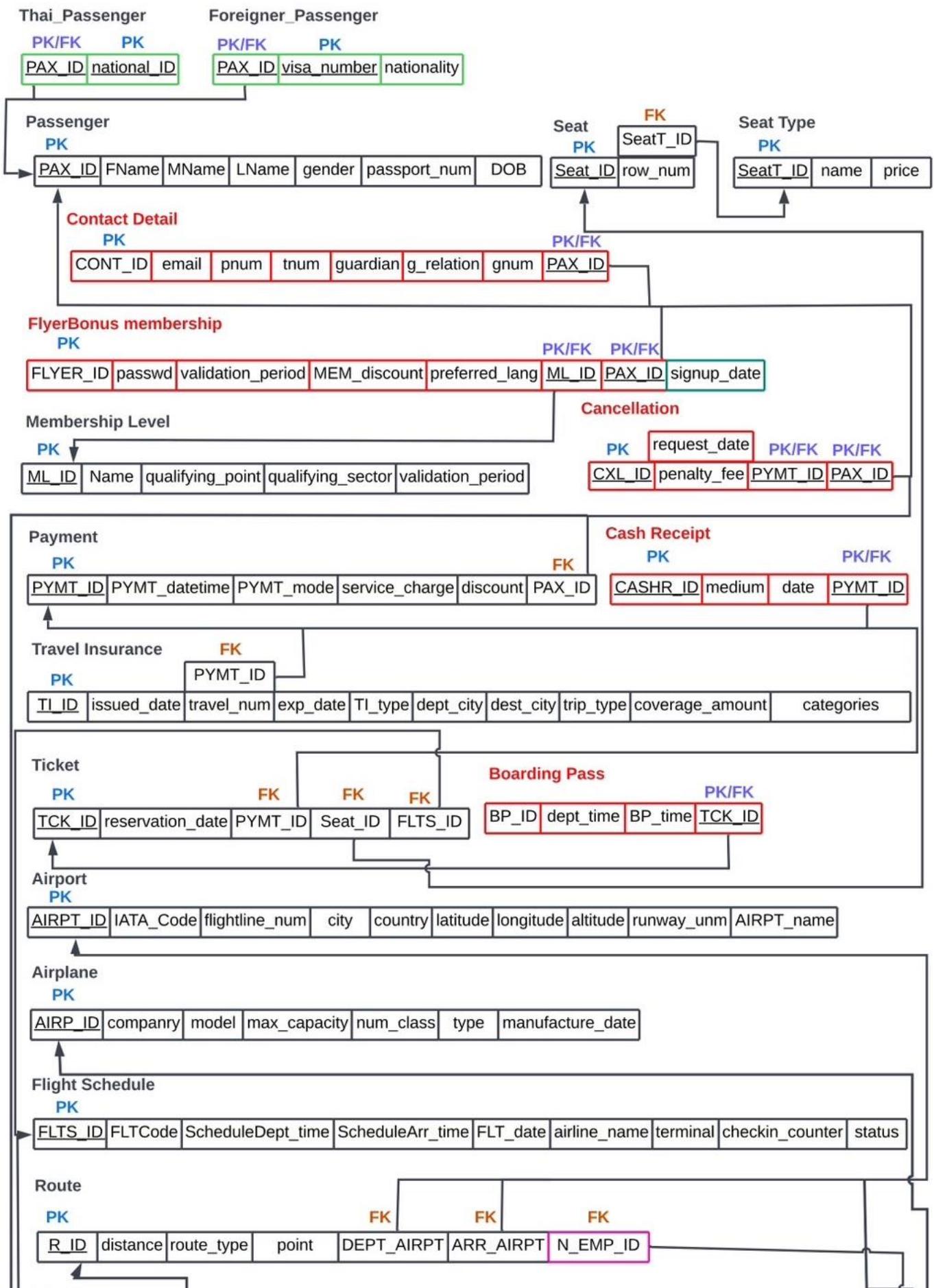
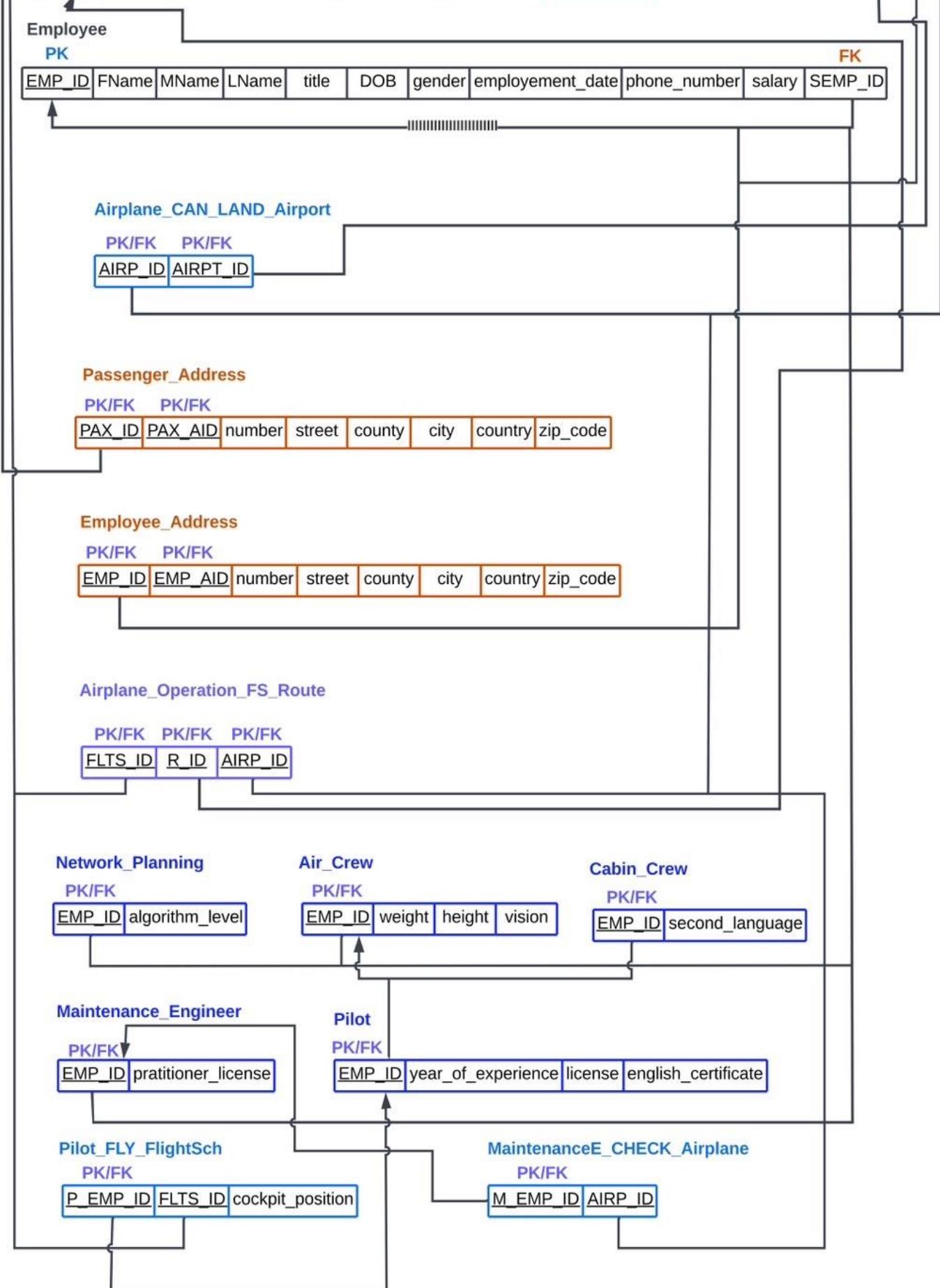


Figure 10 Relational Schema step8

#### 4 Final Relational Schema





## 5 Data Dictionary

Table Name	Attribute Name	Content	Type	Format	Nullable	Range	Key	FK Reference Table
Passenger	PAX_ID	Passenger's ID	int	xxx			PK	
	FName	Passenger's first name	varchar(250)	Xxxxx				
	MName	Passenger's middle name	varchar(250)	Xxxxx	Y			
	LName	Passenger's last name	varchar(250)	Xxxxx				
gender	Passenger's sex	char(1)	X					
	passport_num	Passenger's passport number	varchar(25)	Xxxxxxx				
DOB	Passenger's date of birth	date		YYYY-MM-DD				
Thai_Passenger	TPAX_ID	Thai Passenger's ID	int	xxx			PK, FK	PAX_ID [Passenger]
	national_ID	Thai National ID	varchar(15)	xxxxxxxxxx			PK	
Foreigner_Passenger	FPAX_ID	Foreign Passenger's ID	int	xxx			PK, FK	PAX_ID [Passenger]
	visa_number	Visa number on the passport	varchar(15)	xxxxxxxxxx			PK	
	nationality	Nationality of the Foreign passenger	varchar(15)	xxxxxxxxxx				
Seat	Seat_ID	Seat's ID	int	xxxxx			PK	
	row_num	Seat's row number	char(10)	xxx				
	ST_ID	Seat type's ID	int	xxx			PK, FK	SeatT_ID [Seat_Type]
Seat_Type	SeatT_ID	Seat type's ID	int	xxx			PK	
	name	Name of the seat type	varchar(250)	Xxxxx				
price	price	Base price for the seat type	int	xxxx				
Contact_Detail	CONT_ID	Passenger's contact detail	int	xxx			PK	
	email	Passenger's email address	varchar(250)	xxxx@xxx.com				
	pnum	Passenger's phone number	char(10)	xxxxxxxxxx				
	tnum	Passenger's telephone number	char(9)	xxxxxxxx	Y			
guardian	guardian	Name of the passenger's guardian	varchar(250)	Xxxxx				
	g_relation	Relationship between passenger and the guardian	varchar(50)	xxxxx				
	gnum	Guardian's contact number	char(10)	xxxxxxxx				
	PAX_ID	Passenger's ID	char(3)	xxx			PK, FK	PAX_ID [Passenger]
FlyerBonus_membership	FLYER_ID	FlyerBonuns membership's ID	int	xxxxxxxx				
	passwd	Password	varchar(100)	xxxxx				
	MEM_discount	Conversion rate from membership points to Thai baht	int	xx				
	preferred_lang	Preferred language for communication	varchar(20)	xxxxxx				
ML_ID	Membership level's ID	int	xxxxxxxx				PK, FK	ML_ID [Membership_Level]
PAX_ID	Passenger's ID	int	xxx				PK, FK	PAX_ID [Passenger]
	signup_date	Signup date to become a member	date	YYYY-MM-DD				

Table 1 Data Dictionary

Membership_Level	ML_ID	Membership level's ID	int	xxxxxxxx		PK
	mem_name	Name of the membership level	varchar(20)	xxxx		
	qualifying_point	Minimum qualification for points to be eligible to upgrade to this membership level	int	xxxx		
	qualifying_sector	Minimum qualification for sector to be eligible to upgrade to this membership level	int	xx		
	validation_period	Membership level validation period before renewal (in months)	int	xx		
Payment	PYMT_ID	Payment's ID for each transaction	int	xxxxxx		PK
	PYMT_datetime	Date and time of the payment	int	YYYY-MM-DD hh:mm:ss		
	PYMT_mode	Method of the transaction	varchar(20)	xxxx		ATM Debit, Credit,counter, ibanking
	service_charge	Service charge for each transaction	int	xx		
	discount	Additional discount of the each transaction from coupons and other privileges (excluding membership discount and points redemption)	int	xxx		
	PAX_ID	Passenger's ID that the payment associates with	int	xxx		PK, FK PAX_ID [Passenger]
Cancellation	CXL_ID	Cancellation's ID	int	xxxxxx		PK
	penalty_fee	Additional fees for the cancellation	int	xxxx		
	PYMT_ID	Payment's ID associates with the cancellation	int	xxxxxx		PK, FK PYMT_ID [Payment]
Cash_Receipt	CASHR_ID	Cash receipt's ID	int	xxxxxx		PK
	medium	Medium at which the cash receipt was requested	varchar(20)	xxxx		
	date	Chas_receipt.issued date	date	YYYY-MM-DD		
	PYMT_ID	Payment's ID associates with the cash receipt	int	xxxxxx		PK, FK PYMT_ID [Payment]
Travel_Insurance	T1_ID	Travel Insurance's ID	int	xxxxxx		PK
	issued_date	Travel Insurance's purchase date	date	YYYY-MM-DD		
	travel_num	Number of passenger that the insure covers	int	x		
	exp_date	Travel Insurance's expiration date	int	xx		

Table 2 Data Dictionary cont.

dept_city	Departure city	char(3)	xxx	
dest_city	Destination city	char(3)	xxx	
trip_type	Type of the journey	varchar(20)	xxxx	
coverage_amount	Additional coverage amount	int	xxxx	
categories	Categorie(s) of the insurance	varchar(200)	XXXX	
special_description	Special condition for the insurance to be applicable	varchar(250)	xxx	
PYMT_ID	Payment's ID associates with the travel insurance	int	xxxxxx	
TICK_ID	Ticket's ID	int	xxxxxx	
reservation_date	Ticket's reservation date	date	YYYY-MM-DD	
PYMT_ID	Payment for the Ticket	int	xxxxxx	
Seat_ID	Seat's ID of the ticket	int	xxxx	
FLTS_ID	Flight schedule that the Ticket belongs to	int	xxxxxx	
Boarding_Pass	Boarding pass's ID	int	xxxxxx	
dept_time	Departure time	datetime	YYYY-MM-DD hh:mm:ss	
BP_time	Boarding time	datetime	YYYY-MM-DD hh:mm:ss	
TICK_ID	Associated Ticket's ID	int	xxxxxx	
AIRPT_ID	Airport's ID	char(4)	xxxx	
IATA_Code	Geolocation identifier code	char(3)	xxx	
flightline_num	Maximum number of operating flight per hour	int	xxx	
city	City where the Airport is located	varchar(20)	XXXXXX	
country	Country where the Airport is located	varchar(20)	XXXXXX	
latitude	Airport's latitude	varchar(30)	xxxxxxxx	
longitude	Airport's longitude	varchar(30)	xxxxxxxx	
elevation	Airport's elevation in meters	float	xx.xx	
runway_num	Number of available runways	int	x	
AIRPT_name	Airport name	varchar(250)	XXXXXX	
AIRP_ID	Airplane's ID	varchar(10)	xxxxxx	
company	Name of the manufacturing company of the airplane	varchar(100)	XXXXXX	
model	Airplane's model	varchar(100)	XXXX-XXXX	
max_capacity	Max number of passengers that can board the airplane	int	xxx	
num_class	Number of class on the airplane (ex. First, Business, and Economy)	int	x	1 to 3
type	Airplane's type	varchar(20)	XXXX	

Table 3 Data Dictionary cont.

	manufacture_date	Airplane's manufacturing date	date	YYYY-MM-DD		
Flight_Schedule	FLTS_ID	Flight schedule's ID	int	xxxxx		PK
	FLTCode	Flight code	char(20)	xxxx		
ScheduleDept_time	Scheduled departure time	datetime	YYYY-MM-DD hh:mm:ss			
ScheduleArr_time	Scheduled arrival time	datetime	YYYY-MM-DD hh:mm:ss			
FLT_date	Date of departure	date	YYYY-MM-DD			
airline_name	Name of the operating airline (under the code-share agreement)	varchar(250)	xxxxx			
terminal	Airport's terminal	char(1)	x			
checkin_counter	Airport's checkin counter	char(3)	xxx			
status	Status of the flight schedule whether it is still operating	varchar(30)	xxxx		En-Route, Landed Late, Landed on time	
R_ID	Route's ID	int	xxxxxx			PK
distance	Distance from departure to arrival airport	int	xxxx			
route_type	Route's type	varchar(30)	xxxxx			
point	Point earned from flying this route (only applied to FlyerBonus members)	int	xx			
DEPT_AIRPT	Departure Airport's ID	char(4)	xxx			FK AIRPT_ID [Airport]
ARR_AIRPT	Arrival Airport's ID	char(4)	xxx			FK AIRPT_ID [Airport]
N_EMP_ID	Network Planning' ID who approved the route	int	xxxxxx			FK EMP_ID [Employee]
Employee	Employee's ID	int	xxxxxx			PK
	Employee's first name	varchar(250)	XXXXX			
MName	Employee's middle name	varchar(100)	XXXXX	Y		
LName	Employee's last name	varchar(250)	XXXXX			
title	Employee's corporate title	varchar(100)	XXXXX	Y		
DOB	Employee's date of birth	date	YYYY-MM-DD			
gender	Employee's gender	char(1)	x		M, F	
employment_date	Employee's employment date	date	YYYY-MM-DD			
phone_number	Employee's phone number	bigint	xxxxxxxxxx			
salary	Employee's yearly salary	bigint	xxxxx			
SEMP_ID	Supervisor's employee identification number	int	xxxxxx	Y		EMP_ID [Employee]
AIRP_ID	Airplane's ID	int	xxxxxx			AIRP_ID [Airplane]
AIRPT_ID	Airport's ID	char(4)	xxx			AIRPT_ID [Airport]
PAX_ID	Passenger's ID associated with the Address	int	xxx			PAX_ID [Passenger]
Passenger_Address						

Table 4 Data Dictionary cont.

PAX_AID	Passenger Address' ID	int	xxxx		PK, FK	PAX_AID [Passenger_Address]
number	Passenger's house number	varchar(50)	xxxxxx			
street	Street or Road the passenger's resident is located	varchar(50)	XXXXXX			
county	Address' county	varchar(50)	XXXXX			
city	Address' city	varchar(50)	XXXXX			
country	Address' country	varchar(50)	XXXXX			
zip_code	Address' zipcode	varchar(10)	XXXXXX			
EMP_ID	Employee's ID associated with the Address	int	XXXXXX		PK, FK	EMP_ID [Employee]
EMP_AID	Employee Address' ID	int	xxxx		PK, FK	EMP_AID [Employee_Address]
number	Passenger's house number	varchar(50)	XXXXXX			
street	Street or Road the employee's resident is located	varchar(50)	XXXXX			
county	Address' county	varchar(50)	XXXXX			
city	Address' city	varchar(50)	XXXXX			
country	Address' country	varchar(50)	XXXXX			
zip_code	Address' zipcode	varchar(10)	XXXXX		PK, FK	FLTS_ID [Flight_Schedule]
Airplane_Operation_FS_Route	Flight Schedule's ID	int	XXXXXXX		PK, FK	R_ID [Route]
R_ID	Route's ID	int	XXXXXXX		PK, FK	AIRP_ID [Airplane]
AIRP_ID	Airport's ID	char(6)	XXXXXX		PK, FK	EMP_ID [Employee]
Network_Planning	Network Planning' ID	int	XXXXXX		PK, FK	
	algorithm_level	Metrics to measure NP knowledge with algorithm	varchar(20)	XXXXX		Novice, Moderate, Expert
Air_Crew	AEMP_ID	Air crew's ID	int	XXXXXX	PK, FK	EMP_ID [Employee]
	weight	Air crew's weight	int	xx		
	height	Air crew's height	int	xxx		
	vision	Air crew's vision	varchar(20)	xx/xx		
Cabin_Crew	CEMP_ID	Cabin crew's ID	int	XXXXXX	PK, FK	AEMP_ID [Employee]
	second_language	List of Cabin crew knowledge of second languages	varchar(300)	xx,xx,xx		
Maintenance_Engineer	MEMP_ID	Maintenance Engineer's ID	int	XXXXXX	PK, FK	EMP_ID [Employee]
	pratitioner_license	Necessary pratitioner license for performing maintenance check on the airplane	varchar(30)	XXXXX		
Pilot	PEMP_ID	Pilot's ID	int	XXXXXX	PK, FK	AEMP_ID [Air_Crew]
	year_of_experience	Pilot's year of experience	int	xx		
	license	Piloting license that Pilot obtains	char(4)	xxxx		

Table 5 Data Dictionary cont.

	english_certification	English certificate that Pilot obtains	int	x			
Pilot_Fly_FlightSch	P_EMP_ID	Pilot's ID	int	xxxxxx		PK, FK	PEMP_ID [Pilot]
	FLTS_ID	Flight Schedule's ID	int	xxxxxx		PK, FK	FLTS_ID [Flight_Schedule]
	cockpit_position	Pilot's cockpit position during flight operation	varchar(20)	xxxxxx	Captain, Copilot		
Maintenace_CHECK_Airplane	M_EMP_ID	Maintenance Engineer's ID	int	xxxxxx		PK, FK	MEMP_ID [Maintenance_Engineer]
	AIRP_ID	Airplane's ID	char(6)	xxxxxx		PK, FK	AIRP_ID [Airplane]

Table 6 Data Dictionary cont.

## 6 Table Description

	Passenger	PAX_ID	FName	MName	LName	gender	passport_num	DOB
1		101	Sunan	Jaijing	Aromdee	M	AA6342205	1991-06-04
2		102	Taweerat		Poolvaraluck	M	AA6235110	1987-06-06
3		103	Nakarin		Chaiyansan	M	AA2143376	1991-04-14
4		104	Jirattikarn	Malina	Kasamsun	F	AA1234546	1989-11-30
5		105	Petchra		Thanwareth	F	AA6326695	1993-03-13
6		106	Puttipat		Srisai	M	AA9874323	1998-02-23
7		107	Malika		Srisai	F	AA1594533	1988-07-04
8		108	Natee		Maleenon	M	AA6474058	1987-06-27
9		109	Tulaya	Jennifer	Khumpa	F	AA1923452	1977-03-14
10		110	Amitah	Anika	Singh	F	J8369854	1975-09-19
11		111	Vivek	Yuraj	Bhatia	M	J8565534	1984-08-23
12		112	Geetika		Chauhan	F	J8325112	2003-12-23
13		113	Carlos	James	Arya	M	J8436611	1973-08-17
14		114	Micah	Jones	Li	M	G34545410	1970-04-13
15		115	Davie	Sanjaya	Yang	M	G39450453	1990-04-20
16		116	Minami	Christine	Chung	F	M79004324	1996-04-11
17		117	Eric	Wanno	Zhao	M	E05123434	1992-05-17
18		118	Jonathan	Joseph	Kim	M	M49343554	1976-11-20
19		119	Giju	Jhohan	Yoon	F	M55604532	2000-07-14
20		120	Jiwon		Kim	M	M70656734	1982-02-08

Table 7 Table Description Passenger

Thai_Passenger	
TPAX_ID	national_ID
101	2188458582352
102	1285377555312
103	2984393277963
104	2104521308578
105	1134477642743
106	2495613948628
107	2290117429024
108	2648464069997
109	2397788352811

Table 8 Table Description Thai Passenger

Foreigner_Passenger		
FPAX_ID	visa_number	nationality
110	22363209	Indian
111	32403007	Indian
112	53255825	Indian
113	36708401	Indian
114	19378432	Chinese
115	92126640	Chinese
116	62827598	Korean
117	33240564	Chinese
118	48373740	Korean
119	94756037	Korean
120	35264912	Korean

Table 9 Table Description Foreigner Passenger

Seat			
Seat_ID	row_num	ST_ID	
1	42190	A1	305
2	95130	B1	305
3	12726	E1	305
4	88600	F1	305
5	43988	A2	305
6	93799	B2	305
7	46308	E2	305
8	59315	F2	305
9	41936	A3	305
10	78760	B3	305
11	29406	E3	305
12	20411	F3	305
13	44897	A7	304
14	67672	B7	304
15	85917	C7	304
16	44456	D7	304
17	12141	E7	304
18	49254	F7	304
19	60992	A8	304
20	29666	B8	304
21	52672	C8	304
22	29965	D8	304
23	64342	E8	304
24	71229	F8	304
25	84804	A10	304
26	21511	B10	304
27	95770	C10	304
28	71003	D10	304
29	40207	E10	304
30	59475	F10	304
31	61476	A11	303
32	24142	B11	303
33	53531	C11	303
34	31243	D11	303
35	84262	E11	303
36	63048	F11	303
37	13401	A12	303
38	19637	B12	303
39	58068	C12	303
40	66131	D12	303

41	83116	E12	303
42	77178	F12	303
43	47480	A20	302
44	21325	B20	302
45	49667	C20	302
46	44755	D20	302
47	25806	E20	302
48	52034	F20	302
49	27858	A21	302
50	87593	B21	302
51	11111	C21	302
52	86222	D21	302
53	42240	E21	302
54	50924	F21	302
55	88205	A22	301
56	67783	B22	301
57	53342	C22	301
58	77498	D22	301
59	36004	E22	301
60	32937	F22	301

Table 10 Table Description Seat

Seat Type	SeatT_ID	name	price
1	301	Economy	2500
2	302	EconomyLL	3000
3	303	EconomyC	3500
4	304	Business	20000
5	305	First	30000

Table 11 Table Description Seat Type

Contact_Detail							
CONT_ID	email	pnum	tnum	guardian	g_relationship	gnum	PAX_ID
333	sunan_a@mail.com	0856626740	023431335	Chutinan	friend	0858112651	101
192	taweerat_p@mail.com	0815870237		Titinan	father	0865510689	102
240	nakarin_c@mail.com	0863546420	027196823	Jirattikarn	spouse	0875929325	103
131	jirattikarn_k@mail.com	0875929325	029125734	Nakarin	spouse	0863546420	104
919	petchra_t@mail.com	0853631124	021672532	Puttipat	spouse	0822446335	105
678	puttipat_s@mail.com	0822446335		Petchra	spouse	0853631124	106
505	malika_s@mail.com	0870456365	029803085	Praprai	friend	0874942257	107
828	natee_m@mail.com	0882340098	029124780	Potjamarn	friend	0806173506	108
967	tulaya_k@mail.com	0862779436	024191174	Chotinan	son	0857299637	109
326	amitah_s@mail.com	0838577520	023343340	Natchaporn	daughter	0830259259	110
677	vivek_b@mail.com	0886185316		Vethica	spouse	0872634741	111
620	geetika_c@mail.com	0828051373	028630738	Vethica	mother	0866897157	112
564	carlos_a@mail.com	0857366238	029514450	Swanson	mother	0881959706	113
686	micah_l@mail.com	0842527828		Davie	friend	0898622868	114
282	davie_y@mail.com	0898622868		Micha	friend	0842527828	115
818	minami_c@mail.com	0854557435	028060521	Eric	spouse	0869339846	116
403	eric_z@mail.com	0869339846		Minami	spouse	0854557435	117
658	jonathan_k@mail.com	0864462398	024711593	Karen	mother	0868415581	118
127	giju_y@mail.com	0875173851	024666027	Jiwon	spouse	0835515591	119
721	jiwon_k@mail.com	0835515591	024209820	Giju	spouse	0875173851	120

Table 12 Table Description Contact Detail

FlyerBonus_membership							
FLYER_ID	passwd	MEM_discount	preferred_lang	ML_ID	PAX_ID	signup_date	
1	60152101	Amitah110	10	Thai	68378934	110	2020-12-14
2	60152109	Giju119	5	English	97863546	119	2022-01-24
3	60152100	Nakarin103	8	Thai	57256567	103	2020-07-16
4	60152207	Micah114	8	English	57256567	114	2020-11-04
5	60152201	Minami116	5	English	97863546	116	2021-01-28
6	60152119	Malika170	5	English	97863546	107	2021-12-19
7	60152211	Petchra105	5	Thai	97863546	105	2021-03-09
8	60152111	Taweerat102	5	Thai	97863546	102	2022-05-30
9	60152118	Vivek111	10	English	68378934	111	2020-10-14
10	60152210	Jonathan118	8	English	57256567	118	2021-03-23

Table 13 Table Description Flyer bonus membership

Membership_Level				
ML_ID	mem_name	qualifying_point	qualifying_sect or	validation_perio d
97863546	Priority	0	0	0
57256567	Premium	12500	35	12
68378934	Premium Plus	40000	50	12

Table 14 Table Description membership level

Cancellation		
CXL_ID	penalty_fee	PYMT_ID
1 102243	0	452168
2 219349	2000	234685
3 314456	0	254698
4 645734	2000	284152
5 456234	2000	251478
6 734812	0	784125
7 906904	0	646506
8 874623	0	796502
9 413245	0	253685
10 734812	2000	846321

Table 16 Table Description Cancellation

Cash_Receipt				
CASHR_ID	medium	date	PYMT_ID	
1 345244	Paper	2022-07-22 16:4	452168	
2 362123	Paper	2022-07-11 17:2	234685	
3 756234	Email	2022-07-26 4:13	254698	
4 175678	Email	2022-08-06 22:4	284152	
5 185345	Email	2022-08-14 14:2	251478	
6 342677	Paper	2022-08-17 9:27	784125	
7 323487	Email	2022-08-20 13:3	646506	
8 734563	Paper	2022-08-23 13:1	796502	
9 234712	Email	2022-08-27 20:3	253685	
10 978545	Paper	2022-09-09 0:11	846321	

