create schema if not exists DBproject\_12151595\_LDY default character set utf8mb4;

use DBproject\_12151595\_LDY;

create table AIRPORT

(

Airport\_code varchar(10) not null,

Name varchar(10) not null,

City varchar(10) not null,

State varchar(10) not null,

primary key(Airport\_code)

);

create table FLIGHT

(

Flight\_number varchar(10) not null,

Airline varchar(10) not null,

Weekdays varchar(1) not null,

primary key(Flight\_number)

);

create table FLIGHT\_LEG

(

Flight\_number varchar(10) not null,

Leg\_number varchar(10) not null,

Departure\_airport\_code varchar(10) not null,

Scheduled\_departure\_time time not null,

Arrival\_airport\_code varchar(10) not null,

Scheduled\_arrival\_time time not null,

primary key(Leg\_number,Flight\_number),

foreign key(Flight\_number) REFERENCES FLIGHT(Flight\_number)

);

create table FARE

(

Flight\_number varchar(10) not null,

Fare\_code varchar(10) not null,

Amount int(10) not null,

Restrictions varchar(30) not null,

primary key(Fare\_code),

foreign key(Flight\_number) REFERENCES FLIGHT(Flight\_number)

);

create table AIRPLANE\_TYPE

(

Airplane\_type\_name varchar(10) not null,

Max\_seats int(5) not null,

Company varchar(10) not null,

primary key(Airplane\_type\_name)

);

create table CAN\_LAND

(

Airplane\_type\_name varchar(10) not null,

Airport\_code varchar(10) not null,

foreign key(Airplane\_type\_name) REFERENCES AIRPLANE\_TYPE(Airplane\_type\_name),

foreign key(Airport\_code) REFERENCES AIRPORT(Airport\_code)

);

create table AIRPLANE

(

Airplane\_id varchar(10) not null,

Total\_number\_of\_seats int(5) not null,

Airplane\_type varchar(10) not null,

primary key(Airplane\_id),

foreign key(Airplane\_type) REFERENCES AIRPLANE\_TYPE(Airplane\_type\_name)

);

create table LEG\_INSTANCE

(

Flight\_number varchar(10) not null,

Leg\_number varchar(10) not null,

Date date not null,

Number\_of\_available\_seats int(5) not null,

Airplane\_id varchar(10) not null,

Departure\_airport\_code varchar(10) not null,

Scheduled\_departure\_time time not null,

Arrival\_airport\_code varchar(10) not null,

Scheduled\_arrival\_time time not null,

primary key(Date, FLIGHT\_NUMBER,LEG\_NUMBER),

foreign key(Flight\_number) REFERENCES FLIGHT(Flight\_number),

foreign key(Leg\_number) REFERENCES FLIGHT\_LEG(Leg\_number)

);

create table SEAT\_RESERVATION

(

Flight\_number varchar(10) not null,

Leg\_number varchar(10) not null,

Date date not null,

Seat\_number int(5) not null,

Customer\_name varchar(10) not null,

Customer\_phone varchar(10) not null,

primary key(Seat\_number,Flight\_number,Leg\_number,Date),

foreign key(Flight\_number) REFERENCES FLIGHT(Flight\_number),

foreign key(Leg\_number) REFERENCES FLIGHT\_LEG(Leg\_number),

foreign key(Date) REFERENCES LEG\_INSTANCE(Date)

);

트리거

DELIMITER $$

create TRIGGER NUM\_SEATS

BEFORE INSERT ON AIRPLANE

FOR EACH ROW

BEGIN

SET NEW.Total\_number\_of\_seats = (SELECT Max\_seats FROM AIRPLANE\_TYPE WHERE NEW.Airplane\_type = AIRPLANE\_TYPE.Airplane\_type\_name AND NEW.Total\_number\_of\_seats > AIRPLANE\_TYPE.Max\_seats);

END $$

DELIMITER ;

DELIMITER $$

create TRIGGER CUR\_SEATS

AFTER INSERT ON SEAT\_RESERVATION

FOR EACH ROW

BEGIN

UPDATE LEG\_INSTANCE

SET Number\_of\_available\_seats = (select DISTINCT Total\_number\_of\_seats - (SELECT COUNT(\*) FROM SEAT\_RESERVATION WHERE SEAT\_RESERVATION.Leg\_number = LEG\_INSTANCE.Leg\_number) FROM AIRPLANE where (AIRPLANE.Airplane\_id = Airplane\_id)

);

END $$

DELIMITER ;

삽입

insert into AIRPORT values('SEOUL0','서울공항','성남','수정구');

insert into AIRPORT values('JEJU0','제주공항','제주','용담동');

insert into AIRPORT values('INCHEON0','인천공항','인천','중구');

insert into AIRPORT values('BUSAN0','부산공항','부산','김해');

insert into FLIGHT values('S2J','대한항공','X');

insert into FLIGHT\_LEG values(“S2J”, “1”, “SEOUL0”, “11:00:00”, “INCHEON0”, “12:00:00”);

insert into FLIGHT\_LEG values(“S2J”, “2”, “INCHEON0”, “12:00:00”, “BUSAN0”, “13:00:00”);

insert into FLIGHT\_LEG values(“S2J”, “3”, “BUSAN0”, “11:00:00”, “JEJU0”, “12:00:00”);

insert into FARE values(“S2J”,”S2J0001”,”100000”,”NOPE”);

insert into AIRPLANE\_TYPE values(“BigDaehan”,”100”,”대한항공”);

insert into CAN\_LAND values(“BigDaehan”,”SEOUL0”);

insert into AIRPLANE values(“BigDH1”,”101”,”BigDaehan”);

insert LEG\_INSTANCE values(“S2J”,”1”,”2021-12-01”,”100”,”BigDH1”,”SEOUL0”,”11:00:00”,”INCHEON0”,”12:00:00”);

insert LEG\_INSTANCE values(“S2J”,”2”,”2021-12-01”,”100”,”BigDH1”,”INCHEON0”,”12:00:00”,”BUSAN0”,”13:00:00”);

insert LEG\_INSTANCE values(“S2J”,”3”,”2021-12-01”,”100”,”BigDH1”,”BUSAN0”,”13:00:00”,”JEJU0”,”14:00:00”);

insert into SEAT\_RESERVATION values(“S2J”,”1”,”2021-12-01”,”5”,”LDY”,”1234-5678”);

뷰 생성

Create view test1 as

Select \*

From seat\_reservation;

비트리로 INDEX

Explain Select \* from Seat\_reservation where seat\_number=5;

Create index index\_resv1 on Seat\_reservation (seat\_number) using btree;

Desc seat\_reservation;

Select \* from Seat\_reservation where seat\_number=5;

Explain Select \* from Seat\_reservation where seat\_number=5;

Explain Select \* from Seat\_reservation where seat\_number<10;

Create view test2 as

Select \*

From