Table 17 Table Description Cash Receipt

Travel_Insurance										
TI_ID	issued_date	travel_num	exp_date (days)	dept_city	dest_city	trip_type	coverage_amou nt	categories	special_descrip tion	PYMT_ID
1 578974	2022-07-11 17:2	1	90	BKK	CNX	one way	1000000	Loss of Life		234685
2 567964	2022-07-22 16:4	1	90	BKK	SIN	one way	500000	Medical Expense		452168
3 456824	2022-08-14 14:1	2	90	CEI	HAN	Round	10000	Bagage Delay	Every 6 hours/1000 THB	251478
4 136885	2022-08-17 9:26	2	90	USM	REP	Round	20000	Loss or Damage of Bagage		784125
5 897534	2022-08-17 9:26	1	90	BKK	HKT	one way	0	Trip Cancellation	Ticket price	646506
6 668974	2022-08-23 13:1	1	90	THS	BKK	one way	0	Trip Cancellation	Ticket price	796502
7 233456	2022-08-27 20:2	1	90	CNX	HAN	one way	0	Trip Cancellation	Ticket price	253685
8 135732	2022-08-11 4:05	1	90	BKK	CNX	one way	500000	Personal Liability		243675
9 987541	2022-08-15 9:11	2	90	BKK	CNX	Round	500000	Personal Liability		543673
10 334598	2022-09-05 12:5	2	90	BKK	CNX	Round	500000	Personal Liability		315859

Table 15 Table Description Travel Insurance

	Payment					
	PYMT_ID	PYMT_datetime	PYMT_mode	service_charge	discount	PAX_ID
1	112022	2022-07-08 12:0	ATM	25	0	101
2	251846	2022-07-09 10:1	Debit	20	500	101
3	234685	2022-07-11 17:2	Debit	20	500	101
4	965820	2022-07-14 12:2	Credit	50	200	102
5	852439	2022-07-15 15:2	ATM	25	0	102
6	866458	2022-07-17 20:3	counter	50	0	102
7	542123	2022-07-19 12:0	ibanking	0	0	103
8	447573	2022-07-21 10:4	ATM	25	0	103
9	452168	2022-07-22 16:4	Debit	20	500	103
10	212417	2022-07-22 2:55	Debit	20	500	104
11	845136	2022-07-23 4:49	Credit	50	200	104
12	513346	2022-07-24 8:22	ATM	25	0	104
13	254698	2022-07-22 16:4	counter	50	0	105
14	545168	2022-07-27 17:1	ibanking	0	0	105
15	364521	2022-07-28 12:0	ATM	25	0	105
16	121212	2022-07-30 22:5	Credit	50	200	106
17	567285	2022-07-31 12:0	Debit	20	500	106
18	364215	2022-08-01 16:4	Credit	0	200	106
19	854210	2022-08-01 13:5	ATM	25	0	107
20	181824	2022-08-02 22:4	counter	50	0	107
21	253687	2022-08-03 7:03	ibanking	0	0	107
22	254816	2022-08-03 10:4	ATM	25	0	108
23	258965	2022-08-04 20:5	ibanking	0	0	108
24	541782	2022-08-04 23:1	ibanking	0	0	108
25	471542	2022-08-05 8:07	Debit	20	500	109
26	284152	2022-08-06 22:4	Debit	20	500	109
27	554218	2022-08-08 21:4	Credit	50	200	109
28	256368	2022-08-09 12:4	ATM	25	0	110
29	417852	2022-08-11 16:3	counter	50	0	110
30	254178	2022-08-12 21:5	ibanking	0	0	110
31	251478	2022-08-14 14:1	Credit	0	200	111
32	256321	2022-08-16 5:02	Debit	20	500	111
33	784125	2022-08-17 9:26	Debit	20	500	111
34	254178	2022-08-17 20:5	Credit	50	200	112
35	325689	2022-08-18 10:3	Credit	0	200	112
36	646506	2022-08-17 9:26	Debit	20	500	112
37	852142	2022-08-20 0:53	ibanking	0	0	113
38	517528	2022-08-22 8:10	Credit	50	200	113
39	796502	2022-08-23 13:1	Debit	20	500	113
40	254631	2022-08-24 4:42	Debit	20	500	114

Table 18 Table Description Payment

41	138878	2022-08-26 12:3	Credit	0	200	114
42	253685	2022-08-27 20:2	ibanking	0	0	114
43	254178	2022-08-27 23:2	ibanking	0	0	115
44	854725	2022-08-27 10:0	Credit	50	0	115
45	245806	2022-08-29 5:33	ATM	25	0	115
46	256367	2022-08-30 17:5	ibanking	0	0	116
47	646882	2022-08-31 8:14	ibanking	0	0	116
48	528741	2022-08-31 16:4	ATM	25	0	116
49	846588	2022-09-01 23:4	Debit	20	500	117
50	824150	2022-09-03 10:2	Debit	20	500	117
51	315859	2022-09-05 12:5	Credit	50	200	117
52	253685	2022-09-06 8:07	ATM	25	0	118
53	881662	2022-09-07 20:3	counter	50	0	118
54	542187	2022-09-08 12:2	ibanking	0	0	118
55	846321	2022-09-09 0:10	ATM	25	0	119
56	231842	2022-09-10 9:06	Credit	50	200	119
57	243675	2022-08-11 4:05	Debit	20	500	119
58	826829	2022-09-12 23:1	ATM	25	0	120
59	843468	2022-09-14 8:37	ibanking	0	0	120
60	543673	2022-08-15 9:11	Debit	20	500	120

Table 20 Table Description Payment cont.

Boarding_Pass				
	BP_ID	dept_time	BP_time	TCK_ID
1	446665	2022-10-31 13.25	2022-10-31 13.10	978865
2	984937	2022-10-31 12.55	2022-10-31 12.40	805839
3	726738	2022-10-30 10.10	2022-10-30 09.55	288374
4	181616	2022-10-30 17.30	2022-10-30 17.15	118838
5	293940	2022-10-30 18.30	2022-10-30 18.15	395874
6	283736	2022-10-24 20.00	2022-10-24 19.45	734682
7	846535	2022-10-29 20.05	2022-10-29 19.50	378483
8	983635	2022-10-28 20.46	2022-10-28 20.31	829348
9	223398	2022-10-24 19.46	2022-10-24 19.31	648282
10	165247	2022-10-27 12.40	2022-10-27 12.25	485983

Table 19 Table Description Boarding Pass

Ticket				
TCK_ID	reservation_date	PYMT_ID	Seat_ID	FLTS_ID
1	399800	2022-07-24 8:22	513346	42190
2	378483	2022-08-09 12:4	256368	95130
3	485983	2022-09-12 23:1	826829	12726
4	287782	2022-08-05 8:07	471542	88600
5	288374	2022-07-30 22:5	121212	43988
6	648282	2022-09-06 8:07	253685	93799
7	244345	2022-08-06 22:4	284152	46308
8	553209	2022-07-15 15:2	852439	59315
9	171716	2022-08-11 16:3	417852	41936
10	642785	2022-07-17 20:3	866458	78760
11	309077	2022-08-03 7:03	253687	71229
12	805839	2022-07-19 12:0	542123	84804
13	829348	2022-08-30 17:5	256367	21511
14	339876	2022-08-01 16:4	364215	95770
15	214325	2022-07-09 10:1	251846	71003
16	100809	2022-08-04 23:1	541782	40207
17	199819	2022-08-08 21:4	554218	59475
18	788424	2022-07-22 2:55	212417	61476
19	555678	2022-08-02 22:4	181824	24142
20	400708	2022-08-04 20:5	258965	53531
21	734682	2022-08-05 8:07	471542	83116
22	324578	2022-07-08 12:0	112022	77178
23	746391	2022-07-23 4:49	845136	47480
24	395874	2022-08-03 10:4	254816	21325
25	989872	2022-07-31 12:0	567285	49667
26	299877	2022-07-27 17:1	545168	44755
27	978865	2022-07-14 12:2	965820	25806
28	300008	2022-07-28 12:0	364521	52034
29	118838	2022-08-01 13:5	854210	27858
30	989533	2022-07-21 10:4	447573	87593
31	656787	2022-08-12 21:5	254178	11111
32	445577	2022-08-16 5:02	256321	86222
33	229988	2022-08-17 20:5	254178	42240
34	112998	2022-08-18 10:3	325689	50924
35	909866	2022-08-20 0:53	852142	88205
36	494988	2022-08-22 8:10	517528	67783
37	272898	2022-08-24 4:42	254631	53342
38	454367	2022-08-26 12:3	138878	88600
39	837292	2022-08-27 23:2	254178	43988
40	794739	2022-08-27 10:0	854725	93799

Table 21 Table Description Ticket

Airport	AIRPT_ID	IATA_Code	flightline_num	city	country	latitude	longitude	elevation	runway_num	AIRPT_name
1	VTBD	DMK	48	Bangkok	Thailand	N 13° 54' 45.30"	E 100° 36' 24.30	2.74	2	Don Muang International Airport
2	VTBS	BKK	76	Samut Prakan	Thailand	N 13° 40' 51.02"	E 100° 44' 51.64	1.52	2	Suvarnabhumi Airport
3	VTCC	CNX	24	Chiang Mai	Thailand	N 18° 46' 06.36"	E 098° 57' 46.29	315.77	1	Chiang Mai International Airport
4	VTCT	CEI	16	Chiang Rai	Thailand	N 19° 57' 08.43"	E 099° 52' 58.54	390.14	1	Chiang Rai International Airport
5	VTSP	HKT	24	Phuket	Thailand	N 08° 06' 47.62"	E 098° 19' 00.70	24.99	1	Phuket International Airport
6	VTSS	HDY	8	Songkhla	Thailand	N 06° 55' 57.73"	E 100° 23' 39.07	27.43	1	Hat Yai International Airport
7	VTSG	KBV	22	Krabi	Thailand	N 08° 05' 45.49"	E 098° 59' 19.55	24.38	1	Krabi Airport
8	VTBO	TDX	12	Trat	Thailand	N 12° 16' 29.06"	E 102° 19' 09.08	32	1	Trat Airport
9	VTSM	USM	15	Surat Thani	Thailand	N 09° 32' 52.23"	E 100° 03' 44.81	19.51	1	Samui International Airport
10	VTPO	THS	8	Sukhothai	Thailand	N 17° 14' 16.77"	E 099° 49' 05.46	54.56	1	Sukhothai Airport
11	VTCH	HGN	64	Mae Hong Son	Thailand	N 19° 18' 06.00"	E 097° 58' 30.00	283.16	1	Mae Hong Son Airport
12	VTCL	LPT	40	Lampang	Thailand	N 18° 16' 15.36"	E 099° 30' 15.00	247.19	1	Lampang Airport
13	VVMKK	KUL	60	Kuala Lumpur	Malaysia	N 02° 44' 44.08"	E 101° 42' 35.70	21.03	2	Kuala Lumpur International Airport
14	VVNB	HAN	20	Hanoi	Vietnam	N 21° 13' 13.18"	E 105° 48' 20.07	12.19	2	Noi Bai International Airport
15	WSSS	SIN	42	Changi	Singapore	N 01° 21' 00.59"	E 103° 59' 39.76	6.71	3	Changi Airport
16	ZUCK	CKG	15	Chongqing	China	N 29° 43' 09.18"	E 106° 38' 30.04	416.05	1	Chongqing Jiangbei International Airport
17	YPPH	PER	27	Perth	Australia	S 31° 56' 25.00"	E 115° 58' 01.00	20.42	2	Perth Airport
18	VDPP	PNH	12	Phnom Penh	Cambodia	N 11° 32' 47.60"	E 104° 50' 38.90	12.19	1	Phnom Penh International Airport
19	VDSR	REP	15	Siem Reap	Cambodia	N 13° 24' 38.40"	E 103° 48' 46.22	17.07	1	Siem Reap International Airport
20	VYYY	RGN	16	Yangon	Myanmar	N 16° 54' 26.03"	E 096° 07' 59.66	33.22	1	Yangon International Airport
21	VTBU	UTP	21	Rayong	Thailand	N 12° 40' 47.80"	E 101° 00' 18.10	12.8	1	U-Tapao International Airport
22	VVTS	SGN	32	Ho Chi Minh	Vietnam	N 10° 49' 07.67"	E 106° 39' 06.68	10.06	2	Tan Son Nhat International Airport

Table 23 Table Description Airport

Airplane	AIRP_ID	company	model	max_capacity	num_class	type	manufacture_date
1	88084F	Airbus SAS	Airbus320-200	162	3	Airbus	2012-04-18
2	880C4A	Airbus SAS	Airbus319-100	138	3	Airbus	2001-07-11
3	880455	ATR	ATR72-600	70	3	ATR	1999-06-23
4	8832B0	Airbus SAS	Airbus320-200	162	3	Airbus	2013-10-10
5	8832B1	Airbus SAS	Airbus320-200	162	3	Airbus	2005-04-07
6	885966	Airbus SAS	Airbus319-100	144	3	Airbus	1997-08-20
7	881056	Airbus SAS	Airbus319-100	132	3	Airbus	2004-11-25
8	88596D	Airbus SAS	Airbus319-100	120	3	Airbus	2009-05-18
9	88434E	ATR	ATR72-500	70	3	ATR	2018-12-11
10	88530C	ATR	ATR72-500	70	3	ATR	2017-12-17

Table 22 Table Description Airplane

Flight_Schedule									
	FLTS_ID	FLTCode	ScheduleDept_time	ScheduleArr_time	FLT_date	airline_name	terminal	checkin_counte	Status
1	658344	PG174	2022-10-31 13.25	2022-10-31 15.00	2022-10-31	Bangkok Airways	C	F14	En-Route
2	654177	PG258	2022-10-31 12.55	2022-10-31 13.50	2022-10-31	Bangkok Airways	D	F7	En-Route
3	651180	PG164	2022-10-30 10.10	2022-10-30 11.25	2022-10-30	Bangkok Airways	C	F5	Landed Late
4	659358	PG214	2022-10-30 17.30	2022-10-30 18.50	2022-10-30	Bangkok Airways		F11	Landed on time
5	658114	PG308	2022-10-30 18.30	2022-10-30 19.30	2022-10-30	Bangkok Airways		F12	Landed on time
6	656556	PG264	2022-10-24 20.00	2022-10-24 21.05	2022-10-24	Bangkok Airways	B	F9	Landed on time
7	650823	PG279	2022-10-29 20.05	2022-10-29 21.10	2022-10-29	Bangkok Airways	D	F10	En-Route
8	654235	PG191	2022-10-28 20.46	2022-10-28 21.15	2022-10-28	Bangkok Airways	C	F12	En-Route
9	652153	PG220	2022-10-24 19.46	2022-10-24 21.14	2022-10-24	Bangkok Airways	B	F8	Landed on time
10	650997	PG172	2022-10-27 12.40	2022-10-27 13.55	2022-10-27	Bangkok Airways		F13	Landed Late
11	657845	PG908	2022-10-22 12.35	2022-10-22 13.55	2022-10-22	Cambodia Angkor Air	I	B12	Landed on time
12	654488	PG704	2022-10-22 11.40	2022-10-22 13.10	2022-10-22	Myanmar Airways International		A11	Landed Late
13	653156	PG962	2022-10-31 12.10	2022-10-31 14.15	2022-10-31	Singapore Airlines		A2	En-Route
14	653389	ZA936	2022-10-30 19.41	2022-10-30 20.36	2022-10-30	Sky Angkor Airlines	I	H15	Landed on time
15	659925	ZA1679	2022-10-29 20.00	2022-10-29 21.20	2022-10-29	Sky Angkor Airlines	A	F5	Landed Late
16	655225	ZA679	2022-10-29 19.15	2022-10-29 20.20	2022-10-29	Sky Angkor Airlines	C	F3	Landed on time
17	657976	TR671	2022-10-28 12.30	2022-10-28 13.25	2022-10-28	Tigerair	B	F1	En-Route
18	650035	SQ713	2022-10-27 23.15	2022-10-28 00.18	2022-10-27	Singapore Airlines	I	F2	En-Route
19	658189	8M351	2022-10-26 15.00	2022-10-26 16.15	2022-10-26	Myanmar Airways International	A	A5	Landed Late
20	659260	8M332	2022-10-26 12.25	2022-10-26 13.45	2022-10-26	Myanmar Airways International	B	F3	Landed on time
21	658173	PG934	2022-11-01 08.35	2022-11-01 09.50	2022-11-01	Myanmar Airways International	I	F1	Landed on time
22	654398	PG961	2022-11-01 09.25	2022-11-01 11.20	2022-11-01	Bangkok Airways		F13	En-Route
23	655993	SQ709	2022-11-01 19.15	2022-11-02 21.10	2022-11-01	Singapore Airlines	A	F2	En-Route
24	654040	PG907	2022-10-27 11.30	2022-10-23 12.45	2022-10-27	Sky Angkor Airlines	B	F7	Landed Late
25	656432	PG219	2022-10-26 10.35	2022-10-26 11.55	2022-10-26	Bangkok Airways	C	F15	Landed on time
26	654676	PG284	2022-10-26 09.30	2022-10-26 10.40	2022-10-26	Bangkok Airways		F13	Landed on time
27	651104	VZ307	2022-10-25 09.00	2022-10-25 10.55	2022-10-25	Thai Vietjet Air	C	F2	Landed Late
28	653004	VZ137	2022-10-26 12.30	2022-10-26 14.00	2022-10-26	Thai Vietjet Air		C7	Landed on time
29	655108	8M350	2022-10-29 20.30	2022-10-20 21.45	2022-10-29	Myanmar Airways International	I	A1	En-Route
30	653265	VJ805	2022-10-30 08.00	2022-10-20 09.20	2022-10-30	Thai Vietjet Air	C	F13	En-Route

Table 24 Flight Schedule

Route							
	R_ID	distance	route_type	point	DEPT_AIRPT	ARR_AIRPT	N_EMP_ID
1	641589	594	Domestic	50	VTBS	VTCC	632281
2	649853	671	Domestic	50	VTBS	VTSP	632299
3	644480	504	International	20	VTBS	VDPP	632297
4	644725	333	International	20	VTBS	VDSR	632302
5	647701	716	International	50	VTBS	VVTS	632306
6	640760	1410	International	50	VTBS	WSSS	632282
7	641923	633	International	50	VTCT	VVNB	632292
8	645642	766	International	50	VTCC	VVNB	632310
9	648043	249	Domestic	10	VTSP	VTSM	632312
10	642076	504	International	50	VDPP	VTBS	632305
11	643026	231	Domestic	10	VTBO	VTBS	632306
12	640480	406	Domestic	20	VTPO	VTBS	632282
13	648870	463	Domestic	20	VTSM	VTBS	632292
14	640083	592	International	50	VTSM	VDSR	632310
15	646846	361	Domestic	20	VTBU	VTSM	632312

Table 25 Table Description Route

	Employee				20-45						Employee duration
	EMP_ID	FName	MName	LName	title	DOB	gender	employment_da	phone_number	salary	SEMP_ID
Air Crew	632304	Dhanajay		Bhari		1994-04-10	M	2012-12-25	0868252690	435000	632286
Air Crew	632309	Yong		Hae		1993-01-07	F	2008-06-26	0829736985	500000	632287
Air Crew	632317	Kanokwan		Suprachan		1993-07-15	F	2015-04-09	0820868107	668200	632307
Air Crew	632288	Badinton		Phatipatanawong		1991-12-15	M	2006-06-17	0858839097	450000	632286
Air Crew	632319	Jirapong		Pongprakert		1992-05-17	M	2005-06-16	0860988876	540000	632287
Air Crew	632283	Sinn		Sudham		1991-08-03	F	2005-03-03	0870697011	645000	632307
Air Crew	632286	Yindee		Prateung	Supervisor	1991-02-02	F	2011-08-25	0887691784	743000	632308
Air Crew	632287	Sukanda	Prasert	Palathai	Supervisor	1991-10-22	F	2008-12-27	0826746697	790000	632277
Air Crew	632307	Kajal	Narukka	Nazareth	Supervisor	1991-02-05	F	2008-09-24	0835617064	800000	632285
Air Crew	632291	Phisan		Toktumsonteen		1989-12-03	M	2005-12-14	0888299754	850000	632294
Pilot - Air Crew	632318	Chaimongkol		Puttinachon		1988-08-17	M	2016-05-26	0845980397	1800000	632293
Pilot - Air Crew	632289	Chakrabandhu		Sivaraksa		1987-08-15	M	2010-06-09	0876591707	1900000	632303
Pilot - Air Crew	632314	Karen	Mitchell	Lewis		1987-03-24	F	2007-07-26	0869318155	1900000	632313
Pilot - Air Crew	632321	Ajay	Bihalni	Sethi		1987-10-17	M	2017-11-18	0861322181	2000000	632301
Pilot - Air Crew	632295	Saowapa		Warisanawan		1986-03-22	F	2009-09-01	0833436071	2000000	632313
Pilot - Air Crew	632294	Yupin		Montri	Supervisor	1985-02-19	F	2006-05-20	0825710375	2500000	632296
Pilot - Air Crew	632293	Sasikarn		Ekaluck	Supervisor	1983-09-22	F	2019-02-17	0809024830	2500000	632298
Pilot - Air Crew	632303	Ajay		Sehgal	Supervisor	1983-09-17	M	2012-11-24	0873237493	2500000	632279
Pilot - Air Crew	632313	Don	Christopher	Chul	Supervisor	1982-11-22	M	2012-05-29	0805382006	2500000	632298
Pilot - Air Crew	632301	Sanjana	Malik	Prabhakar	Supervisor	1982-07-03	F	2014-04-18	0877200909	2500000	632279
Engineer	632322	Rathana		Rattikanawong		2002-10-29	M	2017-10-20	0843798590	58000	632290
Engineer	632323	Putinard		Wongkarung		1989-02-01	M	2019-04-16	0865779350	58000	632311
Engineer	632324	Pattiphan		Karuncharman		1987-11-21	M	2013-02-15	0802152620	58000	632320
Engineer	632325	Angkhana		Buraphanin		1988-03-27	M	2008-05-07	0883383060	90000	632284
Engineer	632326	Puttipong		Narakhanwong		1987-10-16	M	2008-10-28	0843387304	110000	632300
Engineer	632290	Sunaroj	Vinayak	Sethi	Supervisor	1979-11-29	M	2013-10-14	0863579329	140000	632298
Engineer	632311	Ryan	Bihari	Sethi	Supervisor	1980-06-08	M	2015-07-11	0826684270	140000	632279
Engineer	632320	Amronray		Yingmekin	Supervisor	1980-06-08	F	2010-06-04	0893845665	151000	632296
Engineer	632284	Intria	Pranee	Iemtadananai	Supervisor	1979-01-11	F	2008-06-25	0823684119	151000	632298
Engineer	632300	Manjusha	Viki	Jain	Supervisor	1979-09-30	M	2012-05-23	0890876782	151000	632279
Management	632308	Pan		Jung-Hwa	Director	1979-09-26	F	2009-04-15	0895029367	2000000	632296
Management	632277	Tammeti	Suthama	Chitwittachaporn	Director	1978-07-13	M	2009-11-30	0844286375	2000000	632298
Management	632285	Pimchanok		Wuttanidai	Director	1977-12-25	F	2017-04-11	0823343665	2000000	632279
Management	632296	Vikenti	Joseph	Makhovnick	Chief operations officer	1978-06-04	M	2005-03-31	0822491628	2900000	632296
Management	632298	Kanokrat		Kasamsun	Chief marketing officer	1978-10-14	F	2018-10-31	0897614287	2900000	632298
Management	632279	Soabaskorn		Mechaimak	Chief information officer	1976-07-14	M	2007-09-19	0877601687	2934742	632279
Management	632316	Armani	Manu	Lawson	Chief financial officer	1975-11-12	M	2017-08-17	0827471743	4440000	632316
Management	632278	Nuengrutai		Rattanabanshi	Chief executive officer	1975-10-01	M	2017-10-03	0885567065	4815157	632278
Network Planning	632281	Thanyara		Kaeynanoon		1999-10-19	F	2015-12-24	0862284178	250000	632310
Network Planning	632299	Burapol		Mintonki		1999-04-01	M	2009-10-07	0827064328	250000	632312
Network Planning	632297	Phisani		Sindudeja		1998-03-27	M	2008-09-09	0854089755	250000	632305
Network Planning	632302	Sonali	Suzi	Garg		1997-12-18	F	2012-02-18	0856030527	250000	632310
Network Planning	632306	Mohini	Mikka	Das		1997-05-19	F	2012-04-25	0841525429	250000	632312
Network Planning	632282	Tookta		Chearavanont		1996-09-18	F	2017-12-03	0832928918	250000	632305
Network Planning	632292	Kittikorn		Chaipoowapat		1995-12-27	M	2018-01-31	0826985335	250000	632305
Network Planning	632310	Seo		Hajoon	Supervisor	1996-03-11	M	2015-01-22	0874287687	300000	632296
Network Planning	632312	Nae		Man-Shik	Supervisor	1995-11-24	M	2005-04-22	0855729175	300000	632298
Network Planning	632305	Ayush	Kruti	Jain	Supervisor	1995-03-29	M	2005-08-21	0808435764	300000	632279
Normal	632333	Thanit		Kingkradeng		2002-11-13	M	2008-07-13	0894595800	150000	632328
Normal	632330	Tuptim		Thailanguaoy		2002-10-27	F	2008-10-21	0838355664	150000	632327
Normal	632329	Pattama		Thammungkong		2001-05-05	M	2009-03-22	0811956913	150000	632336
Normal	632331	Niyom		Sungkong		1996-07-06	M	2017-12-29	0818936568	150000	632328
Normal	632332	Adung	Sraya	Sethi		1995-12-29	F	2016-12-01	0818731169	150000	632327
Normal	632335	Nissorn	Chayunart	Ponphaipoon		1995-11-21	M	2009-06-05	0819458049	150000	632336

Table 26 Table Description Employee

EMP_ID	FName	MName	LName	title	DOB	gender	employment_da	phone_number	salary	SEMP_ID
632286	Yindee		Prateung	Supervisor	1991-02-02	F	2011-08-25	0887691784	743000	632308
632287	Sukanda	Prasert	Palathai	Supervisor	1991-10-22	F	2008-12-27	0826746697	790000	632277
632307	Kajal	Narukka	Nazareth	Supervisor	1991-02-05	F	2008-09-24	0835617064	800000	632285
632294	Yupin		Montri	Supervisor	1985-02-19	F	2006-05-20	0825710375	2500000	632296
632293	Sasikarn		Ekaluck	Supervisor	1983-09-22	F	2019-02-17	0809024830	2500000	632298
632303	Ajay		Sehgal	Supervisor	1983-09-17	M	2012-11-24	0873237493	2500000	632279
632313	Don	Christopher	Chul	Supervisor	1982-11-22	M	2012-05-29	0805382006	2500000	632298
632301	Sanjana	Malik	Prabhakar	Supervisor	1982-07-03	F	2014-04-18	0877200909	2500000	632279
632290	Sunaroj	Vinayak	Sethi	Supervisor	1979-11-29	M	2013-10-14	0863579329	140000	632298
632311	Ryan	Bihari	Sethi	Supervisor	1980-06-08	M	2015-07-11	0826684270	140000	632279
632320	Amronray		Yingmekin	Supervisor	1980-06-08	F	2010-06-04	0893845665	151000	632296
632284	Intira	Pranee	Iemtadanai	Supervisor	1979-01-11	F	2008-06-25	0823684119	151000	632298
632300	Manjusha	Viki	Jain	Supervisor	1979-09-30	M	2012-05-23	0890876782	151000	632279
632310	Seo		Hajoon	Supervisor	1996-03-11	M	2015-01-22	0874287687	300000	632296
632312	Nae		Man-Shik	Supervisor	1995-11-24	M	2005-04-22	0855729175	300000	632298
632305	Ayush	Kruti	Jain	Supervisor	1995-03-29	M	2005-08-21	0808435764	300000	632279
632328	Rungruedeen		Yingyungyong	Supervisor	1992-09-20	F	2013-08-02	0849228668	325000	632296
632327	Monklong	Bhanthai	Paireerak	Supervisor	1991-10-13	M	2016-11-25	0885045688	325000	632298
632336	Saowatharn		Rardchawat	Supervisor	1990-06-25	F	2016-11-28	0878508073	325000	632279
632315	Noe		Billard	Human Resource	1995-09-15	M	2012-06-12	0883391960	150000	632336
632280	Sasiwinon		Rattanabanshi	Executive Secretary To President	1981-04-08	F	2014-04-16	0804316382	200000	632278
632308	Pan		Jung-Hwa	Director	1979-09-26	F	2009-04-15	0895029367	2000000	632296
632277	Tanmeti	Suthama	Chitwitchaporn	Director	1978-07-13	M	2009-11-30	0844286375	2000000	632298
632285	Pimchanok		Wuttanidai	Director	1977-12-25	F	2017-04-11	0823343665	2000000	632279
632296	Vikenti	Joseph	Makhovnick	Chief operations officer	1978-06-04	M	2005-03-31	0822491628	2900000	632296
632298	Kanokrat		Kasamsun	Chief marketing officer	1978-10-14	F	2018-10-31	0897614287	2900000	632298
632279	Soabaskorn		Mechaimak	Chief information officer	1976-07-14	M	2007-09-19	0877601687	2934742	632279
632316	Armani	Manu	Lawson	Chief financial officer	1975-11-12	M	2017-08-17	0827471743	4440000	632316
632278	Nuengrutai		Rattanabanshi	Chief executive officer	1975-10-01	M	2017-10-03	0885567065	4815157	632278
632304	Dhanajay		Bhari		1994-04-10	M	2012-12-25	0868252690	435000	632286
632309	Yong		Hae		1993-01-07	F	2008-06-26	0829736985	500000	632287
632317	Kanokwan		Suprachan		1993-07-15	F	2015-04-09	0820868107	668200	632307
632288	Badinton		Phatipatanawong		1991-12-15	M	2006-06-17	0858839097	450000	632286
632319	Jirapong		Pongprakert		1992-05-17	M	2005-06-16	0860988876	540000	632287
632283	Sinn		Sudham		1991-08-03	F	2005-03-03	0870697011	645000	632307
632291	Phisan		Toktumsonteen		1989-12-03	M	2005-12-14	0888299754	850000	632294
632318	Chaimongkol		Puttinachon		1988-08-17	M	2016-05-26	0845980397	1800000	632293
632289	Chakrabandhu		Sivaraksaa		1987-08-15	M	2010-06-09	0876591707	1900000	632303
632314	Karen	Mitchell	Lewis		1987-03-24	F	2007-07-26	0869318155	1900000	632313
632321	Ajay	Bihalni	Sethi		1987-10-17	M	2017-11-18	0861322181	2000000	632301
632295	Saowapa		Warisanawan		1986-03-22	F	2009-09-01	0833436071	2000000	632313
632322	Ratthana		Rattikanawong		2002-10-29	M	2017-10-20	0843798590	58000	632290
632323	Putinard		Wongkarung		1989-02-01	M	2019-04-16	0865779350	58000	632311
632324	Pattiphan		Karuncharnan		1987-11-21	M	2013-02-15	0802152620	58000	632320
632325	Angkhana		Buraphanin		1988-03-27	M	2008-05-07	0883383060	90000	632284
632326	Puttipong		Narakhanwong		1987-10-16	M	2008-10-28	0843387304	110000	632300
632281	Thanyara		Kaeynnoon		1999-10-19	F	2015-12-24	0862284178	250000	632310
632299	Burapol		Mintonki		1999-04-01	M	2009-10-07	0827064328	250000	632312
632297	Phisani		Sindudeja		1998-03-27	M	2008-09-09	0854089755	250000	632305
632302	Sonali	Suzi	Garg		1997-12-18	F	2012-02-18	0856030527	250000	632310
632306	Mohini	Mikka	Das		1997-05-19	F	2012-04-25	0841524529	250000	632312
632282	Tookta		Cheatavanont		1996-09-18	F	2017-12-03	0832928918	250000	632305
632292	Kittikorn		Chaipoowapat		1995-12-27	M	2018-01-31	0826985335	250000	632305
632333	Thanit		Kingkradeng		2002-11-13	M	2008-07-13	0894595800	150000	632328
632330	Tuptim		Thaibanguaoy		2002-10-27	F	2008-10-21	0838355664	150000	632327
632329	Pattama		Thammungkong		2001-05-05	M	2009-03-22	0811956913	150000	632336
632331	Niyom		Sungkong		1996-07-06	M	2017-12-29	0818936568	150000	632328
632332	Adung	Sraya	Sethi		1995-12-29	F	2016-12-01	0818731169	150000	632327
632335	Nissorn	Chayunart	Ponphalboon		1995-11-21	M	2009-06-05	0819458049	150000	632336
632334	Pundareek		Suprija		1993-07-28	F	2015-01-23	0888744664	150000	632328

Table 27 Table Description Employee cont.

Airplane_CAN_LAND_Airport		
1	AIRP_ID	AIRPT_ID
2	880455	VTCL
3	880455	ZUCK
4	880455	VVTS
5	881056	WMKK
6	881056	VYYY
7	885966	VTSG
8	885966	VTBO
9	885966	VTSM
10	88084F	VTSM
11	88084F	VVNB
12	880C4A	VTCC
13	880C4A	VDSR
14	880C4A	VTSP
15	8832B0	VTCT
15	8832B0	VTCT
16	8832B0	VTSS
17	8832B0	YPPH
18	8832B0	VTBO
19	8832B1	VTCH
20	8832B1	YPPH
21	8832B1	VTBU
22	88434E	VTPO
23	88434E	WSSS
24	88530C	VTBD
25	88530C	VDPP
26	88530C	VTCC
27	88596D	VTBS
28	88596D	VTSP
29	88596D	VTCT
30	88596D	VTSG

Table 28 Table Description Airplane Can Land Airport

Passenger_Address								
	PAX_ID	PAX_AID	number	street	county	city	country	zip_code
Thai Passenger	101	5678	322 Sukhothai 2	Suan Chitlada	Dusit	Bangkok	Thailand	10110
	102	5679	365/2-3	Phrasumen	Bavornnives	Bangkok	Thailand	10200
	103	5680	1770-1772	Sukhumvit	Prakanong	Bangkok	Thailand	10250
	104	5681	64/18 Soi Sainampueng	Sukhumvit	Klongtoey	Bangkok	Thailand	10110
	105	5682	231 9Th Floor The Park Place Ath Building	Ratchadamri	Pathumwan	Bangkok	Thailand	10330
	106	5683	8/25-27	Kanchanapisek	Kanchanapisek	Bangkok	Thailand	10160
	107	5684	95/397-8 Soi Chiangkong	Rama 3	Chong Nonsree	Bangkok	Thailand	10120
	108	5685	98/205 Laksee Village	Chaengwatana	Laksi	Bangkok	Thailand	10210
	109	5686	314/23	Rajaprarop	Phayathai	Bangkok	Thailand	10400
	110	5687	144/110 Soi Uthit 1	Klong Chan	Bang Kapi	Bangkok	Thailand	10240
Foreign Passenger	111	5688	23/2 Moo 3 Soi Phalai	Chaofa	Muang	Phuket	Thailand	83000
	112	5689	Moo 5	Kan Ham	Uthai	Phra Nakhon Si Ayutth	Thailand	13210
	113	5690	126/19-20 Soi Ekamai	Sukhumvit	Klongton Nua	Bangkok	Thailand	10110
	114	5691	54 Montree	Ladyai	Phuket	Thailand		83000
	115	5692	32/45-6 Soi 8	Charansanitwong	Bangkok	Bangkok	Thailand	10200
	116	5693	189 Soi Asoke	Sukhumvit	Watthana	Bangkok	Thailand	10110
	117	5694	28/9 Moo 10	Ekachai	Bangbon	Bangkok	Thailand	10150
	118	5695	89/493 Soi Wat t 3	Chalermphrakiat	Bangsrimuang	Nonthaburi	Thailand	11000
	119	5696	501/77	Nanglinchee	Chongnonsi	Bangkok	Thailand	10120
	120	5697	1020/123 Soi 57	Prachaithit	Bang Mod	Bangkok	Thailand	10140

Table 29 Table Description Passenger Address

Employee_Address								
	EMP_ID	EMP_AID	number	street	county	city	country	zip_code
1	632304	1234	10/1 Soi Farmwatana	Rama 4	Prakanong	Bangkok	Thailand	10110
2	632309	1235	60/38-39	Ramintrra 56	Kannayao	Bangkok	Thailand	10230
3	632317	1236	216/6	Suksawad	Bangoakok	Bangkok	Thailand	10104
4	632288	1237	31/1 Soi Pracha	Uthit 54	Bangmod	Bangkok	Thailand	10140
5	632319	1238	501/77	Nanglinchee	Chongnonsi	Bangkok	Thailand	10120
6	632283	1239	281/16	Suriwong	Suriyawong	Bangkok	Thailand	10500
7	632286	1240	Room 505	Chaengwatana	Pakkred	Bangkok	Thailand	11120
8	632287	1241	15/87-9 Gp 9	Ladprao 53	Lad Prao	Bangkok	Thailand	10230
9	632307	1242	21/4 Soi	Sukhumvit 29	Klongtoey	Bangkok	Thailand	10110
10	632291	1243	11/5 Soi 13	Sukhumvit	Klongtoey	Bangkok	Thailand	10110
11	632318	1244	198 Soi Sawang	Mahanakorn	Mahaprautaram	Bangkok	Thailand	10500
12	632289	1245	130/11 Soi 18	Lardyao	Chatuchak	Bangkok	Thailand	10900
13	632314	1246	1/99 Soi Ekasathaporn	Sukhaphibal 1	Bang Born	Bangkok	Thailand	10150
14	632321	1247	306/9-10 Soi Kiatichai	Asoke-Dindaeng	Din Daeng	Bangkok	Thailand	10320
15	632295	1248	778/15	Phaholyothin	Chatuchak	Bangkok	Thailand	10900
16	632294	1249	33/5 Soi 19	Sukhumvit	Khlong Toei	Bangkok	Thailand	10110
17	632293	1250	18 Soi Sirithamma	New Rd Wang Buraphapirom	Phra Nakhon	Bangkok	Thailand	10200
18	632303	1251	2/243 Soi 14	Ramintrra	Tha Rang	Bangkok	Thailand	10220
19	632313	1252	3 St Louis Soi 3	Chan	Sathorn	Bangkok	Thailand	10120
20	632301	1253	673/159 Soi Pattanakarn 30	Pattanakarn	Bangkok	Bangkok	Thailand	10250
21	632322	1254	154/8 Soi 1	Sukhumvit	Klongtoey Nua Watthana	Bangkok	Thailand	10110
22	632323	1255	691 Happylandsai 1	Klong Chan	Bang Kapi	Bangkok	Thailand	10240
23	632324	1256	16/48 Soi Vajana	Daokanong-Chomthong	Chomthong	Bangkok	Thailand	10150
24	632325	1257	224/2-3 Dinsaw	Sao Chingchar	Phra Nakhon	Bangkok	Thailand	10200
25	632326	1258	161-163 Chula Soi 30	Banthadthong	Wangmai	Bangkok	Thailand	10330
26	632290	1259	565	Sukhumvit	Klongton	Bangkok	Thailand	10110
27	632311	1260	121/13 Soi Sabaichai Suthisarnvinicha	Sam Saen Nork	Huai Khwang	Bangkok	Thailand	10320
28	632320	1261	110/32-33 Soi 23	Pracharat Sai 1	Bangkok	Bangkok	Thailand	10800
29	632284	1262	604/3	Phetburi 12	Payathai	Bangkok	Thailand	10400
30	632300	1263	640/29	New Taksin Klong Ton	Sa Khlong San	Bangkok	Thailand	10600
31	632308	1264	29 Soi Chalermsuk	Rachadaphisek	Ladyao	Bangkok	Thailand	10900
32	632277	1265	640/29	New Taksin	Klong Ton Sa	Bangkok	Thailand	10600
33	632285	1266	29 Soi Chalermsuk	Rachadaphisek	Ladyao	Bangkok	Thailand	10900
34	632296	1267	15 Soi Charoenakorn 32/1	Charoenakorn	Klongsan	Bangkok	Thailand	10600
35	632298	1268	323	Silom	Bang Rak	Bangkok	Thailand	10500
36	632279	1269	1138/51-52	Rama 3	Yan Nawa	Bangkok	Thailand	10120
37	632316	1270	135/1 Soi Kasemsuwan	Sukhumvit 50	Phra Khanong	Bangkok	Thailand	10250
38	632278	1271	2489	New Phetburi	Suanluang	Bangkok	Thailand	10250
39	632281	1272	59 Soi 13	Charoenakorn Road	Khlongsan	Bangkok	Thailand	10600
40	632299	1273	169-171 Soi Sukhumvit 62/1	Sukhumvit	Prakanong	Bangkok	Thailand	10260
41	632297	1274	146-152	Damrongruk Road	Khlongmahanak	Bangkok	Thailand	10100
42	632302	1275	28/15 Soi 36	Sukhumvit	Khlong Toei	Bangkok	Thailand	10110
43	632306	1276	677/88 Soi 5/1	Latphrao	Latyao	Bangkok	Thailand	10900
44	632282	1277	592/1 Soi Suanplu 5	South Sathorn	Thung Maha Maek	Bangkok	Thailand	10120
45	632292	1278	1875/617 Soi Panurangsee	Charansidvongs	Bang Plad	Bangkok	Thailand	10700
46	632310	1279	283	Larnluang	Wat Sommanas	Bangkok	Thailand	10100
47	632312	1280	26/3 Soi Atthakarnprasith	South Sathorn	Thung Maha Maek	Bangkok	Thailand	10120
48	632305	1281	32 Soi Santisuk	Latphrao 98	Latphrao	Bangkok	Thailand	10230
49	632333	1282	135/20-21	Surawong	Bangkok	Bangkok	Thailand	10500
50	632330	1283	68/30-1	Silom	Bangrak	Bangkok	Thailand	10500
51	632329	1284	99/168 Ladprao 41	Lardyao	Chatuchak	Bangkok	Thailand	10900
52	632331	1285	28/5 Soi Liabklongthabchang	Ladkrabang	Minburi	Bangkok	Thailand	10510
53	632332	1286	6 Soi Songphra	Rama 4	Mahapruktaram	Bangkok	Thailand	10500
54	632335	1287	2/9 Silom 13	Silom	Bangkok	Bangkok	Thailand	10500
55	632315	1288	297-299 Charoenakorn 10	Klongtonsai	Bangkok	Bangkok	Thailand	10600
56	632334	1289	36/51	Srinakarin	Suan Luang	Bangkok	Thailand	10250
57	632328	1290	50 Soi Kethuth	Ladprao 64	Wangthonglang	Bangkok	Thailand	10310
58	632327	1291	1604/2 Songwad Talad No	Samphantha Wong	Phan	Bangkok	Thailand	10100
59	632336	1292	9/1-2	Kampaengphet	Chatuchak	Bangkok	Thailand	10900
60	632280	1293	35/16 Soi 124	Ladprao	Wangthonglang	Bangkok	Thailand	10310

Table 30 Table Description Employee Address

Airplane_Operation_FS_Route		
FLTS_ID	R_ID	AIRP_ID
658344	641589	88084F
654177	649853	880C4A
651180	644480	880455
659358	644725	8832B0
658114	647701	8832B1
656556	640760	885966
650823	641923	881056
654235	645642	88596D
652153	648043	88434E
650997	642076	88530C
657845	643026	88084F
654488	640480	880C4A
653156	648870	880455
653389	640083	8832B0
659925	646846	8832B1
655225	641589	885966
657976	649853	881056
650035	644480	88596D
658189	644725	88434E
659260	647701	88530C
658173	640760	88084F
654398	641923	880C4A
655993	645642	880455
654040	648043	8832B0
656432	642076	8832B1
654676	643026	885966
651104	640480	881056
653004	648870	88596D
655108	640083	88434E
653265	646846	88530C

Table 31 Table Description Airplane Operation FS Route

Air_Crew			
EMP_ID	weight	height	vision
632304	88	180	20/20
632309	86	182	20/40
632317	68	180	20/40
632288	72	186	20/40
632319	76	190	20/40
632283	87	182	20/20
632286	70	185	20/20
632287	65	176	20/40
632307	84	175	20/40
632291	83	183	20/20
632318	73	173	20/20
632289	69	179	20/20
632314	67	184	20/20
632321	80	189	20/20
632295	85	185	20/20
632294	72	180	20/20
632293	65	181	20/20
632303	77	173	20/20
632313	81	166	20/20
632301	86	185	20/20

Table 33 Table Description Air Crew

Cabin_Crew	
EMP_ID	second_language
632304	English, Dutch
632309	English, Dutch, Mandarin
632317	English, Mandarin, Hindi
632288	English, Arabic
632319	English, Russian
632283	English
632286	English, Russian, Mandarin
632287	English, Japanese
632307	English, Korean, Arabic, Mandarin
632291	English, Dutch, Mandarin, Spanish

Table 32 Table Description Cabin Crew

Network_Planning		
	EMP_ID	algorithm_level
1	632281	Novice
2	632299	Novice
3	632297	Moderate
4	632302	Moderate
5	632306	Moderate
6	632282	Moderate
7	632292	Expert
8	632310	Expert
9	632312	Expert
10	632305	Expert

Table 35 Table Description Network Planning

Maintenance_Engineer	
EMP_ID	pratitioner_license
632322	Category B1
632323	Category B3
632324	Category C
632325	Category C
632326	Category A
632290	Category B3
632311	Category B1
632320	Category B1
632284	Category B2
632300	Category A

Table 34 Table Description Maintenance Engineer

Pilot				
	EMP_ID	year_of_experience	license	english_certification
1	632318	3	CPL	5
2	632289	10	PPL	5
3	632314	7	ATPL	5
4	632321	3	CPL	6
5	632295	9	ATPL	3
6	632294	2	CPL	6
7	632293	4	CPL	3
8	632303	9	PPL	4
9	632313	7	ATPL	5
10	632301	5	PPL	5

Table 36 Table Description Pilot

Maintenance_CHECK_Airplane	
M_EMP_ID	AIRP_ID
632322	88084F
632323	880C4A
632324	880455
632325	8832B0
632326	8832B1
632290	885966
632311	881056
632320	88596D
632284	88434E
632300	88530C
632322	885966
632323	880455
632324	88434E
632325	880C4A
632326	88530C
632290	881056
632311	88084F
632320	8832B0
632284	8832B1
632300	88596D
632322	8832B0

632323	88084F
632324	8832B1
632325	881056
632326	885966
632290	880C4A
632311	88530C
632320	88434E
632284	88596D
632300	880455

Table 37 Table Description Maintenance Check Airplane

Pilot_Fly_Flighth_Sch			
P_EMP_ID	FLTS_ID	cockpit_position	
632318	658344	Captain	USM-BKK
632289	658344	Co-pilot	USM-BKK
632314	654177	Captain	HKT-USM
632321	654177	Co-pilot	HKT-USM
632295	651180	Captain	USM-BKK
632294	651180	Co-pilot	USM-BKK
632293	659358	Captain	THS-BKK
632303	659358	Co-pilot	THS-BKK
632313	658114	Captain	TDX-BKK
632301	658114	Co-pilot	TDX-BKK
632318	650823	Captain	BKK-HKT
632289	650823	Co-pilot	BKK-HKT
632314	650997	Captain	USM-BKK
632321	650997	Co-pilot	USM-BKK
632295	654235	Captain	BKK-USM
632294	654235	Co-pilot	BKK-USM
632293	659925	Captain	BKK-PNH
632303	659925	Co-pilot	BKK-PNH
632313	655225	Captain	BKK-PNH
632301	655225	Co-pilot	BKK-PNH
632293	657976	Captain	BKK-SIN
632289	657976	Co-pilot	BKK-SIN
632313	650035	Captain	BKK-SIN
632301	650035	Co-pilot	BKK-SIN
632314	656432	Captain	BKK-CNX
632321	656432	Co-pilot	BKK-CNX
632295	658173	Captain	PNH-BKK
632294	658173	Co-pilot	PNH-BKK
632318	654398	Captain	BKK-SIN
632303	654398	Co-pilot	BKK-SIN
632318	654676	Captain	UTP-USM
632295	654676	Co-pilot	UTP-USM
632303	651104	Captain	CNX-HAN
632289	651104	Co-pilot	CNX-HAN
632321	653004	Captain	CEI-HAN
632314	653004	Co-pilot	CEI-HAN
632301	659260	Captain	BKK-REP
632293	659260	Co-pilot	BKK-REP
632313	658189	Captain	USM-REP
632294	658189	Co-pilot	USM-REP
632321	657845	Captain	REP-BKK
632295	657845	Co-pilot	REP-BKK
632303	654488	Captain	RGN-BKK
632314	654488	Co-pilot	RGN-BKK
632301	656556	Captain	KBV-BKK

Table 38 Table Description Pilot Fly Flight Schedule

Pilot_Fly_Flighth_Sch			
P_EMP_ID	FLTS_ID	cockpit_position	
632318	658344	Captain	USM-BKK
632318	652153	Captain	CNX-BKK
632289	652153	Co-pilot	CNX-BKK
632293	653156	Captain	SIN-USM
632313	653156	Co-pilot	SIN-USM
632293	653389	Captain	PNH-BKK
632313	653389	Co-pilot	PNH-BKK
632301	655993	Captain	USM-BKK
632303	655993	Co-pilot	USM-BKK
632295	654040	Captain	BKK-REP
632318	654040	Co-pilot	BKK-REP
632321	655108	Captain	CNX-RGN
632294	655108	Co-pilot	CNX-RGN
632289	653265	Captain	BKK-SGN
632314	653265	Co-pilot	BKK-SGN

Table 39 Table Description Pilot Fly Flight Schedule cont.

## 7 Data Definition Language Script

```
create database bangkokairways_final;  
use bangkokairways_final;  
create table passenger(  
    PAX_ID      int not null,  
    FName       varchar(250) not null,  
    MName       varchar(250),  
    LName       varchar(250) not null,  
    Pgender     char(1) not null,  
    passport_num varchar(25) not null,  
    DOB date not null,  
    constraint primary key (PAX_ID),  
    constraint Pgender check (Pgender in ('M','F')));  
create table seat_type(  
    SeatT_ID    int not null,  
    Sname        varchar(100) not null,  
    Price        int not null,  
    constraint primary key (SeatT_ID));  
create table membership_level(  
    ML_ID        int not null,  
    mem_name    varchar(20) not null,  
    qualifying_point int not null,  
    qualifying_sector int not null,  
    validation_period int not null,  
    constraint primary key (ML_ID));  
create table airport(  
    AIRPT_ID    char(4) not null,  
    IATA_Code   char(3) not null,
```

```
flightline_num int not null,  
city varchar(20) not null,  
country      varchar(20) not null,  
latitude     varchar(30) not null,  
longitude    varchar(30) not null,  
elevation    float not null,  
runway_num int not null,  
AIRPT_name  varchar(250) not null,  
constraint primary key (AIRPT_ID));
```

```
CREATE TABLE flight_schedule (  
FLTS_ID      int not null,  
FLTCode      char(20) not null,  
ScheduleDept_time datetime not null,  
ScheduleArr_time datetime not null,  
FLT_date date not null,  
airline_name varchar(100) not null,  
terminal      char(1) not null,  
checkin_counter   char(3) not null,  
status        varchar(30) not null,  
constraint primary key (FLTS_ID));
```

```
CREATE TABLE employee (  
EMP_ID       int not null,  
FName        varchar(250) not null,  
MName        varchar(250),  
LName        varchar(250) not null,  
title         varchar(100) not null,  
DOB          date not null,  
Egender      char(1) not null,  
employment_date date not null,
```

```
phone_number      bigint,  
salary           bigint,  
SEMP_ID          int,  
constraint primary key (EMP_ID),  
constraint supervisor_emp_id foreign key (SEMP_ID) references employee(EMP_ID),  
constraint Egender check (Egender in ('M','F'));
```

**CREATE TABLE thai\_passenger (**

```
TPAX_ID      int not null,  
national_ID  varchar(15) not null,  
constraint primary key (TPAX_ID, national_ID),  
constraint foreign key (TPAX_ID) references passenger(PAX_ID));
```

**CREATE TABLE foreign\_passenger (**

```
FPAX_ID      int not null,  
visa_number  varchar(15) not null,  
nationality   varchar(15) not null,  
constraint primary key (FPAX_ID, visa_number),  
constraint foreign key (FPAX_ID) references passenger(PAX_ID));
```

**CREATE TABLE seat (**

```
Seat_ID       int not null,  
row_num       char(10) not null,  
ST_ID        int not null,  
constraint primary key (Seat_ID, ST_ID),  
constraint foreign key (ST_ID) references seat_type(SeatT_ID));
```

**CREATE TABLE contact\_detail (**

```
CONT_ID      int not null,  
email        varchar(250) not null,  
pnum         char(10) not null,  
tnum         char(9),  
guardian     varchar(250) not null,
```

```

g_relationship      varchar(50) not null,
gnum                char(10) not null,
CPAX_ID              int not null,
constraint primary key (CONT_ID, CPAX_ID),
constraint foreign key (CPAX_ID) references passenger(PAX_ID));

```

**CREATE TABLE flyerbonus\_membership (**

```

FLYER_ID            int not null,
passwd              varchar(100) not null,
MEM_discount        int not null,
preferred_lang      varchar(20) not null default 'Thai',
ML_ID               int not null,
FLPAX_ID            int not null,
signup_date         date,
constraint primary key (FLYER_ID, ML_ID, FLPAX_ID),
constraint foreign key (ML_ID) references membership_level(ML_ID),
constraint foreign key (FLPAX_ID) references passenger(PAX_ID));

```

**CREATE TABLE payment (**

```

PYMT_ID             int not null,
PYMT_datetime       datetime not null,
PYMT_mode           varchar(20) not null,
service_charge      int not null default 0,
discount            int not null default 0,
PPAX_ID             int not null,
constraint primary key (PYMT_ID,PPAX_ID),
constraint foreign key (PPAX_ID) references passenger(PAX_ID),
constraint PYMT_mode check (PYMT_mode in ('ATM','Debit','Credit','counter','ibanking')));

```

**CREATE TABLE network\_planning(**

```

NEMP_ID             int not null,
algorithm_level     varchar(20) not null,

```

```
constraint primary key (NEMP_ID),
constraint foreign key (NEMP_ID) references employee(EMP_ID),
constraint algorithm_level check (algorithm_level in ('Novice','Moderate','Expert'));
```

**CREATE TABLE route (**

```
R_ID      int not null,
distance   int not null,
route_type varchar(30) not null,
point      int not null,
DEPT_AIRPT char(4) not null,
ARR_AIRPT  char(4) not null,
N_EMP_ID   int not null,
constraint primary key (R_ID),
constraint foreign key (DEPT_AIRPT) references airport(AIRPT_ID),
constraint foreign key (ARR_AIRPT) references airport(AIRPT_ID),
constraint foreign key (N_EMP_ID) references employee(EMP_ID);
```

**CREATE TABLE airplane (**

```
AIRP_ID    varchar(10) not null,
company    varchar(100) not null,
model      varchar(100) not null,
max_capacity int not null,
num_class   int not null default 3,
type       varchar(20) not null,
manufacture_date date not null,
constraint primary key (AIRP_ID),
constraint num_class check (num_class >= 1 and num_class <= 3));
```

**CREATE TABLE airplane\_can\_land\_airport(**

```
AIRP_ID    varchar(10) not null,
AIRPT_ID   char(4) not null,
constraint primary key (AIRP_ID,AIRPT_ID),
```

```
constraint foreign key (AIRP_ID) references airplane(AIRP_ID),
constraint foreign key (AIRPT_ID) references airport(AIRPT_ID));
```

**CREATE TABLE passenger\_address (**

```
PAPAX_ID          int not null,
PAX_AID           int not null,
number            varchar(50) not null,
street             varchar(50) not null,
county             varchar(50) not null,
city               varchar(50) not null,
country            varchar(50) not null,
zip_code           varchar(10) not null,
constraint primary key (PAPAX_ID, PAX_AID),
constraint foreign key (PAPAX_ID) references passenger(PAX_ID));
create index pass_address_id on passenger_address(PAX_AID);
```

**CREATE TABLE employee\_address (**

```
EEMP_ID          int not null,
EMP_AID           int not null,
number            varchar(50) not null,
street             varchar(50) not null,
county             varchar(50) not null,
city               varchar(50) not null,
country            varchar(50) not null,
zip_code           varchar(10) not null,
constraint primary key (EEMP_ID,EMP_AID),
constraint foreign key (EEMP_ID) references employee(EMP_ID));
create index emp_address_id on employee_address(EMP_AID)
```

**CREATE TABLE air\_crew (**

```
AEMP_ID          int not null,
weight            int not null,
```

```
height      int not null,  
vision      varchar(20) not null,  
constraint primary key (AEMP_ID),  
constraint foreign key (AEMP_ID) references employee(EMP_ID));
```

**CREATE TABLE cabin\_crew (**

```
CEMP_ID      int not null,  
second_language  varchar(300) not null,  
constraint primary key (CEMP_ID),  
constraint foreign key (CEMP_ID) references air_crew(AEMP_ID));
```

**CREATE TABLE maintenance\_engineer (**

```
MEMP_ID      int not null,  
pratitioner_license  varchar(30),  
constraint primary key (MEMP_ID),  
constraint foreign key (MEMP_ID) references employee(EMP_ID));
```

**CREATE TABLE pilot (**

```
PEMP_ID      int not null,  
year_of_experience  int not null,  
license      char(4) not null,  
english_certification  int not null,  
constraint primary key (PEMP_ID),  
constraint foreign key (PEMP_ID) references air_crew(AEMP_ID));
```

**CREATE TABLE cancellation (**

```
CXL_ID      int not null,  
penalty_fee  int not null,  
PYMT_ID     int not null,  
constraint primary key (CXL_ID,PYMT_ID),  
constraint foreign key (PYMT_ID) references payment(PYMT_ID));
```

**CREATE TABLE cash\_receipt (**

```
CASHR_ID    int not null,
```

```
medium          varchar(20) not null,  
date           date not null,  
PYMT_ID        int not null,  
constraint primary key (CASHR_ID, PYMT_ID),  
constraint foreign key (PYMT_ID) references payment(PYMT_ID));
```

**CREATE TABLE travel\_insurance (**

```
TI_ID          int not null,  
issued_date    date not null,  
travel_num     int not null,  
exp_date       int not null,  
dept_city      char(3) not null,  
dest_city      char(3) not null,  
trip_type      varchar(20) not null,  
coverage_amount int not null,  
categories     varchar(200) not null,  
special_description  varchar(250),  
PYMT_ID        int not null,  
constraint primary key (TI_ID, PYMT_ID),  
constraint foreign key (PYMT_ID) references payment(PYMT_ID));
```

**CREATE TABLE ticket (**

```
TCK_ID         int not null,  
reservation_date date not null,  
PYMT_ID        int not null,  
Seat_ID         int not null,  
FLTS_ID        int not null,  
constraint primary key (TCK_ID),  
constraint foreign key (PYMT_ID) references payment(PYMT_ID),  
constraint foreign key (Seat_ID) references seat(Seat_ID),  
constraint foreign key (FLTS_ID) references flight_schedule(FLTS_ID));
```

```
CREATE TABLE airplane_operation_fs_route (  
    FLTS_ID      int not null,  
    R_ID         int not null,  
    AIRP_ID      char(6) not null,  
    constraint primary key (FLTS_ID, R_ID, AIRP_ID),  
    constraint foreign key (FLTS_ID) references flight_schedule(FLTS_ID),  
    constraint foreign key (R_ID) references route(R_ID),  
    constraint foreign key (AIRP_ID) references airplane(AIRP_ID));
```

```
CREATE TABLE pilot_fly_flightsch (  
    P_EMP_ID        int not null,  
    FLTS_ID         int not null,  
    cockpit_position varchar(20) not null,  
    constraint primary key (P_EMP_ID, FLTS_ID),  
    constraint foreign key (P_EMP_ID) references pilot(PEMP_ID),  
    constraint foreign key (FLTS_ID) references flight_schedule(FLTS_ID),  
    constraint cockpit_position check (cockpit_position in ('Captain','Co-pilot')));
```

```
CREATE TABLE maintenance_check_airplane (  
    M_EMP_ID        int not null,  
    AIRP_ID         char(6) not null,  
    constraint primary key (M_EMP_ID, AIRP_ID),  
    constraint foreign key (M_EMP_ID) references maintenance_engineer(MEMP_ID),  
    constraint foreign key (AIRP_ID) references airplane(AIRP_ID));
```

```
CREATE TABLE boarding_pass (  
    BP_ID          int not null,  
    dept_time      datetime not null,  
    BP_time        datetime not null,  
    TCK_ID         int not null,  
    constraint primary key (BP_ID, TCK_ID),  
    constraint foreign key (TCK_ID) references ticket(TCK_ID));
```

## 8 Data Manipulation Language Script

```
use bangkokairways_final;
```

```
INSERT INTO passenger (PAX_ID, FName, MName, LName, Pgender, passport_num, DOB)
```

```
VALUES
```

```
('101', 'Sunan', 'Jaijing', 'Aromdee', 'M', 'AA6342205', '1991-06-04'),  
('102', 'Taweerat', "", 'Poolvaraluck', 'M', 'AA6235110', '1987-06-06'),  
('103', 'Nakarin', "", 'Chaiyansan', 'M', 'AA2143376', '1991-04-14'),  
('104', 'Jirattikarn', 'Malina', 'Kasamsun', 'F', 'AA1234546', '1989-11-30'),  
('105', 'Petchra', "", 'Thanwareth', 'F', 'AA6326695', '1993-03-13'),  
('106', 'Puttipat', "", 'Srisai', 'M', 'AA9874323', '1998-02-23'),  
('107', 'Malika', "", 'Srisai', 'F', 'AA1594533', '1988-07-04'),  
('108', 'Natee', "", 'Maleenon', 'M', 'AA6474058', '1987-06-27'),  
('109', 'Tulaya', 'Jennifer', 'Khumpa', 'F', 'AA1923452', '1977-03-14'),  
('110', 'Amitah', 'Anika', 'Singh', 'F', 'J8369854', '1975-09-19'),  
('111', 'Vivek', 'Yuraj', 'Bhatia', 'M', 'J8565534', '1984-08-23'),  
('112', 'Geetika', "", 'Chauhan', 'F', 'J8325112', '2003-12-23'),  
('113', 'Carlos', 'James', 'Arya', 'M', 'J8436611', '1973-08-17'),  
('114', 'Micah', 'Jones', 'Li', 'M', 'G34545410', '1970-04-13'),  
('115', 'Davie', 'Sanjaya', 'Yang', 'M', 'G39450453', '1990-04-20'),  
('116', 'Minami', 'Christine', 'Chung', 'F', 'M79004324', '1996-04-11'),  
('117', 'Eric', 'Wanno', 'Zhao', 'M', 'E05123434', '1992-05-17'),  
('118', 'Jonathan', 'Joseph', 'Kim', 'M', 'M49343554', '1976-11-20'),  
('119', 'Giju', 'Jhohan', 'Yoon', 'F', 'M55604532', '2000-07-14'),  
('120', 'Jiwon', "", 'Kim', 'M', 'M70656734', '1982-02-08');
```

```
INSERT INTO seat_type (SeatT_ID, Sname, price)
```

```
VALUES
```

```
('301', 'Economy', '2500'),  
('302', 'EconomyLL', '3000'),  
('303', 'EconomyC', '3500'),  
('304', 'Business', '20000'),  
('305', 'First', '30000');
```

**INSERT INTO membership\_level** (ML\_ID, mem\_name, qualifying\_point, qualifying\_sector, validation\_period)

VALUES

```
('97863546', 'Priority', '0', '0', '0'),  
('57256567', 'Premium', '12500', '35', '12'),  
('68378934', 'Premium Plus', '40000', '50', '12');
```

**INSERT INTO airport** (AIRPT\_ID, IATA\_Code, flightline\_num, city, country, latitude, longitude, elevation, runway\_num, AIRPT\_name)

VALUES

```
('VTBD', 'DMK', '48', 'Bangkok', 'Thailand', 'N 13° 54\' 45.30"', 'E 100° 36\' 24.30"', '2.74', '2', 'Don Muang International Airport'),  
('VTBS', 'BKK', '76', 'Samut Prakan', 'Thailand', 'N 13° 40\' 51.02"', 'E 100° 44\' 51.64"', '1.52', '2', 'Suvarnabhumi Airport'),  
('VTCC', 'CNX', '24', 'Chiang Mai', 'Thailand', 'N 18° 46\' 06.36"', 'E 098° 57\' 46.29"', '315.77', '1', 'Chiang Mai International Airport'),  
('VTCT', 'CEI', '16', 'Chiang Rai', 'Thailand', 'N 19° 57\' 08.43"', 'E 099° 52\' 58.54"', '390.14', '1', 'Chiang Rai International Airport'),  
('VTSP', 'HKT', '24', 'Phuket', 'Thailand', 'N 08° 06\' 47.62"', 'E 098° 19\' 00.70"', '24.99', '1', 'Phuket International Airport'),  
('VTSS', 'HDY', '8', 'Songkhla', 'Thailand', 'N 06° 55\' 57.73"', 'E 100° 23\' 39.07"', '27.43', '1', 'Hat Yai International Airport'),  
('VTSG', 'KBV', '22', 'Krabi', 'Thailand', 'N 08° 05\' 45.49"', 'E 098° 59\' 19.55"', '24.38', '1', 'Krabi Airport');
```

('VTBO', 'TDX', '12', 'Trat', 'Thailand', 'N 12° 16\' 29.06"', 'E 102° 19\' 09.08"', '32', '1', 'Trat Airport'),  
('VTSM', 'USM', '15', 'Surat Thani', 'Thailand', 'N 09° 32\' 52.23"', 'E 100° 03\' 44.81"', '19.51', '1', 'Samui International Airport'),  
('VTPO', 'THS', '8', 'Sukhothai', 'Thailand', 'N 17° 14\' 16.77"', 'E 099° 49\' 05.46"', '54.56', '1', 'Sukhothai Airport'),  
('VTCH', 'HGN', '64', 'Mae Hong Son', 'Thailand', 'N 19° 18\' 06.00"', 'E 097° 58\' 30.00"', '283.16', '1', 'Mae Hong Son Airport'),  
('VTCL', 'LPT', '40', 'Lampang', 'Thailand', 'N 18° 16\' 15.36"', 'E 099° 30\' 15.00"', '247.19', '1', 'Lampang Airport'),  
('WMKK', 'KUL', '60', 'Kuala Lumpur', 'Malaysia', 'N 02° 44\' 44.08"', 'E 101° 42\' 35.70"', '21.03', '2', 'Kuala Lumpur International Airport'),  
('VVNB', 'HAN', '20', 'Hanoi', 'Vietnam', 'N 21° 13\' 13.18"', 'E 105° 48\' 20.07"', '12.19', '2', 'Noi Bai International Airport'),  
('WSSS', 'SIN', '42', 'Changi', 'Singapore', 'N 01° 21\' 00.59"', 'E 103° 59\' 39.76"', '6.71', '3', 'Changi Airport'),  
('ZUCK', 'CKG', '15', 'Chongqing', 'China', 'N 29° 43\' 09.18"', 'E 106° 38\' 30.04"', '416.05', '1', 'Chongqing Jiangbei International Airport'),  
('YPPH', 'PER', '27', 'Perth', 'Australia', 'S 31° 56\' 25.00"', 'E 115° 58\' 01.00"', '20.42', '2', 'Perth Airport'),  
('VDPP', 'PNH', '12', 'Phnom Penh', 'Cambodia', 'N 11° 32\' 47.60"', 'E 104° 50\' 38.90"', '12.19', '1', 'Phnom Penh International Airport'),  
('VDSR', 'REP', '15', 'Siem Reap', 'Cambodia', 'N 13° 24\' 38.40"', 'E 103° 48\' 46.22"', '17.07', '1', 'Siem Reap International Airport'),  
('VYYY', 'RGN', '16', 'Yangon', 'Myanmar', 'N 16° 54\' 26.03"', 'E 096° 07\' 59.66"', '33.22', '1', 'Yangon International Airport'),  
('VTBU', 'UTP', '21', 'Rayong', 'Thailand', 'N 12° 40\' 47.80"', 'E 101° 00\' 18.10"', '12.8', '1', 'U-Tapao International Airport'),  
('VVTS', 'SGN', '32', 'Ho Chi Minh', 'Vietnam', 'N 10° 49\' 07.67"', 'E 106° 39\' 06.68"', '10.06', '2', 'Tan Son Nhat International Airport');

**INSERT INTO flight\_schedule** (FLTS\_ID, FLTCode, ScheduleDept\_time, ScheduleArr\_time, FLT\_date, airline\_name, terminal, checkin\_counter, status)

VALUES

('658344', 'PG174', '2022-10-31 13:25:00', '2022-10-31 15:00:00', '2022-10-31', 'Bangkok Airways', 'C', 'F14', 'En-Route'),

('654177', 'PG258', '2022-10-31 12:55:00', '2022-10-31 13:50:00', '2022-10-31', 'Bangkok Airways', 'D', 'F7', 'En-Route'),

('651180', 'PG164', '2022-10-30 10:10:00', '2022-10-30 11:25:00', '2022-10-30', 'Bangkok Airways', 'C', 'F5', 'Landed Late'),

('659358', 'PG214', '2022-10-30 17:30:00', '2022-10-30 18:50:00', '2022-10-30', 'Bangkok Airways', '2', 'F11', 'Landed on time'),

('658114', 'PG308', '2022-10-30 18:30:00', '2022-10-30 19:30:00', '2022-10-30', 'Bangkok Airways', '1', 'F12', 'Landed on time'),

('656556', 'PG264', '2022-10-24 20:00:00', '2022-10-24 21:05:00', '2022-10-24', 'Bangkok Airways', 'B', 'F9', 'Landed on time'),

('650823', 'PG279', '2022-10-29 20:05:00', '2022-10-29 21:10:00', '2022-10-29', 'Bangkok Airways', 'D', 'F10', 'En-Route'),

('654235', 'PG191', '2022-10-28 20:46:00', '2022-10-28 21:15:00', '2022-10-28', 'Bangkok Airways', 'C', 'F12', 'En-Route'),

('652153', 'PG220', '2022-10-24 19:46:00', '2022-10-24 21:14:00', '2022-10-24', 'Bangkok Airways', 'B', 'F8', 'Landed on time'),

('650997', 'PG172', '2022-10-27 12:40:00', '2022-10-27 13:55:00', '2022-10-27', 'Bangkok Airways', '2', 'F13', 'Landed Late'),

('657845', 'PG908', '2022-10-22 12:35:00', '2022-10-22 13:55:00', '2022-10-22', 'Cambodia Angkor Air', 'I', 'B12', 'Landed on time'),

('654488', 'PG704', '2022-10-22 11:40:00', '2022-10-22 13:10:00', '2022-10-22', 'Myanmar Airways International', '1', 'A11', 'Landed Late'),

('653156', 'PG962', '2022-10-23 12:10:00', '2022-10-23 14:15:00', '2022-10-31', 'Singapore Airlines', '1', 'A2', 'En-Route'),

('653389', 'ZA936', '2022-10-23 19:41:00', '2022-10-23 20:36:00', '2022-10-30', 'Sky Angkor Airlines', 'I', 'H15', 'Landed on time'),

('659925', 'ZA1679', '2022-10-29 20:00:00', '2022-10-29 21:20:00', '2022-10-29', 'Sky Angkor Airlines', 'A', 'F5', 'Landed Late'),

('655225', 'ZA679', '2022-10-29 19:15:00', '2022-10-29 20:20:00', '2022-10-29', 'Sky Angkor Airlines', 'C', 'F3', 'Landed on time'),

('657976', 'TR671', '2022-10-28 12:30:00', '2022-10-28 13:25:00', '2022-10-28', 'Tigerair', 'B', 'F1', 'En-Route'),

('650035', 'SQ713', '2022-10-27 23:15:00', '2022-10-28 00:18:00', '2022-10-27', 'Singapore Airlines', 'I', 'F2', 'En-Route'),

('658189', '8M351', '2022-10-26 15:00:00', '2022-10-26 16:15:00', '2022-10-26', 'Myanmar Airways International', 'A', 'A5', 'Landed Late'),

('659260', '8M332', '2022-10-26 12:25:00', '2022-10-26 13:45:00', '2022-10-26', 'Myanmar Airways International', 'B', 'F3', 'Landed on time'),

('658173', 'PG934', '2022-11-01 08:35:00', '2022-11-01 09:50:00', '2022-11-01', 'Myanmar Airways International', 'I', 'F1', 'Landed on time'),

('654398', 'PG961', '2022-11-01 09:25:00', '2022-11-01 11:20:00', '2022-11-01', 'Bangkok Airways', '1', 'F13', 'En-Route'),

('655993', 'SQ709', '2022-11-01 19:15:00', '2022-11-01 21:10:00', '2022-11-01', 'Singapore Airlines', 'A', 'F2', 'En-Route'),

('654040', 'PG907', '2022-10-27 11:30:00', '2022-10-27 12:45:00', '2022-10-27', 'Sky Angkor Airlines', 'B', 'F7', 'Landed Late'),

('656432', 'PG219', '2022-10-26 10:35:00', '2022-10-26 11:55:00', '2022-10-26', 'Bangkok Airways', 'C', 'F15', 'Landed on time'),

('654676', 'PG284', '2022-10-26 09:30:00', '2022-10-26 10:40:00', '2022-10-26', 'Bangkok Airways', '2', 'F13', 'Landed on time'),

('651104', 'VZ307', '2022-10-25 09:00:00', '2022-10-25 10:55:00', '2022-10-25', 'Thai Vietjet Air', 'C', 'F2', 'Landed Late'),

('653004', 'VZ137', '2022-10-26 12:30:00', '2022-10-26 14:00:00', '2022-10-26', 'Thai Vietjet Air', '1', 'C7', 'Landed on time'),

('655108', '8M350', '2022-10-29 20:30:00', '2022-10-29 21:45:00', '2022-10-29', 'Myanmar Airways International', 'I', 'A1', 'En-Route'),

('653265', 'VJ805', '2022-10-23 08:00:00', '2022-10-23 09:20:00', '2022-10-30', 'Thai Vietjet Air', 'C', 'F13', 'En-Route');

**INSERT INTO employee** (EMP\_ID, FName, MName, LName, title, DOB, Egender, employment\_date, phone\_number, salary, SEMP\_ID) VALUES

('632296', 'Vikenti', 'Joseph', 'Makhovnick', 'Chief operations officer', '1978-06-04', 'M', '2005-03-31', '0822491628', '2900000', '632296'),

('632298', 'Kanokrat', "", 'Kasamsun', 'Chief marketing officer', '1978-10-14', 'F', '2018-10-31', '0897614287', '2900000', '632298'),

('632279', 'Soabaskorn', "", 'Mechaimak', 'Chief information officer', '1976-07-14', 'M', '2007-09-19', '0877601687', '2934742', '632279'),

('632316', 'Armani', 'Manu', 'Lawson', 'Chief financial officer', '1975-11-12', 'M', '2017-08-17', '0827471743', '4440000', '632316'),

('632278', 'Nuengrutai', "", 'Rattanabanshi', 'Chief executive officer', '1975-10-01', 'M', '2017-10-03', '0885567065', '4815157', '632278'),

('632308', 'Pan', "", 'Jung-Hwa', 'Director', '1979-09-26', 'F', '2009-04-15', '0895029367', '2000000', '632296'),

('632277', 'Tanmeti', 'Suthama', 'Chitwitchaporn', 'Director', '1978-07-13', 'M', '2009-11-30', '0844286375', '2000000', '632298'),

('632285', 'Pimchanok', "", 'Wuttanidai', 'Director', '1977-12-25', 'F', '2017-04-11', '0823343665', '2000000', '632279'),

('632286', 'Yindee', "", 'Prateung', 'Supervisor', '1991-02-02', 'F', '2011-08-25', '0887691784', '743000', '632308'),

('632287', 'Sukanda', 'Prasert', 'Palathai', 'Supervisor', '1991-10-22', 'F', '2008-12-27', '0826746697', '790000', '632277'),

('632307', 'Kajal', 'Narukka', 'Nazareth', 'Supervisor', '1991-02-05', 'F', '2008-09-24', '0835617064', '800000', '632285'),

('632294', 'Yupin', "", 'Montri', 'Supervisor', '1985-02-19', 'F', '2006-05-20', '0825710375', '2500000', '632296'),

('632293', 'Sasikarn', "", 'Ekaluck', 'Supervisor', '1983-09-22', 'F', '2019-02-17', '0809024830', '2500000', '632298'),

('632303', 'Ajay', "", 'Sehgal', 'Supervisor', '1983-09-17', 'M', '2012-11-24', '0873237493', '2500000', '632279'),

('632313', 'Don', 'Christopher', 'Chul', 'Supervisor', '1982-11-22', 'M', '2012-05-29', '0805382006', '2500000', '632298'),

('632301', 'Sanjana', 'Malik', 'Prabhakar', 'Supervisor', '1982-07-03', 'F', '2014-04-18', '0877200909', '2500000', '632279'),

('632290', 'Sunaroj', 'Vinayak', 'Sethi', 'Supervisor', '1979-11-29', 'M', '2013-10-14', '0863579329', '140000', '632298'),

('632311', 'Ryan', 'Bihari', 'Sethi', 'Supervisor', '1980-06-08', 'M', '2015-07-11', '0826684270', '140000', '632279'),

('632320', 'Amronray', "", 'Yingmekin', 'Supervisor', '1980-06-08', 'F', '2010-06-04', '0893845665', '151000', '632296'),

('632284', 'Intira', 'Pranee', 'Iemtadanai', 'Supervisor', '1979-01-11', 'F', '2008-06-25', '0823684119', '151000', '632298'),

('632300', 'Manjusha ', 'Viki', 'Jain', 'Supervisor', '1979-09-30', 'M', '2012-05-23', '0890876782', '151000', '632279'),

('632310', 'Seo', "", 'Hajoon', 'Supervisor', '1996-03-11', 'M', '2015-01-22', '0874287687', '300000', '632296'),

('632312', 'Nae', "", 'Man-Shik', 'Supervisor', '1995-11-24', 'M', '2005-04-22', '0855729175', '300000', '632298'),

('632305', 'Ayush', 'Kruti', 'Jain', 'Supervisor', '1995-03-29', 'M', '2005-08-21', '0808435764', '300000', '632279'),

('632328', 'Rungruedeen', "", 'Yingyungyong', 'Supervisor', '1992-09-20', 'F', '2013-08-02', '0849228668', '325000', '632296'),

('632327', 'Monklong', 'Bhanthai', 'Paireerak', 'Supervisor', '1991-10-13', 'M', '2016-11-25', '0885045688', '325000', '632298'),

('632336', 'Saowatharn', "", 'Rardchawat', 'Supervisor', '1990-06-25', 'F', '2016-11-28', '0878508073', '325000', '632279'),

('632315', 'Noe', "", 'Billard', 'Human Resource', '1995-09-15', 'M', '2012-06-12', '0883391960', '150000', '632336'),

('632280', 'Sasiwinon', "", 'Rattanabanshi', 'Executive Secretary To President', '1981-04-08', 'F', '2014-04-16', '0804316382', '200000', '632278'),

('632304', 'Dhanajay ', "", 'Bhari', "", '1994-04-10', 'M', '2012-12-25', '0868252690', '435000', '632286'),

('632309', 'Yong', "", 'Hae', "", '1993-01-07', 'F', '2008-06-26', '0829736985', '500000', '632287'),

('632317', 'Kanokwan', "", 'Suprachan', "", '1993-07-15', 'F', '2015-04-09', '0820868107', '668200', '632307'),

('632288', 'Badinton', "", 'Phatipatanawong', "", '1991-12-15', 'M', '2006-06-17', '0858839097', '450000', '632286'),

('632319', 'Jirapong', "", 'Pongprakert', "", '1992-05-17', 'M', '2005-06-16', '0860988876', '540000', '632287'),

('632283', 'Sinn', "", 'Sudham', "", '1991-08-03', 'F', '2005-03-03', '0870697011', '645000', '632307'),

('632291', 'Phisan', "", 'Toktumsonteen', "", '1989-12-03', 'M', '2005-12-14', '0888299754', '850000', '632294'),

('632318', 'Chaimongkol', "", 'Puttinachon', "", '1988-08-17', 'M', '2016-05-26', '0845980397', '1800000', '632293'),

('632289', 'Chakrabandhu', "", 'Sivaraksa', "", '1987-08-15', 'M', '2010-06-09', '0876591707', '1900000', '632303'),

('632314', 'Karen', 'Mitchell', 'Lewis', "", '1987-03-24', 'F', '2007-07-26', '0869318155', '1900000', '632313'),

('632321', 'Ajay', 'Bihalni', 'Sethi', "", '1987-10-17', 'M', '2017-11-18', '0861322181', '2000000', '632301'),

('632295', 'Saowapa', "", 'Warisanawan', "", '1986-03-22', 'F', '2009-09-01', '0833436071', '2000000', '632313'),

('632322', 'Ratthana', "", 'Rattikanawong', "", '2002-10-29', 'M', '2017-10-20', '0843798590', '58000', '632290'),

('632323', 'Putinard', "", 'Wongkarung', "", '1989-02-01', 'M', '2019-04-16', '0865779350', '58000', '632311'),

('632324', 'Pattiphan', "", 'Karuncharnarn', "", '1987-11-21', 'M', '2013-02-15', '0802152620', '58000', '632320'),

('632325', 'Angkhana', "", 'Buraphanin', "", '1988-03-27', 'M', '2008-05-07', '0883383060', '90000', '632284'),

('632326', 'Puttipong', "", 'Narakhanwong', "", '1987-10-16', 'M', '2008-10-28', '0843387304', '110000', '632300'),

('632281', 'Thanyara', "", 'Kaeynanoon', "", '1999-10-19', 'F', '2015-12-24', '0862284178', '250000', '632310'),

('632299', 'Burapol', "", 'Mintonki', "", '1999-04-01', 'M', '2009-10-07', '0827064328', '250000', '632312'),

('632297', 'Phisani', "", 'Sindudeja', "", '1998-03-27', 'M', '2008-09-09', '0854089755', '250000', '632305'),

('632302', 'Sonali', 'Suzi', 'Garg', "", '1997-12-18', 'F', '2012-02-18', '0856030527', '250000', '632310'),

('632306', 'Mohini', 'Mikka', 'Das', "", '1997-05-19', 'F', '2012-04-25', '0841525429', '250000', '632312'),

('632282', 'Tookta', "", 'Clearavanont', "", '1996-09-18', 'F', '2017-12-03', '0832928918', '250000', '632305'),

('632292', 'Kittikorn', "", 'Chaipoowapat', "", '1995-12-27', 'M', '2018-01-31', '0826985335', '250000', '632305'),

('632333', 'Thanit', "", 'Kingkradeng', "", '2002-11-13', 'M', '2008-07-13', '0894595800', '150000', '632328'),

('632330', 'Tuptim', "", 'Thaibanguaoy', "", '2002-10-27', 'F', '2008-10-21', '0838355664', '150000', '632327'),

```
('632329', 'Pattama', "", 'Thammungkong', "", '2001-05-05', 'M', '2009-03-22', '0811956913',  
'150000', '632336'),  
(`632331`, 'Niyom', "", 'Sungkong', "", '1996-07-06', 'M', '2017-12-29', '0818936568', '150000',  
'632328'),  
(`632332`, 'Adung', 'Sraya', 'Sethi', "", '1995-12-29', 'F', '2016-12-01', '0818731169', '150000',  
'632327'),  
(`632335`, 'Nissorn', 'Chayunart', 'Ponhpaiboon', "", '1995-11-21', 'M', '2009-06-05',  
'0819458049', '150000', '632336'),  
(`632334`, 'Pundareek', "", 'Suprija', "", '1993-07-28', 'F', '2015-01-23', '0888744664', '150000',  
'632328');
```

**INSERT INTO thai\_passenger (TPAX\_ID, national\_ID)**

VALUES

```
('101', '2905000663917'),  
(`102`, '2677775213485'),  
(`103`, '2361103442290'),  
(`104`, '1598498054337'),  
(`105`, '1602098789836'),  
(`106`, '2508441121022'),  
(`107`, '2807581223544'),  
(`108`, '2610339688532'),  
(`109`, '1608527719452');
```

**INSERT INTO foreign\_passenger (FPAX\_ID, visa\_number, nationality)**

VALUES

```
('110', '76345240', 'Indian'),  
(`111`, '67690686', 'Indian'),  
(`112`, '87128669', 'Indian'),  
(`113`, '16517894', 'Indian'),  
(`114`, '34213619', 'Chinese');
```

```
('115', '37763659', 'Chinese'),  
(`116', '31350813', 'Korean'),  
(`117', '85523087', 'Chinese'),  
(`118', '52684003', 'Korean'),  
(`119', '86120784', 'Korean'),  
(`120', '81721391', 'Korean');
```

**INSERT INTO seat** (Seat\_ID, row\_num, ST\_ID)

VALUES

```
('42190', 'A1', '305'),  
(`95130', 'B1', '305'),  
(`12726', 'E1', '305'),  
(`88600', 'F1', '305'),  
(`43988', 'A2', '305'),  
(`93799', 'B2', '305'),  
(`46308', 'E2', '305'),  
(`59315', 'F2', '305'),  
(`41936', 'A3', '305'),  
(`78760', 'B3', '305'),  
(`29406', 'E3', '305'),  
(`20411', 'F3', '305'),  
(`44897', 'A7', '304'),  
(`67672', 'B7', '304'),  
(`85917', 'C7', '304'),  
(`44456', 'D7', '304'),  
(`12141', 'E7', '304'),  
(`49254', 'F7', '304'),  
(`60992', 'A8', '304'),  
(`29666', 'B8', '304'),
```

('52672', 'C8', '304'),  
('29965', 'D8', '304'),  
('64342', 'E8', '304'),  
('71229', 'F8', '304'),  
('84804', 'A10', '304'),  
('21511', 'B10', '304'),  
('95770', 'C10', '304'),  
('71003', 'D10', '304'),  
('40207', 'E10', '304'),  
('59475', 'F10', '304'),  
('61476', 'A11', '303'),  
('24142', 'B11', '303'),  
('53531', 'C11', '303'),  
('31243', 'D11', '303'),  
('84262', 'E11', '303'),  
('63048', 'F11', '303'),  
('13401', 'A12', '303'),  
('19637', 'B12', '303'),  
('58068', 'C12', '303'),  
('66131', 'D12', '303'),  
('83116', 'E12', '303'),  
('77178', 'F12', '303'),  
('47480', 'A20', '302'),  
('21325', 'B20', '302'),  
('49667', 'C20', '302'),  
('44755', 'D20', '302'),  
('25806', 'E20', '302'),  
('52034', 'F20', '302'),  
('27858', 'A21', '302'),

```
('87593', 'B21', '302'),  
('11111', 'C21', '302'),  
('86222', 'D21', '302'),  
('42240', 'E21', '302'),  
('50924', 'F21', '302'),  
('88205', 'A22', '301'),  
('67783', 'B22', '301'),  
('53342', 'C22', '301'),  
('77498', 'D22', '301'),  
('36004', 'E22', '301'),  
('32937', 'F22', '301');
```

**INSERT INTO contact\_detail** (CONT\_ID, email, pnum, tnum, guardian, g\_relationship, gnum, CPAX\_ID)

VALUES

```
('333', 'sunan_a@mail.com', '0856626740', '023431335', 'Chutinan', 'friend', '0858112651',  
'101'),  
('192', 'taweerat_p@mail.com', '0815870237', "", 'Titinan', 'father', '0865510689', '102'),  
('240', 'nakarin_c@mail.com', '0863546420', '027196823', 'Jirattikarn', 'spouse', '0875929325',  
'103'),  
('131', 'jirattikarn_k@mail.com', '0875929325', '029125734', 'Nakarin', 'spouse', '0863546420',  
'104'),  
('919', 'patchra_t@mail.com', '0853631124', '021672532', 'Puttipat', 'spouse', '0822446335',  
'105'),  
('678', 'puttipat_s@mail.com', '0822446335', "", 'Patchra', 'spouse', '0853631124', '106'),  
('505', 'malika_s@mail.com', '0870456365', '029803085', 'Praprai', 'friend', '0874942257', '107'),  
('828', 'natee_m@mail.com', '0882340098', '029124780', 'Potjamarn', 'friend', '0806173506',  
'108'),  
('967', 'tulaya_k@mail.com', '0862779436', '024191174', 'Chotinan', 'son', '0857299637', '109'),  
('326', 'amitah_s@mail.com', '0838577520', '023343340', 'Natchaporn', 'daughter',  
'0830259259', '110'),  
('677', 'vivek_b@mail.com', '0886185316', "", 'Vethica', 'spouse', '0872634741', '111');
```

```
('620', 'geetika_c@mail.com', '0828051373', '028630738', 'Vethica', 'mother', '0866897157',  
'112'),  
( '564', 'carlos_a@mail.com', '0857366238', '029514450', 'Swanson', 'mother', '0881959706',  
'113'),  
( '686', 'micah_l@mail.com', '0842527828', '', 'Davie', 'friend', '0898622868', '114'),  
( '282', 'davie_y@mail.com', '0898622868', '', 'Micha', 'friend', '0842527828', '115'),  
( '818', 'minami_c@mail.com', '0854557435', '028060521', 'Eric', 'spouse', '0869339846', '116'),  
( '403', 'eric_z@mail.com', '0869339846', '', 'Minami', 'spouse', '0854557435', '117'),  
( '658', 'jonathan_k@mail.com', '0864462398', '024711593', 'Karen', 'mother', '0801406911',  
'118'),  
( '127', 'giju_y@mail.com', '0875173851', '024666027', 'Jiwon', 'spouse', '0835515591', '119'),  
( '721', 'jiwon_k@mail.com', '0835515591', '024209820', 'Giju', 'spouse', '0875173851', '120');
```

**INSERT INTO flyerbonus\_membership** (FLYER\_ID, passwd, MEM\_discount, preferred\_lang, ML\_ID, FLPAX\_ID, signup\_date)

VALUES

```
('60152101', 'Amitah110', '10', 'Thai', '68378934', '110', '2020-12-14'),  
( '60152109', 'Giju119', '5', 'English', '97863546', '119', '2022-01-24'),  
( '60152100', 'Nakarin103', '8', 'Thai', '57256567', '103', '2020-07-16'),  
( '60152207', 'Micah114', '8', 'English', '57256567', '114', '2020-11-04'),  
( '60152201', 'Minami116', '5', 'English', '97863546', '116', '2021-01-28'),  
( '60152119', 'Malika170', '5', 'English', '97863546', '107', '2021-12-19'),  
( '60152211', 'Petchra105', '5', 'Thai', '97863546', '105', '2021-03-09'),  
( '60152111', 'Taweerat102', '5', 'Thai', '97863546', '102', '2022-05-30'),  
( '60152118', 'Vivek111', '10', 'English', '68378934', '111', '2020-10-14'),  
( '60152210', 'Jonathan118', '8', 'English', '57256567', '118', '2021-03-23');
```

**INSERT INTO payment** (PYMT\_ID, PYMT\_datetime, PYMT\_mode, service\_charge, discount, PPAX\_ID)

VALUES

```
('112022', '2022-07-08 12:09:11', 'ATM', '25', '0', '101'),
```

('251846', '2022-07-09 10:15:19', 'Debit', '20', '500', '101'),  
('234685', '2022-07-11 17:21:09', 'Debit', '20', '500', '101'),  
('965820', '2022-07-14 12:26:13', 'Credit', '50', '200', '102'),  
('852439', '2022-07-15 15:29:12', 'ATM', '25', '0', '102'),  
('866458', '2022-07-17 20:30:09', 'counter', '50', '0', '102'),  
('542123', '2022-07-19 12:00:22', 'ibanking', '0', '0', '103'),  
('447573', '2022-07-21 10:43:34', 'ATM', '25', '0', '103'),  
('452168', '2022-07-22 16:44:19', 'Debit', '20', '500', '103'),  
('212417', '2022-07-22 2:55:55', 'Debit', '20', '500', '104'),  
('845136', '2022-07-23 4:49:48', 'Credit', '50', '200', '104'),  
('513346', '2022-07-24 8:22:21', 'ATM', '25', '0', '104'),  
('254698', '2022-07-22 16:44:19', 'counter', '50', '0', '105'),  
('545168', '2022-07-27 17:11:32', 'ibanking', '0', '0', '105'),  
('364521', '2022-07-28 12:00:00', 'ATM', '25', '0', '105'),  
('121212', '2022-07-30 22:59:11', 'Credit', '50', '200', '106'),  
('567285', '2022-07-31 12:09:11', 'Debit', '20', '500', '106'),  
('364215', '2022-08-01 16:41:02', 'Credit', '0', '200', '106'),  
('854210', '2022-08-01 13:58:00', 'ATM', '25', '0', '107'),  
('181824', '2022-08-02 22:47:02', 'counter', '50', '0', '107'),  
('253687', '2022-08-03 7:03:32', 'ibanking', '0', '0', '107'),  
('254816', '2022-08-03 10:46:27', 'ATM', '25', '0', '108'),  
('258965', '2022-08-04 20:54:15', 'ibanking', '0', '0', '108'),  
('541782', '2022-08-04 23:19:47', 'ibanking', '0', '0', '108'),  
('471542', '2022-08-05 8:07:36', 'Debit', '20', '500', '109'),  
('284152', '2022-08-06 22:48:44', 'Debit', '20', '500', '109'),  
('554218', '2022-08-08 21:47:28', 'Credit', '50', '200', '109'),  
('256368', '2022-08-09 12:45:56', 'ATM', '25', '0', '110'),  
('417852', '2022-08-11 16:38:45', 'counter', '50', '0', '110'),  
('254178', '2022-08-12 21:52:51', 'ibanking', '0', '0', '110'),

('251478', '2022-08-14 14:19:01', 'Credit', '0', '200', '111'),  
('256321', '2022-08-16 5:02:03', 'Debit', '20', '500', '111'),  
('784125', '2022-08-17 9:26:03', 'Debit', '20', '500', '111'),  
('254178', '2022-08-17 20:50:35', 'Credit', '50', '200', '112'),  
('325689', '2022-08-18 10:31:37', 'Credit', '0', '200', '112'),  
('646506', '2022-08-17 9:26:03', 'Debit', '20', '500', '112'),  
('852142', '2022-08-20 0:53:02', 'ibanking', '0', '0', '113'),  
('517528', '2022-08-22 8:10:22', 'Credit', '50', '200', '113'),  
('796502', '2022-08-23 13:16:47', 'Debit', '20', '500', '113'),  
('254631', '2022-08-24 4:42:51', 'Debit', '20', '500', '114'),  
('138878', '2022-08-26 12:36:11', 'Credit', '0', '200', '114'),  
('253685', '2022-08-27 20:29:58', 'ibanking', '0', '0', '114'),  
('254178', '2022-08-27 23:29:37', 'ibanking', '0', '0', '115'),  
('854725', '2022-08-27 10:02:17', 'Credit', '50', '0', '115'),  
('245806', '2022-08-29 5:33:07', 'ATM', '25', '0', '115'),  
('256367', '2022-08-30 17:54:55', 'ibanking', '0', '0', '116'),  
('646882', '2022-08-31 8:14:59', 'ibanking', '0', '0', '116'),  
('528741', '2022-08-31 16:43:36', 'ATM', '25', '0', '116'),  
('846588', '2022-09-01 23:42:03', 'Debit', '20', '500', '117'),  
('824150', '2022-09-03 10:23:14', 'Debit', '20', '500', '117'),  
('315859', '2022-09-05 12:54:29', 'Credit', '50', '200', '117'),  
('253685', '2022-09-06 8:07:42', 'ATM', '25', '0', '118'),  
('881662', '2022-09-07 20:37:12', 'counter', '50', '0', '118'),  
('542187', '2022-09-08 12:29:35', 'ibanking', '0', '0', '118'),  
('846321', '2022-09-09 0:10:03', 'ATM', '25', '0', '119'),  
('231842', '2022-09-10 9:06:35', 'Credit', '50', '200', '119'),  
('243675', '2022-08-11 4:05:53', 'Debit', '20', '500', '119'),  
('826829', '2022-09-12 23:15:28', 'ATM', '25', '0', '120'),  
('843468', '2022-09-14 8:37:34', 'ibanking', '0', '0', '120'),

```
('543673', '2022-08-15 9:11:57', 'Debit', '20', '500', '120');
```

**INSERT INTO network\_planning** (NEMP\_ID, algorithm\_level)

VALUES

```
('632281', 'Novice'),  
(‘632299’, ‘Novice’),  
(‘632297’, ‘Moderate’),  
(‘632302’, ‘Moderate’),  
(‘632306’, ‘Moderate’),  
(‘632282’, ‘Moderate’),  
(‘632292’, ‘Expert’),  
(‘632310’, ‘Expert’),  
(‘632312’, ‘Expert’),  
(‘632305’, ‘Expert’);
```

**INSERT INTO route** (R\_ID, distance, route\_type, point, DEPT\_AIRPT, ARR\_AIRPT, N\_EMP\_ID)

VALUES

```
('641589', '594', 'Domestic', '50', 'VTBS', 'VTCC', '632281'),  
(‘649853’, ‘671’, ‘Domestic’, ‘50’, ‘VTBS’, ‘VTSP’, ‘632299’),  
(‘644480’, ‘504’, ‘International’, ‘20’, ‘VTBS’, ‘VDPP’, ‘632297’),  
(‘644725’, ‘333’, ‘International’, ‘20’, ‘VTBS’, ‘VDSR’, ‘632302’),  
(‘647701’, ‘716’, ‘International’, ‘50’, ‘VTBS’, ‘VVTS’, ‘632306’),  
(‘640760’, ‘1410’, ‘International’, ‘50’, ‘VTBS’, ‘WSSS’, ‘632282’),  
(‘641923’, ‘633’, ‘International’, ‘50’, ‘VTCT’, ‘VVNB’, ‘632292’),  
(‘645642’, ‘766’, ‘International’, ‘50’, ‘VTCC’, ‘VVNB’, ‘632310’),  
(‘648043’, ‘249’, ‘Domestic’, ‘10’, ‘VTSP’, ‘VTSM’, ‘632312’),  
(‘642076’, ‘504’, ‘International’, ‘50’, ‘VDPP’, ‘VTBS’, ‘632305’),  
(‘643026’, ‘231’, ‘Domestic’, ‘10’, ‘VTBO’, ‘VTBS’, ‘632306’),  
(‘640480’, ‘406’, ‘Domestic’, ‘20’, ‘VTPO’, ‘VTBS’, ‘632282’),
```

```
('648870', '463', 'Domestic', '20', 'VTSM', 'VTBS', '632292'),  
('640083', '592', 'International', '50', 'VTSM', 'VDSR', '632310'),  
('646846', '361', 'Domestic', '20', 'VTBU', 'VTSM', '632312');
```

**INSERT INTO airplane** (AIRP\_ID, company, model, max\_capacity, num\_class, type, manufacture\_date)

VALUES

```
('88084F', 'Airbus SAS', 'Airbus320-200', '162', '3', 'Airbus', '2012-04-18'),  
('880C4A', 'Airbus SAS', 'Airbus319-100', '138', '3', 'Airbus', '2001-07-11'),  
('880455', 'ATR', 'ATR72-600', '70', '3', 'ATR', '1999-06-23'),  
('8832B0', 'Airbus SAS', 'Airbus320-200', '162', '3', 'Airbus', '2013-10-10'),  
('8832B1', 'Airbus SAS', 'Airbus320-200', '162', '3', 'Airbus', '2005-04-07'),  
('885966', 'Airbus SAS', 'Airbus319-100', '144', '3', 'Airbus', '1997-08-20'),  
('881056', 'Airbus SAS', 'Airbus319-100', '132', '3', 'Airbus', '2004-11-25'),  
('88596D', 'Airbus SAS', 'Airbus319-100', '120', '3', 'Airbus', '2009-05-18'),  
('88434E', 'ATR', 'ATR72-500', '70', '3', 'ATR', '2018-12-11'),  
('88530C', 'ATR', 'ATR72-500', '70', '3', 'ATR', '2017-12-17');
```

**INSERT INTO airplane\_can\_land\_airport** (AIRP\_ID, AIRPT\_ID)

VALUES

```
('880455', 'VTCL'),  
('880455', 'ZUCK'),  
('880455', 'VVTS'),  
('881056', 'WMKK'),  
('881056', 'VYYY'),  
('885966', 'VTSG'),  
('885966', 'VTBO'),  
('885966', 'VTSM'),  
('88084F', 'VTSM'),  
('88084F', 'VVNB');
```

('880C4A', 'VTCC'),  
('880C4A', 'VDSR'),  
('880C4A', 'VTSP'),  
('8832B0', 'VTCT'),  
('8832B0', 'VTSS'),  
('8832B0', 'YPPH'),  
('8832B0', 'VTBO'),  
('8832B1', 'VTCH'),  
('8832B1', 'YPPH'),  
('8832B1', 'VTBU'),  
('88434E', 'VTPO'),  
('88434E', 'WSSS'),  
('88530C', 'VTBD'),  
('88530C', 'VDPP'),  
('88530C', 'VTCC'),  
('88596D', 'VTBS'),  
('88596D', 'VTSP'),  
('88596D', 'VTCT'),  
('88596D', 'VTSG');

**INSERT INTO passenger\_address (PAPAX\_ID, PAX\_AID, number, street, county, city, country, zip\_code)**

**VALUES**

('101', '5678', '322 Sukhothai 2', 'Suan Chitlada', 'Dusit', 'Bangkok', 'Thailand', '10110'),  
('102', '5679', '365/2-3', 'Phrasumen', 'Bavornnives', 'Bangkok', 'Thailand', '10200'),  
('103', '5680', '1770-1772', 'Sukhumvit', 'Prakanong', 'Bangkok', 'Thailand', '10250'),  
('104', '5681', '64/18 Soi Sainampueng', 'Sukhumvit', 'Klongtoey', 'Bangkok', 'Thailand', '10110'),  
('105', '5682', '231 9Th Floor The Park Place Ath Building', 'Ratchadamri', 'Pathumwan',  
'Bangkok', 'Thailand', '10330'),  
('106', '5683', '8/25-27', 'Kanchanapisek', 'Bangkhae', 'Bangkok', 'Thailand', '10160'),

('107', '5684', '95/397-8 Soi Chiangkong', 'Rama 3', 'Chong Nonsree', 'Bangkok', 'Thailand', '10120'),  
 ('108', '5685', '98/205 Laksee Village', 'Chaengwatana', 'Laksi', 'Bangkok', 'Thailand', '10210'),  
 ('109', '5686', '314/23', 'Rajaprarop', 'Phayathai', 'Bangkok', 'Thailand', '10400'),  
 ('110', '5687', '144/110 Soi Uthit 1', 'Klong Chan', 'Bang Kapi', 'Bangkok', 'Thailand', '10240'),  
 ('111', '5688', '23/2 Moo 3 Soi Phalai', 'Chaofa', 'Muang', 'Phuket', 'Thailand', '83000'),  
 ('112', '5689', 'Moo 5', 'Kan Ham', 'Uthai', 'Phra Nakhon Si Ayutth', 'Thailand', '13210'),  
 ('113', '5690', '126/19-20 Soi Ekamai', 'Sukhumvit', 'Klongton Nua', 'Bangkok', 'Thailand', '10110'),  
 ('114', '5691', '54', 'Montree', 'Ladyai', 'Phuket', 'Thailand', '83000'),  
 ('115', '5692', '32/45-6 Soi 8', 'Charansanitwong', 'Bangkok', 'Thailand', '10200'),  
 ('116', '5693', '189 Soi Asoke', 'Sukhumvit', 'Watthana', 'Bangkok', 'Thailand', '10110'),  
 ('117', '5694', '28/9 Moo 10', 'Ekachai', 'Bangbon', 'Bangkok', 'Thailand', '10150'),  
 ('118', '5695', '89/493 Soi Wat', 'Chalermphrakiat 3', 'Bangsrimuang', 'Nonthaburi', 'Thailand', '11000'),  
 ('119', '5696', '501/77', 'Nanglinchee', 'Chongnonsi', 'Bangkok', 'Thailand', '10120'),  
 ('120', '5697', '1020/123 Soi 57', 'Prachauthit', 'Bang Mod', 'Bangkok', 'Thailand', '10140');

**INSERT INTO employee\_address (EEMP\_ID, EMP\_AID, number, street, county, city, country, zip\_code)**

VALUES

('632304', '1234', '10/1 Soi Farmwatana', 'Rama 4', 'Prakanong', 'Bangkok', 'Thailand', '10110'),  
 ('632309', '1235', '60/38-39', 'Ramintra 56', 'Kannayao', 'Bangkok', 'Thailand', '10230'),  
 ('632317', '1236', '216/6', 'Suksawad', 'Bangoakok', 'Bangkok', 'Thailand', '10104'),  
 ('632288', '1237', '31/1 Soi Pracha', 'Uthit 54', 'Bangmod', 'Bangkok', 'Thailand', '10140'),  
 ('632319', '1238', '501/77 ', 'Nanglinchee', 'Chongnonsi', 'Bangkok', 'Thailand', '10120'),  
 ('632283', '1239', '281/16 ', 'Suriwong', 'Suriyawong', 'Bangkok', 'Thailand', '10500'),  
 ('632286', '1240', 'Room 505', 'Chaengwatana', 'Pakkred', 'Bangkok', 'Thailand', '11120'),  
 ('632287', '1241', '15/87-9 Gp 9', 'Ladprao 53', 'Lad Prao', 'Bangkok', 'Thailand', '10230'),  
 ('632307', '1242', '21/4 Soi', 'Sukhumvit 29', 'Klongtoey', 'Bangkok', 'Thailand', '10110'),  
 ('632291', '1243', '11/5 Soi 13', 'Sukhumvit', 'Klongtoey', 'Bangkok', 'Thailand', '10110'),

('632318', '1244', '198 Soi Sawang', 'Mahanakorn', 'Mahaprautaram', 'Bangkok', 'Thailand', '10500'),  
('632289', '1245', '130/11 Soi 18', 'Lardyao', 'Chatuchak', 'Bangkok', 'Thailand', '10900'),  
('632314', '1246', '1/99 Soi Ekasathaporn', 'Sukhaphibal 1', 'Bang Born', 'Bangkok', 'Thailand', '10150'),  
('632321', '1247', '306/9-10 Soi Kiatichai', 'Asoke-Dindaeng', 'Din Daeng', 'Bangkok', 'Thailand', '10320'),  
('632295', '1248', '778/15', 'Phaholyothin', 'Chatuchak', 'Bangkok', 'Thailand', '10900'),  
('632294', '1249', '33/5 Soi 19', 'Sukhumvit', 'Khlong Toei', 'Bangkok', 'Thailand', '10110'),  
('632293', '1250', '18 Soi Sirithamma', 'New Rd Wang Buraphapirom', 'Phra Nakhon', 'Bangkok', 'Thailand', '10200'),  
('632303', '1251', '2/243 Soi 14', 'Ramintra', 'Tha Rang', 'Bangkok', 'Thailand', '10220'),  
('632313', '1252', '3 St Louis Soi 3', 'Chan', 'Sathorn', 'Bangkok', 'Thailand', '10120'),  
('632301', '1253', '673/159 Soi Pattanakarn 30', 'Pattanakarn', 'Bangkok', 'Bangkok', 'Thailand', '10250'),  
('632322', '1254', '154/8 Soi 1', 'Sukhumwit', 'Klongtoey Nua Watthana', 'Bangkok', 'Thailand', '10110'),  
('632323', '1255', '691 Happylandsai 1', 'Klong Chan', 'Bang Kapi', 'Bangkok', 'Thailand', '10240'),  
('632324', '1256', '16/48 Soi Vajana', 'Daokanong-Chomthong', 'Chomthong', 'Bangkok', 'Thailand', '10150'),  
('632325', '1257', '224/2-3 Dinsaw', 'Sao Chingchar', 'Phra Nakhon', 'Bangkok', 'Thailand', '10200'),  
('632326', '1258', '161-163 Chula Soi 30', 'Banthadthong', 'Wangmai', 'Bangkok', 'Thailand', '10330'),  
('632290', '1259', '565', 'Sukhumvit', 'Klongton', 'Bangkok', 'Thailand', '10110'),  
('632311', '1260', '121/13 Soi Sabaichai Suthisarnvinichai', 'Sam Saen Nork', 'Huai Khwang', 'Bangkok', 'Thailand', '10320'),  
('632320', '1261', '110/32-33 Soi 23', 'Pracharat Sai 1', 'Bangkok', 'Bangkok', 'Thailand', '10800'),  
('632284', '1262', '604/3', 'Phetburi 12', 'Payathai', 'Bangkok', 'Thailand', '10400'),  
('632300', '1263', '640/29', 'New Taksin Klong Ton', 'Sa Khlong San', 'Bangkok', 'Thailand', '10600'),  
('632308', '1264', '29 Soi Chalermsuk', 'Rachadaphisek', 'Ladyao', 'Bangkok', 'Thailand', '10900'),  
('632277', '1265', '640/29', 'New Taksin', 'Klong Ton Sa', 'Bangkok', 'Thailand', '10600'),

('632285', '1266', '29 Soi Chalermksuk', 'Rachadaphisek', 'Ladyao', 'Bangkok', 'Thailand', '10900'),  
('632296', '1267', '15 Soi Charoennakorn 32/1', 'Charoennakorn', 'Klongsan', 'Bangkok',  
'Thailand', '10600'),  
('632298', '1268', '323', 'Silom', 'Bang Rak', 'Bangkok', 'Thailand', '10500'),  
('632279', '1269', '1138/51-52', 'Rama 3', 'Yan Nawa', 'Bangkok', 'Thailand', '10120'),  
('632316', '1270', '135/1 Soi Kasemsuwan', 'Sukhumvit 50', 'Phra Khanong', 'Bangkok', 'Thailand',  
'10250'),  
('632278', '1271', '2489', 'New Phetburi', 'Suanluang', 'Bangkok', 'Thailand', '10250'),  
('632281', '1272', '59 Soi 13', 'Charoennakorn Road', 'Klongsan', 'Bangkok', 'Thailand', '10600'),  
('632299', '1273', '169-171 Soi Sukhumvit 62/1', 'Sukhumvit', 'Prakanong', 'Bangkok', 'Thailand',  
'10260'),  
('632297', '1274', '146-152', 'Damrongrak Road', 'Klongmahanak', 'Bangkok', 'Thailand',  
'10100'),  
('632302', '1275', '28/15 Soi 36', 'Sukhumvit', 'Khlong Toei', 'Bangkok', 'Thailand', '10110'),  
('632306', '1276', '677/88 Soi 5/1', 'Latphrao', 'Latyao', 'Bangkok', 'Thailand', '10900'),  
('632282', '1277', '592/1 Soi Suanplu 5', 'South Sathorn', 'Thung Maha Maek', 'Bangkok',  
'Thailand', '10120'),  
('632292', '1278', '1875/617 Soi Panurangsee', 'Charansnidvongs', 'Bang Plad', 'Bangkok',  
'Thailand', '10700'),  
('632310', '1279', '283', 'Larnluang', 'Wat Sommanas', 'Bangkok', 'Thailand', '10100'),  
('632312', '1280', '26/3 Soi Atthakarnprasith', 'South Sathorn', 'Thung Maha Maek', 'Bangkok',  
'Thailand', '10120'),  
('632305', '1281', '32 Soi Santisuk', 'Latphrao 98', 'Latphrao', 'Bangkok', 'Thailand', '10230'),  
('632333', '1282', '135/20-21', 'Surawong', 'Bangkok', 'Bangkok', 'Thailand', '10500'),  
('632330', '1283', '68/30-1', 'Silom', 'Bangrak', 'Bangkok', 'Thailand', '10500'),  
('632329', '1284', '99/168 Ladprao 41', 'Lardyao', 'Chatuchak', 'Bangkok', 'Thailand', '10900'),  
('632331', '1285', '28/5 Soi Liabklongthabchang', 'Ladkrabang', 'Minburi', 'Bangkok', 'Thailand',  
'10510'),  
('632332', '1286', '6 Soi Songphra', 'Rama 4', 'Mahapruktaram', 'Bangkok', 'Thailand', '10500'),  
('632335', '1287', '2/9 Silom 13', 'Silom', 'Bangkok', 'Bangkok', 'Thailand', '10500'),  
('632315', '1288', '297-299 Charoennakorn 10', 'Klongtonsai', 'Bangkok', 'Bangkok', 'Thailand',  
'10600'),

('632334', '1289', '36/51', 'Srinakarin', 'Suan Luang', 'Bangkok', 'Thailand', '10250'),  
('632328', '1290', '50 Soi Kethnuth', 'Ladprao 64', 'Wangthonglang', 'Bangkok', 'Thailand', '10310'),  
('632327', '1291', '1604/2 Songwad Talad No', 'Samphantha Wong', 'Phan', 'Bangkok', 'Thailand',  
'10100'),  
('632336', '1292', '9/1-2', 'Kampaengphet', 'Chatuchak', 'Bangkok', 'Thailand', '10900'),  
('632280', '1293', '35/16 Soi 124', 'Ladprao', 'Wangthonglang', 'Bangkok', 'Thailand', '10310');

**INSERT INTO air\_crew (AEMP\_ID, weight, height, vision)**

VALUES

('632304', '88', '180', '20/20'),  
('632309', '86', '182', '20/40'),  
('632317', '68', '180', '20/40'),  
('632288', '72', '186', '20/40'),  
('632319', '76', '190', '20/40'),  
('632283', '87', '182', '20/20'),  
('632286', '70', '185', '20/20'),  
('632287', '65', '176', '20/40'),  
('632307', '84', '175', '20/40'),  
('632291', '83', '183', '20/20'),  
('632318', '73', '173', '20/20'),  
('632289', '69', '179', '20/20'),  
('632314', '67', '184', '20/20'),  
('632321', '80', '189', '20/20'),  
('632295', '85', '185', '20/20'),  
('632294', '72', '180', '20/20'),  
('632293', '65', '181', '20/20'),  
('632303', '77', '173', '20/20'),  
('632313', '81', '166', '20/20'),  
('632301', '86', '185', '20/20');

**INSERT INTO cabin\_crew** (CEMP\_ID, second\_language)

VALUES

```
('632304', 'English, Dutch'),  
(‘632309’, ‘English, Dutch, Mandarin’),  
(‘632317’, ‘English, Mandarin, Hindi’),  
(‘632288’, ‘English, Arabic’),  
(‘632319’, ‘English, Russian’),  
(‘632283’, ‘English’),  
(‘632286’, ‘English, Russian, Mandarin’),  
(‘632287’, ‘English, Japanese’),  
(‘632307’, ‘English, Korean, Arabic, Mandarin’),  
(‘632291’, ‘English, Dutch, Mandarin, Spanish’);
```

**INSERT INTO maintenance\_engineer** (MEMP\_ID, practitioner\_license)

VALUES

```
('632322', 'Category B1'),  
(‘632323’, ‘Category B3’),  
(‘632324’, ‘Category C’),  
(‘632325’, ‘Category C’),  
(‘632326’, ‘Category A’),  
(‘632290’, ‘Category B3’),  
(‘632311’, ‘Category B1’),  
(‘632320’, ‘Category B1’),  
(‘632284’, ‘Category B2’),  
(‘632300’, ‘Category A’);
```

**INSERT INTO pilot** (PEMP\_ID, year\_of\_experience, license, english\_certification)

VALUES

```
(‘632318’, ‘3’, ‘CPL’, ‘5’),
```

```
('632289', '10', 'PPL', '5'),  
('632314', '7', 'ATPL', '5'),  
('632321', '3', 'CPL', '6'),  
('632295', '9', 'ATPL', '3'),  
('632294', '2', 'CPL', '6'),  
('632293', '4', 'CPL', '3'),  
('632303', '9', 'PPL', '4'),  
('632313', '7', 'ATPL', '5'),  
('632301', '5', 'PPL', '5');
```

**INSERT INTO cancellation** (CXL\_ID, penalty\_fee, PYMT\_ID) VALUES

```
('102243', '0', '452168'),  
('219349', '2000', '234685'),  
('314456', '0', '254698'),  
('645734', '2000', '284152'),  
('456234', '2000', '251478'),  
('734812', '0', '784125'),  
('906904', '0', '646506'),  
('874623', '0', '796502'),  
('413245', '0', '253685'),  
('734812', '2000', '846321');
```

**INSERT INTO cash\_receipt** (CASHR\_ID, medium, date, PYMT\_ID)

VALUES

```
('345244', 'Paper', '2022-07-22 16:45:19', '452168'),  
('362123', 'Paper', '2022-07-11 17:23:09', '234685'),  
('756234', 'Email', '2022-07-26 4:13:33', '254698'),  
('175678', 'Email', '2022-08-06 22:49:44', '284152'),  
('185345', 'Email', '2022-08-14 14:20:01', '251478');
```

('342677', 'Paper', '2022-08-17 9:27:03', '784125'),  
(‘323487’, ‘Email’, ‘2022-08-20 13:30:41’, ‘646506’),  
(‘734563’, ‘Paper’, ‘2022-08-23 13:17:47’, ‘796502’),  
(‘234712’, ‘Email’, ‘2022-08-27 20:30:58’, ‘253685’),  
(‘978545’, ‘Paper’, ‘2022-09-09 0:11:03’, ‘846321’);

**INSERT INTO travel\_insurance** (TI\_ID, issued\_date, travel\_num, exp\_date, dept\_city, dest\_city, trip\_type, coverage\_amount, categories, special\_description, PYMT\_ID)

VALUES

(‘578974’, ‘2022-07-11 17:21:09’, ‘1’, ‘90’, ‘BKK’, ‘CNX’, ‘one way’, ‘1000000’, ‘Loss of Life’, ‘’, ‘234685’),  
(‘567964’, ‘2022-07-22 16:44:19’, ‘1’, ‘90’, ‘BKK’, ‘SIN’, ‘one way’, ‘500000’, ‘Medical Expense’, ‘’, ‘452168’),  
(‘456824’, ‘2022-08-14 14:19:01’, ‘2’, ‘90’, ‘CEI’, ‘HAN’, ‘Round’, ‘10000’, ‘Bagage Delay’, ‘Every 6 hours/1000 THB’, ‘251478’),  
(‘136885’, ‘2022-08-17 9:26:03’, ‘2’, ‘90’, ‘USM’, ‘REP’, ‘Round’, ‘20000’, ‘Loss or Damage of Bagage’, ‘’, ‘784125’),  
(‘897534’, ‘2022-08-17 9:26:03’, ‘1’, ‘90’, ‘BKK’, ‘HKT’, ‘one way’, ‘0’, ‘Trip Cancellation’, ‘Ticket price’, ‘646506’),  
(‘668974’, ‘2022-08-23 13:16:47’, ‘1’, ‘90’, ‘THS’, ‘BKK’, ‘one way’, ‘0’, ‘Trip Cancellation’, ‘Ticket price’, ‘796502’),  
(‘233456’, ‘2022-08-27 20:29:58’, ‘1’, ‘90’, ‘CNX’, ‘HAN’, ‘one way’, ‘0’, ‘Trip Cancellation’, ‘Ticket price’, ‘253685’),  
(‘135732’, ‘2022-08-11 4:05:53’, ‘1’, ‘90’, ‘BKK’, ‘CNX’, ‘one way’, ‘500000’, ‘Personal Liability’, ‘’, ‘243675’),  
(‘987541’, ‘2022-08-15 9:11:57’, ‘2’, ‘90’, ‘BKK’, ‘CNX’, ‘Round’, ‘500000’, ‘Personal Liability’, ‘’, ‘543673’),  
(‘334598’, ‘2022-09-05 12:54:29’, ‘2’, ‘90’, ‘BKK’, ‘CNX’, ‘Round’, ‘500000’, ‘Personal Liability’, ‘’, ‘315859’);

**INSERT INTO ticket** (TCK\_ID, reservation\_date, PYMT\_ID, Seat\_ID, FLTS\_ID)

VALUES

(‘399800’, ‘2022-07-24 8:22:21’, ‘513346’, ‘42190’, ‘650035’),

('378483', '2022-08-09 12:45:56', '256368', '95130', '650823'),  
('485983', '2022-09-12 23:15:28', '826829', '12726', '650997'),  
('287782', '2022-08-05 8:07:36', '471542', '88600', '651104'),  
('288374', '2022-07-30 22:59:11', '121212', '43988', '651180'),  
('648282', '2022-09-06 8:07:42', '253685', '93799', '652153'),  
('244345', '2022-08-06 22:48:44', '284152', '46308', '653004'),  
('553209', '2022-07-15 15:29:12', '852439', '59315', '653156'),  
('171716', '2022-08-11 16:38:45', '417852', '41936', '653265'),  
('642785', '2022-07-17 20:30:09', '866458', '78760', '653389'),  
('309077', '2022-08-03 7:03:32', '253687', '71229', '654040'),  
('805839', '2022-07-19 12:00:22', '542123', '84804', '654177'),  
('829348', '2022-08-30 17:54:55', '256367', '21511', '654235'),  
('339876', '2022-08-01 16:41:02', '364215', '95770', '654398'),  
('214325', '2022-07-09 10:15:19', '251846', '71003', '654488'),  
('100809', '2022-08-04 23:19:47', '541782', '40207', '654676'),  
('199819', '2022-08-08 21:47:28', '554218', '59475', '655108'),  
('788424', '2022-07-22 2:55:55', '212417', '61476', '655225'),  
('555678', '2022-08-02 22:47:02', '181824', '24142', '655993'),  
('400708', '2022-08-04 20:54:15', '258965', '53531', '656432'),  
('734682', '2022-08-05 8:07:36', '471542', '83116', '656556'),  
('324578', '2022-07-08 12:09:11', '112022', '77178', '657845'),  
('746391', '2022-07-23 4:49:48', '845136', '47480', '657976'),  
('395874', '2022-08-03 10:46:27', '254816', '21325', '658114'),  
('989872', '2022-07-31 12:09:11', '567285', '49667', '658173'),  
('299877', '2022-07-27 17:11:32', '545168', '44755', '658189'),  
('978865', '2022-07-14 12:26:13', '965820', '25806', '658344'),  
('300008', '2022-07-28 12:00:00', '364521', '52034', '659260'),  
('118838', '2022-08-01 13:58:00', '854210', '27858', '659358'),  
('989533', '2022-07-21 10:43:34', '447573', '87593', '659925'),

```
('656787', '2022-08-12 21:52:51', '254178', '11111', '658344'),  
('445577', '2022-08-16 5:02:03', '256321', '86222', '654177'),  
('229988', '2022-08-17 20:50:35', '254178', '42240', '651180'),  
('112998', '2022-08-18 10:31:37', '325689', '50924', '659358'),  
('909866', '2022-08-20 0:53:02', '852142', '88205', '658114'),  
('494988', '2022-08-22 8:10:22', '517528', '67783', '656556'),  
('272898', '2022-08-24 4:42:51', '254631', '53342', '650823'),  
('454367', '2022-08-26 12:36:11', '138878', '88600', '654235'),  
('837292', '2022-08-27 23:29:37', '254178', '43988', '652153'),  
('794739', '2022-08-27 10:02:17', '854725', '93799', '650997');
```

**INSERT INTO airplane\_operation\_fs\_route (FLTS\_ID, R\_ID, AIRP\_ID)**

VALUES

```
('658344', '641589', '88084F'),  
('654177', '649853', '880C4A'),  
('651180', '644480', '880455'),  
('659358', '644725', '8832B0'),  
('658114', '647701', '8832B1'),  
('656556', '640760', '885966'),  
('650823', '641923', '881056'),  
('654235', '645642', '88596D'),  
('652153', '648043', '88434E'),  
('650997', '642076', '88530C'),  
('657845', '643026', '88084F'),  
('654488', '640480', '880C4A'),  
('653156', '648870', '880455'),  
('653389', '640083', '8832B0'),  
('659925', '646846', '8832B1'),  
('655225', '641589', '885966'),
```

```
('657976', '649853', '881056'),  
('650035', '644480', '88596D'),  
('658189', '644725', '88434E'),  
('659260', '647701', '88530C'),  
('658173', '640760', '88084F'),  
('654398', '641923', '880C4A'),  
('655993', '645642', '880455'),  
('654040', '648043', '8832B0'),  
('656432', '642076', '8832B1'),  
('654676', '643026', '885966'),  
('651104', '640480', '881056'),  
('653004', '648870', '88596D'),  
('655108', '640083', '88434E'),  
('653265', '646846', '88530C');
```

**INSERT INTO pilot\_fly\_flightsch** (P\_EMP\_ID, FLTS\_ID, cockpit\_position)

VALUES

```
('632318', '658344', 'Captain'),  
('632289', '658344', 'Co-pilot'),  
('632314', '654177', 'Captain'),  
('632321', '654177', 'Co-pilot'),  
('632295', '651180', 'Captain'),  
('632294', '651180', 'Co-pilot'),  
('632293', '659358', 'Captain'),  
('632303', '659358', 'Co-pilot'),  
('632313', '658114', 'Captain'),  
('632301', '658114', 'Co-pilot'),  
('632318', '650823', 'Captain'),  
('632289', '650823', 'Co-pilot'),
```

('632314', '650997', 'Captain'),  
('632321', '650997', 'Co-pilot'),  
('632295', '654235', 'Captain'),  
('632294', '654235', 'Co-pilot'),  
('632293', '659925', 'Captain'),  
('632303', '659925', 'Co-pilot'),  
('632313', '655225', 'Captain'),  
('632301', '655225', 'Co-pilot'),  
('632293', '657976', 'Captain'),  
('632289', '657976', 'Co-pilot'),  
('632313', '650035', 'Captain'),  
('632301', '650035', 'Co-pilot'),  
('632314', '656432', 'Captain'),  
('632321', '656432', 'Co-pilot'),  
('632295', '658173', 'Captain'),  
('632294', '658173', 'Co-pilot'),  
('632318', '654398', 'Captain'),  
('632303', '654398', 'Co-pilot'),  
('632318', '654676', 'Captain'),  
('632295', '654676', 'Co-pilot'),  
('632303', '651104', 'Captain'),  
('632289', '651104', 'Co-pilot'),  
('632321', '653004', 'Captain'),  
('632314', '653004', 'Co-pilot'),  
('632301', '659260', 'Captain'),  
('632293', '659260', 'Co-pilot'),  
('632313', '658189', 'Captain'),  
('632294', '658189', 'Co-pilot'),  
('632321', '657845', 'Captain'),

```
('632295', '657845', 'Co-pilot'),  
('632303', '654488', 'Captain'),  
('632314', '654488', 'Co-pilot'),  
('632301', '656556', 'Captain'),  
('632294', '656556', 'Co-pilot'),  
('632318', '652153', 'Captain'),  
('632289', '652153', 'Co-pilot'),  
('632293', '653156', 'Captain'),  
('632313', '653156', 'Co-pilot'),  
('632293', '653389', 'Captain'),  
('632313', '653389', 'Co-pilot'),  
('632301', '655993', 'Captain'),  
('632303', '655993', 'Co-pilot'),  
('632295', '654040', 'Captain'),  
('632318', '654040', 'Co-pilot'),  
('632321', '655108', 'Captain'),  
('632294', '655108', 'Co-pilot'),  
('632289', '653265', 'Captain'),  
('632314', '653265', 'Co-pilot');
```

**INSERT INTO maintenancee\_check\_airplane (M\_EMP\_ID, AIRP\_ID)**

VALUES

```
('632322', '88084F'),  
('632323', '880C4A'),  
('632324', '880455'),  
('632325', '8832B0'),  
('632326', '8832B1'),  
('632290', '885966'),  
('632311', '881056'),
```

```
('632320', '88596D'),  
('632284', '88434E'),  
('632300', '88530C'),  
('632322', '885966'),  
('632323', '880455'),  
('632324', '88434E'),  
('632325', '880C4A'),  
('632326', '88530C'),  
('632290', '881056'),  
('632311', '88084F'),  
('632320', '8832B0'),  
('632284', '8832B1'),  
('632300', '88596D'),  
('632322', '8832B0'),  
('632323', '88084F'),  
('632324', '8832B1'),  
('632325', '881056'),  
('632326', '885966'),  
('632290', '880C4A'),  
('632311', '88530C'),  
('632320', '88434E'),  
('632284', '88596D'),  
('632300', '880455');
```

**INSERT INTO boarding\_pass (BP\_ID, dept\_time, BP\_time, TCK\_ID)**

**VALUES**

```
('446665', '2022-10-31 13:25:00', '2022-10-31 13:10:00', '978865'),  
('984937', '2022-10-31 12:55:00', '2022-10-31 12:40:00', '805839'),  
('726738', '2022-10-30 10:10:00', '2022-10-30 09:55:00', '288374'),
```

('181616', '2022-10-30 17:30:00', '2022-10-30 17:15:00', '118838'),  
('293940', '2022-10-30 18:30:00', '2022-10-30 18:15:00', '395874'),  
('283736', '2022-10-24 20:00:00', '2022-10-24 19:45:00', '734682'),  
('846535', '2022-10-29 20:05:00', '2022-10-29 19:50:00', '378483'),  
('983635', '2022-10-28 20:46:00', '2022-10-28 20:31:00', '829348'),  
('223398', '2022-10-24 19:46:00', '2022-10-24 19:31:00', '648282'),  
('165247', '2022-10-27 12:40:00', '2022-10-27 12:25:00', '485983');

## 8 SQL queries

### Pauruetai Kobsahai [6322770064]

#### Query 1

- Show a list of employees who are supervisors. The result should display employee id, employee full name and the title “Supervisor”.
- SQL statement

```
select
    EMP_ID as "Employee ID",
    concat(FName, ' ', LName) as Fullname
    ,title "Title"
from employee where title like "%Supervisor%"
group by EMP_ID;
```

#### c. Result

	Employee ID	Fullname	Title
▶	632284	Intira Iemtadanai	Supervisor
	632286	Yindee Prateung	Supervisor
	632287	Sukanda Palathai	Supervisor
	632290	Sunaroj Sethi	Supervisor
	632293	Sasikarn Ekaluck	Supervisor
	632294	Yupin Montri	Supervisor
	632300	Manjusha Jain	Supervisor
	632301	Sanjana Prabhakar	Supervisor
	632303	Ajay Sehgal	Supervisor
	632305	Ayush Jain	Supervisor
	632307	Kajal Nazareth	Supervisor
	632310	Seo Hajoon	Supervisor
	632311	Ryan Sethi	Supervisor
	632312	Nae Man-Shik	Supervisor
	632313	Don Chul	Supervisor
	632320	Amronray Yingme...	Supervisor
	632327	Monklong Paireerak	Supervisor
	632328	Rungruedeen Yin...	Supervisor
	632336	Saowatharn Rard...	Supervisor

Figure 11 Query 1 Result

## Query 2

- Show the total number of employees for each title
- SQL statement

```
select
    title as "Title",
    count(*) as "Total Employees"
from employee
where title != ""
group by title
order by count(*) desc;
```

- Result

Title	Total Employees
Supervisor	19
Director	3
Chief executive officer	1
Chief information officer	1
Executive Secretary To President	1
Chief operations officer	1
Chief marketing officer	1
Human Resource	1
Chief financial officer	1

Figure 12 Query 2 Result

## Query 3

- Display the total number of flights in each status. The result must show the status and the total number of flights.
- SQL statement

```
select
    status as "Status",
    count(*) as "Total"
from flight_schedule
group by status
order by count(*) desc;
```

- Result

Status	Total
Landed on time	12
En-Route	11
Landed Late	7

Figure 13 Query 3 Result

#### Query 4

- a. Display the number of route groups by route type. The result must show the route type and the number of routes.
- b. SQL statement

```
select
    route_type as "Route Type",
    count(*) as "Total Route"
from route
group by route_type;
```

- c. Result

Route Type	Total Route
International	8
Domestic	7

Figure 14 Query 4 Result

#### Query 5

- a. List all captain id, their full name, year, and the name of month of their employment time.
- b. SQL statement

```
select
    EMP_ID as "Captain ID",
    concat(FName, ' ', LName) as Fullname,
    year(employment_date) as 'year',
    monthname(employment_date) as 'Month'
from employee as p
inner join pilot as fp
on p.EMP_ID = fp.PEMP_ID
group by EMP_ID;
```

c. Result

Captain ID	Fullname	year	Month
632289	Chakrabandhu Sivaraksa	2010	June
632293	Sasikarn Ekaluck	2019	February
632294	Yupin Montri	2006	May
632295	Saowapa Warisanawan	2009	September
632301	Sanjana Prabhakar	2014	April
632303	Ajay Sehgal	2012	November
632313	Don Chul	2012	May
632314	Karen Lewis	2007	July
632318	Chaimongkol Puttinachon	2016	May
632321	Ajay Sethi	2017	November

Figure 15 Query 5 Result

Query 6

- a. Find the BMI of employees, which can be calculated from weight in kilograms and height in meters squared.
- b. SQL statement

```

select
    emp.emp_id,
    concat_ws(" ", emp.fname, emp.mname, emp.lname) as "Full name",
    ac.height,
    ac.weight,
    round(weight / pow(height/100,2),3) as bmi
from employee as emp
inner join air_crew as ac
on emp.emp_id = ac.aemp_id
order by ac.height desc, ac.weight desc;

```

c. Result

emp_id	Full name	height	weight	bmi
632319	Jirapong Pongprakert	190	76	21.053
632321	Ajay Bihalni Sethi	189	80	22.396
632288	Badinton Phatipatanawong	186	72	20.812
632301	Sanjana Malik Prabhakar	185	86	25.128
632295	Saowapa Warisanawan	185	85	24.836
632286	Yindee Prateung	185	70	20.453
632314	Karen Mitchell Lewis	184	67	19.79
632291	Phisan Toktumsonteen	183	83	24.784
632283	Sinn Sudham	182	87	26.265
632309	Yong Hae	182	86	25.963
632293	Sasikarn Ekaluck	181	65	19.841
632304	Dhanajay Bhari	180	88	27.16
632294	Yupin Montri	180	72	22.222
632317	Kanokwan Suprachan	180	68	20.988
632289	Chakrabandhu Sivaraksa	179	69	21.535
632287	Sukanda Prasert Palathai	176	65	20.984
632307	Kajal Narukka Nazareth	175	84	27.429
632303	Ajay Sehgal	173	77	25.728
632318	Chaimongkol Puttinachon	173	73	24.391
632313	Don Christopher Chul	166	81	29.395

Figure 16 Query 6 Result

### Query 7

- Show the BMI of employees, which can be calculated from weight in kilograms and height in meters squared and classify the employee into weight classification as overweight and healthy weight.
- SQL statement

```
with emp_profile as (
    select
        emp.emp_id,
        concat_ws(" ", emp.fname, emp.mname, emp.lname) as "Full name",
        ac.height,
        ac.weight,
        round(weight / pow(height/100,2),3) as bmi
    from employee as emp
    inner join air_crew as ac
    on emp.emp_id = ac.aemp_id
)
select
    *,
    case
        when bmi < 18.5 then "Underweight"
        when bmi >= 18.5 and bmi < 25 then "Healthy weight"
        when bmi >= 25 and bmi < 30 then "Overweight"
        else "Obesity"
    end as "Weight Classification"
from emp_profile;
```

- Result

emp_id	Full name	height	weight	bmi	Weight Classificati...
632283	Sinn Sudham	182	87	26.265	Overweight
632286	Yindee Prateung	185	70	20.453	Healthy weight
632287	Sukanda Prasert Palathai	176	65	20.984	Healthy weight
632288	Badinton Phatipatanawong	186	72	20.812	Healthy weight
632289	Chakrabandhu Sivaraksa	179	69	21.535	Healthy weight
632291	Phisan Toktumsonteen	183	83	24.784	Healthy weight
632293	Sasikarn Ekaluck	181	65	19.841	Healthy weight
632294	Yupin Montri	180	72	22.222	Healthy weight
632295	Saowapa Warisanawan	185	85	24.836	Healthy weight
632301	Sanjana Malik Prabhakar	185	86	25.128	Overweight
632303	Ajay Sehgal	173	77	25.728	Overweight
632304	Dhanajay Bhari	180	88	27.16	Overweight
632307	Kajal Narukka Nazareth	175	84	27.429	Overweight
632309	Yong Hae	182	86	25.963	Overweight
632313	Don Christopher Chul	166	81	29.395	Overweight
632314	Karen Mitchell Lewis	184	67	19.79	Healthy weight
632317	Kanokwan Suprachan	180	68	20.988	Healthy weight
632318	Chaimongkol Puttinachon	173	73	24.391	Healthy weight
632319	Jirapong Pongprakert	190	76	21.053	Healthy weight
632321	Ajay Bihalni Sethi	189	80	22.396	Healthy weight

Figure 17 Query 7 Result

### Query 8

- a. Bangkok Airways is planning to give a raise to all employees who stayed with the company for a certain number of years using the following scale. For those who worked at the company for less than 5 years, greater than and equal to 5 but less than 8 years, and more than 8 years, will get a raise of 5%, 8%, and 10% from the current salary respectively.
- b. SQL statement

```
select
    *,
    round(
        case
            when year_with_company < 5 then current_salary * 105 / 100
            when year_with_company >= 5 and year_with_company < 8 then
                current_salary * 108/100
            else current_salary * 110 / 100
        end
    ) as new_salary
from (
    select
        emp_id,
        case
            when e1.mname != "" then concat(e1.fname, " ", e1.mname, " ",
                e1.lname)
            else concat(e1.fname, " ", e1.lname)
        end as employee_name,
        e1.employment_date,
        timestampdiff(year,e1.employment_date,now()) as year_with_company,
        e1.salary as current_salary
    from employee as e1
) as temp;
```

### c. Result

emp_id	employee_name	employment_date	year_with_company	current_salary	new_salary
632277	Tanmeti Suthama Chitwitchaporn	2009-11-30	12	2000000	2200000
632278	Nuengrurai Rattanabanshi	2017-10-03	5	4815157	5200370
632279	Saobaskorn Mechaimek	2007-09-19	15	2934742	3228216
632280	Sasiwinon Rattanabanshi	2014-04-16	8	200000	220000
632281	Thanyara Kaeynanoon	2015-12-24	6	250000	270000
632282	Tookta Chearavanont	2017-12-03	4	250000	262500
632283	Sinn Sudham	2005-03-03	17	645000	709500
632284	Intira Pranee Iemtadanaei	2008-06-25	14	151000	166100
632285	Pimchanok Wuttanidai	2017-04-11	5	2000000	2160000
632286	Yindee Prateung	2011-08-25	11	743000	817300
632287	Sukanda Prasert Palathai	2008-12-27	13	790000	869000
632288	Badinton Phatipatanawong	2006-06-17	16	450000	495000
632289	Chakrabandhu Sivaraksa	2010-06-09	12	1900000	2090000
632290	Sunaroj Vinayak Sethi	2013-10-14	9	140000	154000
632291	Phisan Toktumsonteen	2005-12-14	16	850000	935000
632292	Kittikorn Chaipoowapat	2018-01-31	4	250000	262500
632293	Sasikarn Ekaluck	2019-02-17	3	2500000	2625000
632294	Yupin Montri	2006-05-20	16	2500000	2750000
632295	Saowapa Warisanawan	2009-09-01	13	2000000	2200000
632296	Vikenti Joseph Makhovnick	2005-03-31	17	2900000	3190000
632297	Phisani Sindudeja	2008-09-09	14	250000	275000
632298	Kanokrat Kasamsun	2018-10-31	4	2900000	3045000
632299	Burapol Mintonki	2009-10-07	13	250000	275000
632300	Manjusha Viki Jain	2012-05-23	10	151000	166100
632301	Sanjana Malik Prabhakar	2014-04-18	8	2500000	2750000
632302	Sonali Suzi Garg	2012-02-18	10	250000	275000
632303	Ajay Sehgal	2012-11-24	9	2500000	2750000
632304	Dhanajay Bhari	2012-12-25	9	435000	478500
632305	Ayush Kruti Jain	2005-08-21	17	300000	330000
632306	Mohini Mikka Das	2012-04-25	10	250000	275000
632307	Kajal Narukka Nazareth	2008-09-24	14	800000	880000
632308	Pan Jung-Hwa	2009-04-15	13	2000000	2200000
632309	Yong Hae	2008-06-26	14	500000	550000
632310	Seo Hajoon	2015-01-22	7	300000	324000
632311	Ryan Bihari Sethi	2015-07-11	7	140000	151200
632312	Nae Man-Shik	2005-04-22	17	300000	330000
632313	Don Christopher Chul	2012-05-29	10	2500000	2750000
632314	Karen Mitchell Lewis	2007-07-26	15	1900000	2090000
632315	Noe Billard	2012-06-12	10	150000	165000
632316	Armani Manu Lawson	2017-08-17	5	4440000	4795200
632317	Kanokwan Suprachan	2015-04-09	7	668200	721656
632318	Chaimongkol Puttinachon	2016-05-26	6	1800000	1944000
632319	Jirapong Pongprakert	2005-06-16	17	540000	594000
632320	Amronray Yingmekin	2010-06-04	12	151000	166100
632321	Ajay Bihalni Sethi	2017-11-18	4	2000000	2100000
632322	Ratthana Rattikanawong	2017-10-20	5	58000	62640
632323	Putinard Wongkarung	2019-04-16	3	58000	60900

Figure 18 Query 8 Result

### Query 9

- a. Show a list of employees that have supervisors. The result should display employee name, supervisor name, and the difference in their salary.
- b. SQL statement

```
select
    e1.emp_id as employee_id,
    case
        when e1.mname != "" then concat(e1.fname, " ", e1.mname, " ", e1.lname)
        else concat(e1.fname, " ", e1.lname)
    end as employee_name,
    -- e1.title,
    -- e1.salary,
    e2.emp_id as supervisor_id,
    case
        when e2.mname != "" then concat(e2.fname, " ", e2.mname, " ", e2.lname)
        else concat(e2.fname, " ", e2.lname)
    end as supervisor_name,
    -- e2.title,
    -- e2.salary,
    e2.salary - e1.salary as salary_diff
from employee as e1
left join employee as e2
on e1.semp_id = e2.emp_id
where e1.emp_id != e2.emp_id;
```

### c. Result

employee_id	employee_name	supervisor_id	supervisor_name	salary_diff
632277	Tanmeti Suthama Chitwitchaporn	632298	Kanokrat Kasamsun	900000
632280	Sasiwinon Rattanabanshi	632278	Nuengrurai Rattanabanshi	4615157
632281	Thanyara Kaeynanoon	632310	Seo Hajoon	50000
632282	Tookta Chearavanont	632305	Ayush Kruti Jain	50000
632283	Sinn Sudham	632307	Kajal Narukka Nazareth	155000
632284	Intira Pranee Iemtadanai	632298	Kanokrat Kasamsun	2749000
632285	Pimchanok Wuttanidai	632279	Soabaskorn Mechaimek	934742
632286	Yindee Prateung	632308	Pan Jung-Hwa	1257000
632287	Sukanda Prasert Palathai	632277	Tanmeti Suthama Chitwitchaporn	1210000
632288	Badinton Phatipatanawong	632286	Yindee Prateung	293000
632289	Chakrabandhu Sivaraksa	632303	Ajay Sehgal	600000
632290	Sunaroj Vinayak Sethi	632298	Kanokrat Kasamsun	2760000
632291	Phisan Toktumsonteen	632294	Yupin Montri	1650000
632292	Kittikorn Chaipoowapat	632305	Ayush Kruti Jain	50000
632293	Sasikarn Ekaluck	632298	Kanokrat Kasamsun	400000
632294	Yupin Montri	632296	Vikenti Joseph Makhovnick	400000
632295	Saowapa Warisanawan	632313	Don Christopher Chul	500000
632297	Phisani Sindudeja	632305	Ayush Kruti Jain	50000
632299	Burapol Mintonki	632312	Nae Man-Shik	50000
632300	Manjusha Viki Jain	632279	Soabaskorn Mechaimek	2783742
632301	Sanjana Malik Prabhakar	632279	Soabaskorn Mechaimek	434742
632302	Sonali Suzi Garg	632310	Seo Hajoon	50000
632303	Ajay Sehgal	632279	Soabaskorn Mechaimek	434742
632304	Dhanajay Bhari	632286	Yindee Prateung	308000
632305	Ayush Kruti Jain	632279	Soabaskorn Mechaimek	2634742
632306	Mohini Mikka Das	632312	Nae Man-Shik	50000
632307	Kajal Narukka Nazareth	632285	Pimchanok Wuttanidai	1200000
632308	Pan Jung-Hwa	632296	Vikenti Joseph Makhovnick	900000
632309	Yong Hae	632287	Sukanda Prasert Palathai	290000
632310	Seo Hajoon	632296	Vikenti Joseph Makhovnick	2600000
632311	Ryan Bihari Sethi	632279	Soabaskorn Mechaimek	2794742
632312	Nae Man-Shik	632298	Kanokrat Kasamsun	2600000
632313	Don Christopher Chul	632298	Kanokrat Kasamsun	400000
632314	Karen Mitchell Lewis	632313	Don Christopher Chul	600000
632315	Noe Billard	632336	Saowatharn Rardchawat	175000
632317	Kanokwan Suprachan	632307	Kajal Narukka Nazareth	131800
632318	Chaimongkol Puttinachon	632293	Sasikarn Ekaluck	700000
632319	Jirapong Pongprakert	632287	Sukanda Prasert Palathai	250000
632320	Amronray Yingmekin	632296	Vikenti Joseph Makhovnick	2749000
632321	Ajay Bihalni Sethi	632301	Sanjana Malik Prabhakar	500000
632322	Ratthana Rattikanawong	632290	Sunaroj Vinayak Sethi	82000
632323	Putinard Wongkarung	632311	Ryan Bihari Sethi	82000
632324	Pattiphan Karuncharnan	632320	Amronray Yingmekin	93000
632325	Angkhana Buraphanin	632284	Intira Pranee Iemtadanai	61000
632326	Puttipong Narakhanwong	632300	Manjusha Viki Jain	41000
632327	Monklong Bhanthai Paireerak	632298	Kanokrat Kasamsun	2575000
632328	Rungruedeen Yingyungyong	632296	Vikenti Joseph Makhovnick	2575000

Figure 19 Query 9 Result

Query 10

- a. Display the number of distances for each airplane id . The result must show the airplane id and the total of distance.
- b. SQL statement

```
select
    airp_id as "Airplane ID",
    sum(distance) as "Total Distance"
from (
    select
        ap.airp_id,
        ap.company,
        ap.model,
        ap.manufacture_date,
        r.r_id,
        r.distance
    from airplane as ap
    inner join airplane_operation_fs_route as afs
    on ap.airp_id = afs.airp_id
    inner join route as r
    on afs.r_id = r.r_id
) as temp
group by airp_id;
```

- c. Result

Airplane ID	Total Distance
88084F	2235
885966	2235
880455	1733
88596D	1733
880C4A	1710
881056	1710
8832B1	1581
88530C	1581
8832B0	1174
88434E	1174

Figure 20 Query 10 Result

**Thanakrit Loetpricha [6322770114]****Query 11**

- a. Show the list of Route id and departure - arrival id for each route.
- b. SQL statement

```
select
    R_ID as "Route ID",
    concat(DEPT_AIRPT, ' - ', ARR_AIRPT) as Route
from route
group by R_ID;
```

- c. Result

Route ID	Route
640083	VTSM - VDSR
640480	VTPO - VTBS
640760	VTBS - WSSS
641589	VTBS - VTCC
641923	VTCT - VVNB
642076	VDPP - VTBS
643026	VTBO - VTBS
644480	VTBS - VDPP
644725	VTBS - VDSR
645642	VTCC - VVNB
646846	VTBU - VTSM
647701	VTBS - VVTS
648043	VTSP - VTSM
648870	VTSM - VTBS
649853	VTBS - VTSP

Figure 21 Query 11 Result

**Query 12**

- a. Display total Discount and total Service charge of passenger by ID of passenger.
- b. SQL statement

```
select
    PPAX_ID as "Passenger ID",
    sum(discount) as "Total Discount",
    sum(service_charge) as "Total Service Charge"
from payment
group by PPAX_ID
order by PPAX_ID;
```

c. Result

Passenger ID	Total Discount	Total Service Charge
101	1000	65
102	200	125
103	500	45
104	700	95
105	0	75
106	900	70
107	0	75
108	0	25
109	1200	90
110	0	75
111	1200	40
112	900	70
113	700	70
114	700	20
115	0	75
116	0	25
117	1200	90
118	0	75
119	700	95
120	500	45

Figure 22 Query 12 Result

Query 13

- Show the query of total seats in each seat type by using seat ID.
- SQL statement

```
select
    ST_ID as "Seat ID",
    Sname as "Seat Type",
    count(ST_ID) as "Total Seat"
from seat as p
inner join seat_type as fp
on p.ST_ID = fp.SeatT_ID
group by ST_ID;
```

c. Result

Seat ID	Seat Type	Total Seat
301	Economy	6
302	EconomyLL	12
303	EconomyC	12
304	Business	18
305	First	12

Figure 23 Query 13 Result

Query 14

- a. Display the list of 5 highest salaries per year for each employee with name and employee ID.
- b. SQL statement

```
select
    EMP_ID as "Employee ID",
    concat(FName, ' ', LName) as Fullname,
    salary as "total Salary"
from employee
order by salary DESC
limit 5;
```

- c. Result

Employee ID	Fullname	total Salary
632278	Nuengrutai Rattanabanshi	4815157
632316	Armani Lawson	4440000
632279	Soabaskorn Mechaimak	2934742
632296	Vikenti Makhovnick	2900000
632298	Kanokrat Kasamsun	2900000

Figure 24 Query 14 Result

#### Query 15

- a. Show status of Bangkok Airways. The result must show the flight id, flight code and the status of Bangkok Airways flights.
- b. SQL statement

```
select
    FLTS_ID as "Flight ID",
    FLTCode as "Flight Code",
    Status as "Status"
from flight_schedule where airline_name = 'Bangkok Airways'
group by FLTS_ID;
```

c. Result

Flight ID	Flight Code	Status
650823	PG279	En-Route
650997	PG172	Landed Late
651180	PG164	Landed Late
652153	PG220	Landed on time
654177	PG258	En-Route
654235	PG191	En-Route
654398	PG961	En-Route
654676	PG284	Landed on time
656432	PG219	Landed on time
656556	PG264	Landed on time
658114	PG308	Landed on time
658344	PG174	En-Route
659358	PG214	Landed on time

Figure 25 Query 15 Result

Query 16

- a. Show the total income for each airline.
- b. SQL statement

```
with cte1 as (
    select
        pay.pymt_id,
        service_charge,
        discount,
        price,
        flts_id
        from payment as pay
        inner join ticket as tk
        on pay.pymt_id = tk.pymt_id
        inner join seat as s
        on s.seat_id = tk.seat_id
        inner join seat_type as st
        on s.st_id = st.seatt_id
),
cte2 as (
    select
        fs.flts_id,
        fs.fltcode,
        fs.airline_name,
        r.distance * 6.0 as route_price
        from flight_schedule as fs
        inner join airplane_operation_fs_route as afs
        on fs.flts_id = afs.flts_id
)
```

```

        inner join route as r
        on afs.r_id = r.r_id
    )

select
    airline_name,
    format(round(sum(total_price)),0) as total_income
from (
    select
        cte1.*,
        cte2.fltcode,
        cte2.airline_name,
        cte2.route_price,
        service_charge + price + route_price - discount as total_price
    from cte1
    inner join cte2
) as temp
group by airline_name
order by sum(total_price) desc;

```

c. Result

Airline Name	Total Income (THB)
Bangkok Airways	11,126,466
Myanmar Airways International	4,413,924
Sky Angkor Airlines	3,257,712
Singapore Airlines	2,552,136
Thai Vietjet Air	2,410,290
Tigerair	877,032
Cambodia Angkor Air	752,952

Figure 26 Query 16 Result

### Query 17

- Show the number of cancellations by countries.
- SQL statement

```
select
    nationality as "Nationality",
    count(*) as "Total Cancellation"
from cancellation as c
inner join payment as pay
on c.pymt_id = pay.pymt_id
inner join passenger as p
on pay.ppx_id = p.pax_id
left join (
    select
        tpax_id as pax_id,
        "Thai" as nationality
    from thai_passenger
    union all
    select
        fpax_id,
        nationality
    from foreign_passenger
) as temp
on p.pax_id = temp.pax_id
group by nationality;
```

- Result

	Nationality	Total Cancellation
▶	Thai	4
	Indian	4
	Chinese	1
	Korean	2

Figure 27 Query 17 Result

### Query 18

- Display all the flight code and the airplane that is responsible for the scheduled flight.
- SQL statement

```
select
    flts.fltcode as "Flight Code",
    aor.airp_id as "Airplane ID",
    flts.flt_date as "date"
from flight_schedule as flts
inner join airplane_operation_fs_route as aor
on flts.flts_id = aor.flts_id
inner join airplane as air
on aor.airp_id = air.airp_id
order by flts.flt_date asc;
```

### c. Result

	Flight Code	Airplane ID	date			
▶	PG908	88084F	2022-10-22			
	PG704	880C4A	2022-10-22			
	PG220	88434E	2022-10-24			
	PG264	885966	2022-10-24			
	VZ307	881056	2022-10-25	8M350	88434E	2022-10-29
	PG219	8832B1	2022-10-26	ZA679	885966	2022-10-29
	8M351	88434E	2022-10-26	PG164	880455	2022-10-30
	8M332	88530C	2022-10-26	ZA936	8832B0	2022-10-30
	PG284	885966	2022-10-26	PG214	8832B0	2022-10-30
	VZ137	88596D	2022-10-26	PG308	8832B1	2022-10-30
	PG907	8832B0	2022-10-27	VJ805	88530C	2022-10-30
	PG172	88530C	2022-10-27	PG962	880455	2022-10-31
	SQ713	88596D	2022-10-27	PG174	88084F	2022-10-31
	TR671	881056	2022-10-28	PG258	880C4A	2022-10-31
	PG191	88596D	2022-10-28	SQ709	880455	2022-11-01
	PG279	881056	2022-10-29	PG934	88084F	2022-11-01
	ZA1679	8832B1	2022-10-29	PG961	880C4A	2022-11-01

Figure 28 Query 18 Result

Query 19

- a. Display the jobs (Maintenance engineer, Pilot, Cabin crew, Network Planning, and Staff) of all the employee
- b. SQL statement

```
select memp_id, "maintenance Engineer" as job from maintenance_engineer  
union all  
select pemp_id, "Pilot" as job from pilot  
union all  
select aemp_id, "Air Crew" as job from air_crew;
```

- c. Result

The image shows two side-by-side database result grids. Both grids have columns labeled 'memp\_id' and 'job'. The left grid, titled 'Result 8', contains 20 rows of data where the 'job' column values are either 'maintenance Engineer' or 'Pilot'. The right grid, also titled 'Result 8', contains 16 rows of data where the 'job' column values are either 'Air Crew' or 'Pilot'. The data is presented in a tabular format with each row representing an employee record.

memp_id	job
632284	maintenance Engineer
632290	maintenance Engineer
632300	maintenance Engineer
632311	maintenance Engineer
632320	maintenance Engineer
632322	maintenance Engineer
632323	maintenance Engineer
632324	maintenance Engineer
632325	maintenance Engineer
632326	maintenance Engineer
632289	Pilot
632293	Pilot
632294	Pilot
632295	Pilot
632301	Pilot
632303	Pilot
632313	Pilot
632314	Pilot
632318	Pilot
632321	Pilot
632283	Air Crew
632286	Air Crew
632287	Air Crew
632288	Air Crew
632289	Air Crew
632291	Air Crew
632293	Air Crew
632294	Air Crew
632295	Air Crew
632301	Air Crew
632303	Air Crew
632304	Air Crew
632307	Air Crew
632309	Air Crew
632313	Air Crew

memp_id	job
632313	Air Crew
632314	Air Crew
632317	Air Crew
632318	Air Crew
632319	Air Crew
632321	Air Crew

Figure 29 Query 19 Result

The image shows a single database result grid with columns labeled 'memp\_id' and 'job'. The grid contains 7 rows of data where the 'job' column values are all 'Air Crew'. The data is presented in a tabular format with each row representing an employee record.

632313	Air Crew
632314	Air Crew
632317	Air Crew
632318	Air Crew
632319	Air Crew
632321	Air Crew

### Query 20

- Display the number of employee for each job titles, total salary, and average employee.
- SQL statement

```
select
    job as "Job Title",
    count( distinct emp_id) as "Number Employee",
    sum(salary) as "Total Salary",
    round(avg(salary)) as "Average Salary"
from (
    select
        emp.*,
        case
            when emp_id in (select memp_id from maintenance_engineer) then
                "Maintenance Engineer"
            when emp_id in (select pemp_id from pilot) then "Pilot"
            when emp_id in (select cemp_id from cabin_crew) then "Cabin Crew"
            when emp_id in (select nemp_id from network_planning) then "Network
Planning"
            else "Staff"
        end as job
    from employee as emp
) as temp
group by job
order by count( distinct emp_id) desc ,avg(salary) desc;
```

### c. Result

	Job Title	Number Employee	Total Salary	Average Salary
▶	Staff	20	26364899	1318245
	Pilot	10	22100000	2210000
	Cabin Crew	10	6421200	642120
	Network Planning	10	2650000	265000
	Maintenance Engineer	10	1107000	110700

Figure 30 Query 20 Result

## Chanon Charuchinda [6322770692]

### Query 21

- a. Show a list of passengers that purchase at least one insurance. The result should display passenger id, passenger full name, the type of insurance, and the coverage amount.
- b. SQL statement

```
select
    p.pax_id as "Passenger ID",
    case
        when p.mname != "" then concat(p.fname, " ", left(p.mname,1), ". ", p.lname)
        else concat(p.fname, " ", p.lname)
    end as "Fullname",
    ti.categories as "Insurance Type",
    case
        when ti.coverage_amount = 0 then "Ticket Price"
        else ti.coverage_amount
    end as "Coverage"
from passenger as p
inner join payment as pay
on p.pax_id = pay.ppxx_id
inner join travel_insurance as ti
on pay.pymt_id = ti.pymt_id;
```

### c. Result

	Passenger ID	Fullname	Insurance Type	Coverage
▶	119	Giju J. Yoon	Personal Liability	500000
	111	Vivek Y. Bhatia	Loss or Damage of Bagage	20000
	114	Micah J. Li	Trip Cancellation	Ticket Price
	118	Jonathan J. Kim	Trip Cancellation	Ticket Price
	117	Eric W. Zhao	Personal Liability	500000
	111	Vivek Y. Bhatia	Bagage Delay	10000
	103	Nakarin Chaiyansan	Medical Expense	500000
	101	Sunan J. Aromdee	Loss of Life	1000000
	113	Carlos J. Arya	Trip Cancellation	Ticket Price
	112	Geetika Chauhan	Trip Cancellation	Ticket Price
	120	Jiwon Kim	Personal Liability	500000

Figure 31 Query 21 Result

### Query 22

- Display the number of foreign passengers groups by country. The result must show the country and the associated number of passengers.
- SQL statement

```
select
    fp.nationality as "Nationality",
    count(*) as "Total Passengers"
from passenger as p
inner join foreign_passenger as fp
on p.pax_id = fp.fpx_id
group by fp.nationality;
```

- Result

	Nationality	Total Passengers
▶	Indian	4
	Chinese	3
	Korean	4

Figure 32 Query 22 Result

### Query 23

- Classified the passenger into categories of adult and senior citizens using the conversion. Then count the number of each category. The result should display the category's name and the count.
- SQL statement

```
select
    cat as "Passenger Type",
    count(*) as "Passenger Num"
from (
    select
        *,
        timestampdiff(year,timestamp(dob),now()) as age,
        case
            when timestampdiff(year,timestamp(dob),now()) > 35 then "senior"
            else "adult"
        end as "cat"
    from passenger
) as temp
group by cat;
```

c. Result

	Passenger Type	Passenger Num
▶	adult	13
	senior	7

Figure 33 Query 23 Result

Query 24

- a. Find the purchase price of the travel insurance, which can be calculated from multiplying the number of travelers and type of categories after mapping. For insurance of type trip cancellation put null.
- b. SQL statement

```

select
    ti_id as "Travel Insurance ID",
    categories,
    case
        when categories like "%Loss of Life%" then 300 * travel_num
        when categories like "%Personal Liability%" or categories like "%Medical
Expense%" then 200 * travel_num
        when categories like "%Loss or Damage of Bagage%" then 100 * travel_num
        when categories like "%Bagage Delay%" then 80 * travel_num
        else null
    end as "Purchase Price"
from travel_insurance;

```

c. Result

Travel Insurance ID	categories	Purchase Price
135732	Personal Liability	200
136885	Loss or Damage of Bagage	200
233456	Trip Cancellation	NULL
334598	Personal Liability	400
456824	Bagage Delay	160
567964	Medical Expense	200
578974	Loss of Life	300
668974	Trip Cancellation	NULL
897534	Trip Cancellation	NULL
987541	Personal Liability	400

Figure 34 Query 24 Result

### Query 25

- Show a list of country, the number of airports, and the average number of supported flights per hours
- SQL statement

```
select
    country as "Country",
    count(*) as "Airport number",
    round(avg(flightline_num)) as "Average Flight per hours"
from airport
group by country;
```

- Result

Country	Aiport number	Average Flight per hours
Cambodia	2	14
Thailand	13	29
Vietnam	2	26
Myanmar	1	16
Malaysia	1	60
Singapore	1	42
Australia	1	27
China	1	15

Figure 35 Query 25 Result

### Query 26

- Find the frequency of each route.
- SQL statement

```
select
    dept_airpt as "Departure Airport",
    arr_airpt as "Arrival Airport",
    count(*) as "Frequency"
from route
group by dept_airpt, arr_airpt;
```

c. Result

Departure Airport	Arrival Airport	Frequency
VTSM	VDSR	1
VTPO	VTBS	1
VTBS	WSSS	1
VTBS	VTCC	1
VTCT	VVNB	1
VDPP	VTBS	1
VTBO	VTBO	1
VTBS	VDPP	1
VTBS	VDSR	1
VTCC	VVNB	1
VTBU	VTSM	1
VTBS	VVTS	1
VTSP	VTSM	1
VTSM	VTBS	1
VTBS	VTSP	1

Figure 36 Query 26 Result

Query 27

- Show the total number of ticket purchase for each day of week
- SQL statement

```
select
    dayname(reservation_date) as "Weekday",
    count(*) as "Total Tickets"
from ticket
group by dayname(reservation_date);
```

c. Result

Weekday	Total Tickets
Thursday	7
Monday	5
Saturday	7
Wednesday	5
Friday	7
Tuesday	6
Sunday	3

Figure 37 Query 27 Result

### Query 28

- a. List all the payments that are made for purchasing tickets by the FlyerBonus members.  
The result should display FlyerBonus ID, Fullname, Total payment, and number of ticket purchases.
- b. SQL statement

```
select
    flyer_id "FlyerBonus ID",
    fullname as "Fullname",
    service_charge + seat_price + route_price - discount as "Total payment",
    count(flyer_id) as "Num tickets"
from (
    select
        fm.flyer_id,
        concat(p.fname, " ", p.lname) as fullname,
        pay.service_charge,
        pay.discount,
        st.price as seat_price,
        r.distance * 6.0 as route_price
    from flyerbonus_membership as fm
    inner join passenger as p
    on fm.flpax_id = p.pax_id
    inner join payment as pay
    on p.pax_id = pay.p Pax_id
    inner join ticket as t
    on t.pymt_id = pay.pymt_id
    inner join seat as s
    on s.seat_id = t.seat_id
    inner join seat_type as st
    on st.seatt_id = s.st_id
    inner join airplane_operation_fs_route as afr
    on afr.flts_id = t.flts_id
    inner join route as r
    on afr.r_id = r.r_id
) as temp
group by flyer_id;
```

c. Result

FlyerBonus ID	Fullname	Total payment	Num tickets
60152100	Nakarin Chaiyansan	5191.0	2
60152101	Amitah Singh	6024.0	5
60152111	Taweerat Poolvaraluck	32803.0	3
60152118	Vivek Bhatia	6546.0	1
60152119	Malika Srisai	8146.0	3
60152201	Minami Chung	24596.0	1
60152207	Micah Li	34396.0	3
60152210	Jonathan Kim	31519.0	1
60152211	Petchra Thanwareth	7321.0	2

Figure 38 Query 28 Result

Query 29

- Show the accumulated points of each FlyerBonus member by making an assumption that points can be calculated from base\_point + round(r.point \* seat\_price \* 0.005), which is 5% of seat\_price. The result should display FlyerBonus ID, Fullname, membership level, total point, and discount rate.
- SQL statement

```

select
    flyer_id as "FlyerBonus ID",
    fullname as "Fullname",
    member_level "Membership",
    round(base_point / count(*) + point_earned) as "Total Points",
    member_discount as "Discount"
from (
    select
        fm.flyer_id,
        ml.mem_name as member_level,
        ml.qualifying_point as base_point,
        concat(p.fname, " ", p.lname) as fullname,
        round(r.point * st.price * 0.005) as point_earned,
        fm.mem_discount as member_discount
        from flyerbonus_membership as fm
        inner join membership_level as ml
        on fm.ml_id = ml.ml_id
        inner join passenger as p
        on fm.flpax_id = p.pax_id
        inner join payment as pay
        on p.pax_id = pay.ppx_id
        inner join ticket as t

```

```

on t.pytm_id = pay.pytm_id
inner join seat as s
on s.seat_id = t.seat_id
inner join seat_type as st
on st.seatt_id = s.st_id
inner join airplane_operation_fs_route as afr
on afr.flts_id = t.flts_id
inner join route as r
on afr.r_id = r.r_id
) as temp
group by flyer_id;

```

c. Result

FlyerBonus ID	Fullname	Membership	Total Points	Discount
60152100	Nakarin Chaiyansan	Premium	6550	8
60152207	Micah Li	Premium	11667	8
60152210	Jonathan Kim	Premium	14000	8
60152101	Amitah Singh	Premium Plus	8300	10
60152118	Vivek Bhatia	Premium Plus	40750	10
60152111	Taweerat Poolvaraluck	Priority	3000	5
60152119	Malika Srisai	Priority	875	5
60152201	Minami Chung	Priority	5000	5
60152211	Petchra Thanwareth	Priority	750	5

Figure 39 Query 29 Result

Query 30

- Find Passengers who have registered for FlyerBonus membership and display when is their next membership renewal date. If the passenger is a Priority member, which is default level, put renew date as null.
- SQL statement

```

select
    fm.flyer_id as "Member ID",
    case
        when p.mname != "" then concat(p.fname, " ", p.mname , " ", p.lname)
        else concat(p.fname," ",p.lname)
        end as "Fullname",
    p.passport_num as "Passport number",
    ml.mem_name as "Member Level",
    fm.signup_date as "Signup date",
    case

```

```

when ml.validation_period = 12 then date_add(fm.signup_date, interval 12
month)
else null
end as "Renew Date"
from passenger as p
right join flyerbonus_membership as fm
on fm.flpax_id = p.pax_id
left join membership_level as ml
on fm.ml_id = ml.ml_id;

```

c. Result

Member ID	Fullname	Passport number	Member Level	Signup date	Renew Date
60152100	Nakarin Chaiyansan	AA2143376	Premium	2020-07-16	2021-07-16
60152101	Amitah 'Anika' Singh	J8369854	Premium Plus	2020-12-14	2021-12-14
60152109	Giju 'Jhohan' Yoon	M55604532	Priority	2022-01-24	NULL
60152111	Taweerat Poolvaraluck	AA6235110	Priority	2022-05-30	NULL
60152118	Vivek 'Yuraj' Bhatia	J8565534	Premium Plus	2020-10-14	2021-10-14
60152119	Malika Srisai	AA1594533	Priority	2021-12-19	NULL
60152201	Minami 'Christine' Chung	M79004324	Priority	2021-01-28	NULL
60152207	Micah 'Jones' Li	G34545410	Premium	2020-11-04	2021-11-04
60152210	Jonathan 'Joseph' Kim	M49343554	Premium	2021-03-23	2022-03-23
60152211	Petchra Thanwareth	AA6326695	Priority	2021-03-09	NULL

Figure 40 Query 30 Result

Query 31

- Show a list of all airplanes, a set of flight schedules that they operated on, and the total flight time during the period starting from 28th October to 1st November 2022.
- SQL statement

```

with airtime as
(
    select
        fs.flts_id,
        fs.fltcode,
        fs.flt_date,
        timediff(fs.schedulearr_time,fs.scheduledept_time) as flight_time,
        fs.airline_name,
        ap.airp_id,
        ap.model
    from flight_schedule as fs
    inner join airplane_operation_fs_route as operate
    on fs.flts_id = operate.flts_id
)
```

```

        inner join airplane as ap
        on ap.airp_id = operate.airp_id
)
select
    airp_id,
    model,
    group_concat(fltcode separator ', ') as flight_code,
    sec_to_time(sum(time_to_sec(flight_time))) as total_flight_time
from airtime
where flt_date between '2022-10-28' and '2022-11-01'
group by airp_id
order by airp_id asc;

```

c. Result

airp_id	model	flight_code	total_flight_time
880455	ATR72-600	PG164, PG962, SQ709	05:15:00
88084F	Airbus320-200	PG934, PG174	02:50:00
880C4A	Airbus319-100	PG258, PG961	02:50:00
881056	Airbus319-100	PG279, TR671	02:00:00
8832B0	Airbus320-200	ZA936, PG214	02:15:00
8832B1	Airbus320-200	PG308, ZA1679	02:20:00
88434E	ATR72-500	8M350	01:15:00
88530C	ATR72-500	VJ805	01:20:00
885966	Airbus319-100	ZA679	01:05:00
88596D	Airbus319-100	PG191	00:29:00

Figure 41 Query 31 Result

Query 32

- Display how many times Airplane model Airbus has undergone Light Maintenance A/B checks, Line Maintenance C check, and the approximate remaining operational years. The result should be ordered by the age of the airplane in descending order. On average, airplanes can operate for 30 years. Use this number as the base to calculate the remaining years of service for each airplane airbus model.
- SQL Statement

```

with airplane_summary as
(
    select
        airp_id,
        company,
        model,
        type as "airplane_type",
        manufacture_date,

```

```

        timestampdiff(hour,timestamp(manufacture_date),now()) as age_hours,
        timestampdiff(year,timestamp(manufacture_date),now()) as age_years,
        timestampdiff(month,timestamp(manufacture_date),now()) as age_months
    from airplane
    where model like '%Airbus%'
)
select
    airp_id as "Airplane ID",
    model,
    manufacture_date,
    floor(age_months / 4) as check_ab_num,
    floor(age_months / 24) as check_c_num,
    age_years as "Age",
    30 - age_years as remaining_years
from airplane_summary
order by age desc;

```

c. Result

Airplane ID	model	manufacture_date	check_ab_num	check_c_num	Age	remaining_years
885966	Airbus319-100	1997-08-20	75	12	25	5
880C4A	Airbus319-100	2001-07-11	64	10	21	9
881056	Airbus319-100	2004-11-25	53	8	17	13
8832B1	Airbus320-200	2005-04-07	52	8	17	13
88596D	Airbus319-100	2009-05-18	40	6	13	17
88084F	Airbus320-200	2012-04-18	31	5	10	20
8832B0	Airbus320-200	2013-10-10	27	4	9	21

Figure 42 Query 32 Result

Query 33

- Show a list of pilot and copilot of each flight schedule that is not codeshare flights. The list must contains the Flight Code, Airline name, name of the pilot, and s/he cockpit position.

b. SQL statement

```

select
    fs.fltcode as "Flight Code",
    fs.airline_name as "Airline",
    concat(emp.fname, " ", if(left(emp.mname,1) != "", concat(left(emp.mname,1),"."),
    left(emp.mname,1)), " ", emp.lname) as "Fullname",
    pff.cockpit_position as "Position"
from pilot as pil
inner join employee as emp
on pil.pemp_id = emp.emp_id
inner join pilot_fly_flightsch as pff
on pil.pemp_id = pff.p_emp_id
inner join flight_schedule as fs
on pff.flts_id = fs.flts_id
where fs.fltcode like "%PG%" and fs.airline_name = "Bangkok Airways"
order by fs.fltcode, pff.cockpit_position;

```

c. Result

Flight Code	Airline	Fullname	Position				
PG164	Bangkok Airways	Saowapa Warisanawan	Captain	PG258	Bangkok Airways	Karen M. Lewis	Captain
PG164	Bangkok Airways	Yupin Montri	Co-pilot	PG258	Bangkok Airways	Ajay B. Sethi	Co-pilot
PG172	Bangkok Airways	Karen M. Lewis	Captain	PG264	Bangkok Airways	Sanjana M. Prabhakar	Captain
PG172	Bangkok Airways	Ajay B. Sethi	Co-pilot	PG264	Bangkok Airways	Yupin Montri	Co-pilot
PG174	Bangkok Airways	Chaimongkol Puttinachon	Captain	PG279	Bangkok Airways	Chaimongkol Puttinachon	Captain
PG174	Bangkok Airways	Chakrabandhu Sivaraksa	Co-pilot	PG279	Bangkok Airways	Chakrabandhu Sivaraksa	Co-pilot
PG191	Bangkok Airways	Saowapa Warisanawan	Captain	PG284	Bangkok Airways	Chaimongkol Puttinachon	Captain
PG191	Bangkok Airways	Yupin Montri	Co-pilot	PG284	Bangkok Airways	Saowapa Warisanawan	Co-pilot
PG214	Bangkok Airways	Sasikarn Ekaluck	Captain	PG308	Bangkok Airways	Don C. Chul	Captain
PG214	Bangkok Airways	Ajay Sehgal	Co-pilot	PG308	Bangkok Airways	Sanjana M. Prabhakar	Co-pilot
PG219	Bangkok Airways	Karen M. Lewis	Captain	PG961	Bangkok Airways	Chaimongkol Puttinachon	Captain
PG219	Bangkok Airways	Ajay B. Sethi	Co-pilot	PG961	Bangkok Airways	Ajay Sehgal	Co-pilot
PG220	Bangkok Airways	Chaimongkol Puttinachon	Captain				
PG220	Bangkok Airways	Chakrabandhu Sivaraksa	Co-pilot				

Figure 43 Query 33 Result

### Query 34

- Generate a Flight Schedule Dashboard similar to that is commonly seen at an airport.
- SQL statement

```

select
    fs.fltcode as "Flight Code",
    fs.airline_name as "Airline",
    date(fs.scheduledept_time) as "Departure Date",
    time(fs.scheduledept_time) as "Departure Time",
    concat(
        mod(hour(TIMEDIFF(fs.scheduledept_time,fs.schedulearr_time)), 24), ' hours ',
        minute(TIMEDIFF(fs.scheduledept_time,fs.schedulearr_time)), ' minutes'
    ) as "Travel Duration",
    r.distance as "Distance (km)",
    concat(ap1.airpt_name, " (", ap1.iata_code, ")") as "Deptature",
    concat(ap2.airpt_name, " (", ap2.iata_code, ")") as "Arrival"
from flight_schedule as fs
inner join airplane_operation_fs_route as operate
on fs.flts_id = operate.flts_id
inner join route as r
on r.r_id = operate.r_id
inner join airport as ap1
on ap1.airpt_id = r.dept_airpt
inner join airport as ap2
on ap2.airpt_id = r.arr_airpt;

```

### c. Result

Flight Code	Airline	Departure Date	Departure Time	Travel Duration	Distance (km)	Deptature	Arrival
SQ713	Singapore Airlines	2022-10-27	23:15:00	1 hours 3 minutes	504	Suvarnabhumi Airport (BKK)	Phnom Penh International Airport (PNH)
PG279	Bangkok Airways	2022-10-29	20:05:00	1 hours 5 minutes	633	Chiang Rai International Airport (CEI)	Noi Bai International Airport (HAN)
PG172	Bangkok Airways	2022-10-27	12:40:00	1 hours 15 minutes	504	Phnom Penh International Airport (PNH)	Suvarnabhumi Airport (BKK)
VZ307	Thai Vietjet Air	2022-10-25	09:00:00	1 hours 55 minutes	406	Sukhothai Airport (THS)	Suvarnabhumi Airport (BKK)
PG164	Bangkok Airways	2022-10-30	10:10:00	1 hours 15 minutes	504	Suvarnabhumi Airport (BKK)	Phnom Penh International Airport (PNH)
PG220	Bangkok Airways	2022-10-24	19:46:00	1 hours 28 minutes	249	Phuket International Airport (HKT)	Samui International Airport (USM)
VZ137	Thai Vietjet Air	2022-10-26	12:30:00	1 hours 30 minutes	463	Samui International Airport (USM)	Suvarnabhumi Airport (BKK)
PG962	Singapore Airlines	2022-10-31	12:10:00	2 hours 5 minutes	463	Samui International Airport (USM)	Suvarnabhumi Airport (BKK)
VJ805	Thai Vietjet Air	2022-10-30	08:00:00	1 hours 20 minutes	361	U-Tapao International Airport (UTP)	Samui International Airport (USM)
ZA936	Sky Angkor Airlines	2022-10-30	19:41:00	0 hours 55 minutes	592	Samui International Airport (USM)	Siem Reap International Airport (REP)
PG907	Sky Angkor Airlines	2022-10-27	11:30:00	1 hours 15 minutes	249	Phuket International Airport (HKT)	Samui International Airport (USM)
PG258	Bangkok Airways	2022-10-31	12:55:00	0 hours 55 minutes	671	Suvarnabhumi Airport (BKK)	Phuket International Airport (HKT)
PG191	Bangkok Airways	2022-10-28	20:46:00	0 hours 29 minutes	766	Chiang Mai International Airport (CNX)	Noi Bai International Airport (HAN)
PG961	Bangkok Airways	2022-11-01	09:25:00	1 hours 55 minutes	633	Chiang Rai International Airport (CEI)	Noi Bai International Airport (HAN)
PG704	Myanmar Airways ...	2022-10-22	11:40:00	1 hours 30 minutes	406	Sukhothai Airport (THS)	Suvarnabhumi Airport (BKK)
PG284	Bangkok Airways	2022-10-26	09:30:00	1 hours 10 minutes	231	Trat Airport (TDX)	Suvarnabhumi Airport (BKK)
8M350	Myanmar Airways ...	2022-10-29	20:30:00	1 hours 15 minutes	592	Samui International Airport (USM)	Siem Reap International Airport (REP)
ZA679	Sky Angkor Airlines	2022-10-29	19:15:00	1 hours 5 minutes	594	Suvarnabhumi Airport (BKK)	Chiang Mai International Airport (CNX)
SQ709	Singapore Airlines	2022-11-01	19:15:00	1 hours 55 minutes	766	Chiang Mai International Airport (CNX)	Noi Bai International Airport (HAN)
PG219	Bangkok Airways	2022-10-26	10:35:00	1 hours 20 minutes	504	Phnom Penh International Airport (PNH)	Suvarnabhumi Airport (BKK)
PG264	Bangkok Airways	2022-10-24	20:00:00	1 hours 5 minutes	1410	Suvarnabhumi Airport (BKK)	Changi Airport (SIN)
PG908	Cambodia Angkor Air	2022-10-22	12:35:00	1 hours 20 minutes	231	Trat Airport (TDX)	Suvarnabhumi Airport (BKK)
TR671	Tigerair	2022-10-28	12:30:00	0 hours 55 minutes	671	Suvarnabhumi Airport (BKK)	Phuket International Airport (HKT)
PG308	Bangkok Airways	2022-10-30	18:30:00	1 hours 0 minutes	716	Suvarnabhumi Airport (BKK)	Tan Son Nhat International Airport (SGN)
PG934	Myanmar Airways ...	2022-11-01	08:35:00	1 hours 15 minutes	1410	Suvarnabhumi Airport (BKK)	Changi Airport (SIN)
8M351	Myanmar Airways ...	2022-10-26	15:00:00	1 hours 15 minutes	333	Suvarnabhumi Airport (BKK)	Siem Reap International Airport (REP)
PG174	Bangkok Airways	2022-10-31	13:25:00	1 hours 35 minutes	594	Suvarnabhumi Airport (BKK)	Chiang Mai International Airport (CNX)
8M332	Myanmar Airways ...	2022-10-26	12:25:00	1 hours 20 minutes	716	Suvarnabhumi Airport (BKK)	Tan Son Nhat International Airport (SGN)
PG214	Bangkok Airways	2022-10-30	17:30:00	1 hours 20 minutes	333	Suvarnabhumi Airport (BKK)	Siem Reap International Airport (REP)
ZA1679	Sky Angkor Airlines	2022-10-29	20:00:00	1 hours 20 minutes	361	U-Tapao International Airport (UTP)	Samui International Airport (USM)

Figure 44 Query 34 Result

### Query 35

- a. Create a list to show the total number of cancellations made by each country.
- b. SQL statement

```
select
    nationality as "Nationality",
    count(*) as "Total Cancellation"
from cancellation as c
inner join payment as pay
on c.pymt_id = pay.pymt_id
inner join passenger as p
on pay.ppx_id = p.pax_id
left join (
    select
        tpax_id as pax_id,
        "Thai" as nationality
    from thai_passenger
    union all
    select
        fpax_id,
        nationality
    from foreign_passenger
) as temp
on p.pax_id = temp.pax_id
group by nationality
order by count(*) desc;
```

- c. Result

Nationality	Total Cancellation
Thai	4
Indian	4
Korean	2
Chinese	1

Figure 45 Query 35 Result

### Query 36

- Schedule the next three Check A type checks for all the airplanes. The table must shows airplane id, model, a list of engineer responsible for the check, and the three scheduled check dates separated by "|" symbol.
- SQL statement

```

select
    airp_id,
    model,
    group_concat(distinct M_EMP_ID separator ", ") as engineer,
    group_concat(distinct next_check separator "| ") as schedule_checkA
from (
    select
        mca.m_emp_id,
        ap.*,
        date_add(
            date_add(
                manufacture_date,
                interval
                floor(timestampdiff(month,timestamp(manufacture_date),now())) month
            ),
            interval (rank() over (partition by airp_id order by m_emp_id)) * 4
        month
    ) as next_check
    from maintenancee_check_airplane as mca
    inner join airplane as ap
    on mca.airp_id = ap.airp_id
) as temp
group by airp_id;

```

- Result

airp_id	model	engineer	schedule_checkA
880455	ATR72-600	632300, 632323, 632324	2023-02-23  2023-06-23  2023-10-23
88084F	Airbus320-200	632311, 632322, 632323	2023-03-18  2023-07-18  2023-11-18
880C4A	Airbus319-100	632290, 632323, 632325	2023-03-11  2023-07-11  2023-11-11
881056	Airbus319-100	632290, 632311, 632325	2023-02-25  2023-06-25  2023-10-25
8832B0	Airbus320-200	632320, 632322, 632325	2023-03-10  2023-07-10  2023-11-10
8832B1	Airbus320-200	632284, 632324, 632326	2023-03-07  2023-07-07  2023-11-07
88434E	ATR72-500	632284, 632320, 632324	2023-03-11  2023-07-11  2023-11-11
88530C	ATR72-500	632300, 632311, 632326	2023-03-17  2023-07-17  2023-11-17
885966	Airbus319-100	632290, 632322, 632326	2023-03-20  2023-07-20  2023-11-20
88596D	Airbus319-100	632284, 632300, 632320	2023-03-18  2023-07-18  2023-11-18

Figure 46 Query 36 Result

### Query 37

- Create a list to show the number of employees for each job title, the total expenditure that Bangkok Airways spent on them, and the average salary of each job title.
- SQL statement

```
select
    job as "Job Title",
    count( distinct emp_id) as "Number Employee",
    format(sum(salary),0) as "Total Salary",
    format(round(avg(salary)),0) as "Average Salary"
from (
    select
        emp.*,
        case
            when emp_id in (select memp_id from maintenance_engineer) then
                "Maintenance Engineer"
            when emp_id in (select pemp_id from pilot) then "Pilot"
            when emp_id in (select cemp_id from cabin_crew) then "Cabin Crew"
            when emp_id in (select nemp_id from network_planning) then "Network
Planning"
            else "Staff"
        end as job
    from employee as emp
) as temp
group by job
order by count( distinct emp_id) desc ,avg(salary) desc;
```

### c. Result

Job Title	Number Employee	Total Salary	Average Salary
Staff	20	26,364,899	1,318,245
Pilot	10	22,100,000	2,210,000
Cabin Crew	10	6,421,200	642,120
Network Planning	10	2,650,000	265,000
Maintenance Engineer	10	1,107,000	110,700

Figure 47 Query 37 Result

### Query 38

- a. Find the number of speakers from a set of spoken languages among the cabin crew..
- b. SQL statement

```
with cte as (
    select
        substring_index(second_language, ", ",1) as flang,
        case
            when substring_index(substring_index(second_language, ", ",2), ", ", -1) != second_language
                then substring_index(substring_index(second_language, ", ",2), ", ", -1)
            else null
        end as slang,
        case
            when substring_index(substring_index(second_language," ",3), " ", -1) != substring_index(substring_index(second_language, ", ",2), " ", -1)
                then substring_index(substring_index(second_language," ",3), " ", -1)
            else null
        end as tlang,
        case
            when substring_index(second_language, ", ", -1) != substring_index(substring_index(second_language," ",3), " ", -1)
                then substring_index(second_language, ", ", -1)
            else null
        end as frlang
    from cabin_crew as cc
)

select flang as "Language", count(*) as frequency
from (
    select flang from cte
    union all
    select slang from cte
    union all
    select tlang from cte
    union all
    select frlang from cte
) as temp
where flang is not null
group by flang
order by count(*) desc;
```

c. Result

Language	frequency
English	10
Mandarin	5
Dutch	3
Russian	2
Arabic	2
Japanese	1
Korean	1
Hindi	1
Spanish	1

Figure 48 Query 38 Result

Query 39

- Calculate the number of cancellations made for the category of travel insurance.
- SQL statement

```
select
    cancel_type as "Cancellation Categories",
    count(*) as "Frequency"
from (
    select
        pay.*,
        case
            when pay.pymt_id in (select pymt_id from ticket) then "Ticket"
            when pay.pymt_id in (select pymt_id from travel_insurance) then "Travel
Insurance"
            else "Unknown"
        end cancel_type
    from cancellation as c
    inner join payment as pay
    on c.pymt_id = pay.pymt_id
) as temp
group by cancel_type;
```

c. Result

Cancellation Categories	Frequency
Travel Insurance	6
Ticket	3
Unknown	2

Figure 49 Query 39 Result

Query 40

- Find the Average spending on seat for passenger from different area (combination of street and county)
- SQL statement

```
select
    street,
    county,
    round(avg(price)) as "Average Spending on Seat"
from (
    select
        p.pax_id,
        pa.street,
        pa.county,
        pay.pymt_mode,
        temp.sname,
        temp.price
    from passenger as p
    inner join passenger_address as pa
    on p.pax_id = pa.papax_id
    inner join payment as pay
    on p.pax_id = pay.p Pax_id
    inner join (
        select t.pymt_id, st.sname, st.price
        from ticket as t
        inner join seat as s
        on t.seat_id = s.seat_id
        inner join seat_type as st
        on s.st_id = st.seatt_id
    ) as temp
    on pay.pymt_id = temp.pymt_id
) as temp
group by street, county
order by avg(price) desc;
```

d. Result

street	county	Average Spending on Seat
Chalermphrakiat 3	Bangsrimuang	30000
Prachauthit	Bang Mod	30000
Phrasumen	Bavorrnives	21000
Rajaprarop	Phayathai	20875
Montree	Ladyai	20833
Sukhumvit	Watthana	20000
Klong Chan	Bang Kapi	19200
Kanchanapisek	Bangkhae	17667
Charansanitwong	Bangkokyai	16500
Sukhumvit	Klongtoey	12167
Suan Chitlada	Dusit	11750
Sukhumvit	Prakanong	11500
Kan Ham	Uthai	9750
Rama 3	Chong Nonsree	8833
Chaengwatana	Laksi	8833
Ratchadamri	Pathumwan	3000
Chaofa	Muang	3000
Sukhumvit	Klongton Nua	2500

Figure 50 Query 40 Result

## Warangkana Wuttisupasiri [6322770759]

### Query 41

- Display the full name of Passenger who born after year 1990
- SQL statement

```
select concat(Fname, " ", MName, " ", LName) as "Full Name", DOB from passenger  
where year(DOB) >= 1990;
```

### c. Result

	Full Name	DOB
▶	Sunan Jaijing Aromdee	1991-06-04
◀	Nakarin Chaiyansan	1991-04-14
◀	Petchra Thanwareth	1993-03-13
◀	Puttipat Srisai	1998-02-23
◀	Geetika Chauhan	2003-12-23
◀	Davie Sanjaya Yang	1990-04-20
◀	Minami Christine Chung	1996-04-11
◀	Eric Wanno Zhao	1992-05-17
◀	Giju Jhohan Yoon	2000-07-14

Figure 51 Query 41 Result

### Query 42

- Find the Coordinates of the airport where its city starts with "c"
- SQL statement

```
select city as "City", AIRPT_name as 'Airport',  
concat(latitude,' ',longitude) as 'Coordinates'  
from airport  
Where City like 'c%';
```

c. Result

City	Airport	Coordinates
▶ Chiang Mai	Chiang Mai International Airport	N 18° 46' 06.36" E 098° 57' 46.29"
Chiang Rai	Chiang Rai International Airport	N 19° 57' 08.43" E 099° 52' 58.54"
Changi	Changi Airport	N 01° 21' 00.59" E 103° 59' 39.76"
Chongqing	Chongqing Jiangbei International Airport	N 29° 43' 09.18" E 106° 38' 30.04"

Figure 52 Query 42 Result

Query 43

- a. Find payment id that paid by Credit order by datetime.
- b. SQL statement

```
select PYMT_datetime as "Datetime", PYMT_ID as "Payment ID paid by Credit"
from payment
where PYMT_mode = "credit"
order by PYMT_datetime asc;
```

c. Result

Datetime	Payment ID paid by Credit
▶ 2022-07-14 12:26:13	965820
2022-07-23 04:49:48	845136
2022-07-30 22:59:11	121212
2022-08-01 16:41:02	364215
2022-08-08 21:47:28	554218
2022-08-14 14:19:01	251478
2022-08-17 20:50:35	254178
2022-08-18 10:31:37	325689
2022-08-22 08:10:22	517528
2022-08-26 12:36:11	138878
2022-08-27 10:02:17	854725
2022-09-05 12:54:29	315859
2022-09-10 09:06:35	231842

Figure 53 Query 43 Result

#### Query 44

- List the seat type name that have a price lower than 10000.
- SQL statement

```
select Sname as "Name", price as "Price"  
from seat_type  
where price < 10000;
```

- Result

Name	Price
Economy	2500
EconomyLL	3000
EconomyC	3500

Figure 54 Query 44 Result

#### Query 45

- Display number of employees which are male.
- SQL statement

```
select count(Egender) as "Male Employee" from employee  
where Egender like "%M%";
```

- Result

Male Employee
34

Figure 55 Query 45 Result

#### Query 46

- Display ID and First Name of Passenger whose nationality is Indian.
- SQL statement

```
select p.Pax_ID as ID, p.Fname as 'Name', f.Nationality as Nationality  
from passenger p  
Inner join foreign_passenger f ON p.Pax_ID = f.FPax_ID  
Where nationality = 'indian';
```

- Result

	ID	Name	Nationality
▶	110	Amitah	Indian
◀	111	Vivek	Indian
▶	112	Geetika	Indian
◀	113	Carlos	Indian

Figure 56 Query 46 Result

#### Query 47

- Display the passenger id and name with their preferred language who have a member discount more than or equal to 8.
- SQL statement

```
select p.Pax_ID as ID, concat(p.Fname, " ", p.MName, " ", p.LName)as 'Full Name',  
m.preferred_lang as 'Preferred Language', m.MEM_discount as "Member Discount"  
from passenger p  
Inner join flyerbonus_membership m ON p.Pax_ID = m.FLPax_ID  
Where MEM_discount >= 8  
Order By MEM_discount desc;
```

- Result

	ID	Full Name	Preferred Language	Member Discount
▶	110	Amitah Anika Singh	Thai	10
◀	111	Vivek Yuraj Bhatia	English	10
▶	103	Nakarin Chaiyansan	Thai	8
◀	114	Micah Jones Li	English	8
▶	118	Jonathan Joseph Kim	English	8

Figure 57 Query 47 Result

#### Query 48

- Show the seat id, row number, and class of first 15 seats according to its ID.
- SQL statement

```
select s.Seat_ID as "Seat ID", s.row_num as "Row number", t.Sname as 'Class'  
from seat s  
inner join seat_type t on s.st_id = t.SeatT_ID  
order by s.seat_id asc  
limit 15;
```

#### c. Result

	Seat ID	Row number	Class
▶	11111	C21	EconomyLL
	12141	E7	Business
	12726	E1	First
	13401	A12	EconomyC
	19637	B12	EconomyC
	20411	F3	First
	21325	B20	EconomyLL
	21511	B10	Business
	24142	B11	EconomyC
	25806	E20	EconomyLL
	27858	A21	EconomyLL
	29406	E3	First
	29666	B8	Business
	29965	D8	Business
	31243	D11	EconomyC

Figure 58 Query 48 Result

#### Query 49

- Select Employee full name who is on the route order by Employee name.
- SQL statement

```
select concat(e.Fname, " ", e.Mname, " ", e.Lname) as "Employee", concat(r.dept_airpt, ' - ',  
r.arr_airpt) as 'Route'  
from employee e  
join route r on e.emp_id = r.n_emp_id  
where route_type = 'domestic'  
order by Employee asc;
```

c. Result

Employee	Route
Burapol Mintonki	VTBS - VTSP
Kittikorn Chaipoowapat	VTSM - VTBS
Mohini Mikka Das	VTBO - VTBS
Nae Man-Shik	VTBU - VTSM
Nae Man-Shik	VTSP - VTSM
Thanyara Kaeynanoon	VTBS - VTCC
Tookta Clearavanont	VTPO - VTBS

Figure 59 Query 49 Result

Query 50

- Show the Seat ID and Type of class which is business with the row number start with 'A'
- SQL statement

```
select s.ST_ID as "Seat ID", st.Sname as 'Class', s.row_num as 'Row Number' from Seat s  
join seat_type st on st.SeatT_ID = s.ST_ID  
where Sname like '%Business%' and s.row_num like "%A%"
```

c. Result

Seat ID	Class	Row Number
304	Business	A7
304	Business	A8
304	Business	A10

Figure 60 Query 50 Result

**Tul Tulyapornchote [6322800077]****Query 51**

- a. List how many Flyerbonus members' member languages prefer.
- b. SQL statement

```
select preferred_lang as "Preferred language",
       count(*) as "No. of membership"
  from flyerbonus_membership
 group by preferred_lang;
```

**c. Result**

	Preferred language	No. of membership
▶	Thai	4
	English	6

*Figure 61 Query 51 Result***Query 52**

- a. Display how many flights each airline has in total.
- b. SQL statement

```
select airline_name as "Airline",
       count(airline_name) as "Total flight"
  from flight_schedule group by airline_name;
```

**c. Result**

	Airline	Total flight
▶	Singapore Airlines	3
	Bangkok Airways	13
	Thai Vietjet Air	3
	Sky Angkor Airlines	4
	Myanmar Airways International	5
	Cambodia Angkor Air	1
	Tigerair	1

*Figure 62 Query 52 Result*

Query 53

- Display all payment ID with ATM purchase method.
- SQL statement

```
select  
PYMT_ID as "Payment ID"from payment  
where PYMT_mode like "%ATM%"  
group by PYMT_ID;
```

- Result

Payment ID
112022
245806
253685
254816
256368
364521
447573
513346
528741
826829
846321
852439
854210

Figure 63 Query 53 Result

Query 54

- How many First Class seats are there.
- SQL statement

```
select count(s.Seat_ID) as "First Class"  
from seat s  
inner join seat_type t on s.st_id = t.SeatT_ID  
where SName = 'First';
```

- Result

First Class
12

Figure 64 Query 54 Result

Query 55

- a. List Aircrew employee id, weight, and height that is greater than 180 in order.
- b. SQL statement

```
select AEMP_ID as "Employee ID", weight as "Weight", height as "Height"  
from air_crew  
where height>=180  
order by height asc;
```

c. Result

	Employee ID	Weight	Height
▶	632294	72	180
	632304	88	180
	632317	68	180
	632293	65	181
	632283	87	182
	632309	86	182
	632291	83	183
	632314	67	184
	632286	70	185
	632295	85	185
	632301	86	185
	632288	72	186
	632321	80	189
	632319	76	190

Figure 65 Query 55 Result

### Query 56

- a. List all payment id, Ticket ID, Schedule Departure Time and Schedule Arriving Time which has 0 in seat id and get a discount of more than 200.
- b. SQL statement

```
select
p.PYMT_ID as "Payment ID", t.TCK_ID as "Ticket ID", f.ScheduleDept_time as "Schedule
Departure Time",f.ScheduleArr_time as "Schedule Arriving Time",p.discount from payment p
join ticket t on p.PYMT_ID = t.PYMT_ID
join flight_schedule f on t.FLTS_ID = f.FLTS_ID
where discount >= 200 and Seat_ID like "%0%"
order by p.discount desc;
```

### c. Result

	Payment ID	Ticket ID	Schedule Departure Time	Schedule Arriving Time	discount
▶	251846	214325	2022-10-22 11:40:00	2022-10-22 13:10:00	500
	284152	244345	2022-10-26 12:30:00	2022-10-26 14:00:00	500
	471542	287782	2022-10-25 09:00:00	2022-10-25 10:55:00	500
	325689	112998	2022-10-30 17:30:00	2022-10-30 18:50:00	200
	254178	229988	2022-10-30 10:10:00	2022-10-30 11:25:00	200
	364215	339876	2022-11-01 09:25:00	2022-11-01 11:20:00	200
	138878	454367	2022-10-28 20:46:00	2022-10-28 21:15:00	200
	845136	746391	2022-10-28 12:30:00	2022-10-28 13:25:00	200
	965820	978865	2022-10-31 13:25:00	2022-10-31 15:00:00	200

Figure 66 Query 56 Result

### Query 57

- List all cash received ID along with Payment ID which Ask for paper medium.
- SQL statement

```
select c.CASHR_ID as "Cash recieve ID", c.medium , c.PYMT_ID as "Paymeny ID"  
from cash_receipt c  
join payment p on c.PYMT_ID = p.PYMT_ID  
where medium like "%paper%"  
order by c.PYMT_ID asc;
```

- Result

	Cash recieve ID	medium	Paymeny ID
▶	362123	Paper	234685
	345244	Paper	452168
	342677	Paper	784125
	734563	Paper	796502
	978545	Paper	846321

Figure 67 Query 57 Result

### Query 58

- Display Flight ID, Seat ID, Seat class that use F12 Check-in Counter.
- SQL statement

```
select f.FLTS_ID as "Flight ID" , f.checkin_counter as "Check-in counter", s.Seat_ID as "Seat  
ID", st.Sname as "Class" from ticket t  
join seat s on s.Seat_ID = t.Seat_ID  
join flight_schedule f on f.FLTS_ID = t.FLTS_ID  
join seat_type st where st.Sname like "%First%" and f.checkin_counter like "%F12%";
```

- Result

	Flight ID	Check-in counter	Seat ID	Class
▶	654235	F12	88600	First
	654235	F12	21511	First
	658114	F12	21325	First
	658114	F12	88205	First

Figure 68 Query 58 Result

### Query 59

- Display Network employee with Algorithm = Expert level and show their origin country.
- SQL statement

```
select n.NEMP_ID as "Network Planning Employee", n.algorithm_level as "Algorithm Level",  
ea.country from network_planning n  
join employee e on e.EMP_ID = n.NEMP_ID  
join employee_address ea on e.EMP_ID= ea.EEMP_ID  
where n.algorithm_level like "%Expert%";
```

- Result

	Network Planning Employee	Algorithm Level	country
▶	632292	Expert	Thailand
	632305	Expert	Thailand
	632310	Expert	Thailand
	632312	Expert	Thailand

Figure 69 Query 59 Result

### Query 60

- Order the sign up date from the latest day and show up their passenger ID, fullname, gender, phone number, email, and password.
- SQL statement

```
select p.PAX_ID as 'Passenger ID', signup_date as 'Signup date', concat(FName, " ", MName, "  
", LName) as "Name", Pgender as 'Gender', pnum as 'Phone No.', email as 'Email', passwd as '  
Password'  
from Passenger p  
join Contact_Detail c on c.CPAX_ID = p.PAX_ID  
join FlyerBonus_membership f on f.FLPAX_ID = p.PAX_ID  
order by signup_date desc;
```

- Result

	Passenger ID	Signup date	Name	Gender	Phone No.	Email	Password
▶	102	2022-05-30	Taweerat Poolvaraluck	M	0815870237	taweerat_p@mail.com	Taweerat102
	119	2022-01-24	Giju Jhohan Yoon	F	0875173851	giju_y@mail.com	Giju119
	107	2021-12-19	Malika Srisai	F	0870456365	malika_s@mail.com	Malika170
	118	2021-03-23	Jonathan Joseph Kim	M	0864462398	jonathan_k@mail.com	Jonathan118
	105	2021-03-09	Petchra Thanwareth	F	0853631124	petchra_t@mail.com	Petchra105
	116	2021-01-28	Minami Christine Chung	F	0854557435	minami_c@mail.com	Minami116
	110	2020-12-14	Amitah Anika Singh	F	0838577520	amitah_s@mail.com	Amitah110
	114	2020-11-04	Micah Jones Li	M	0842527828	micah_l@mail.com	Micah114
	111	2020-10-14	Vivek Yuraj Bhatia	M	0886185316	vivek_b@mail.com	Vivek111
	103	2020-07-16	Nakarin Chaiyansan	M	0863546420	nakarin_c@mail.com	Nakarin103

Figure 70 Query 60 Result

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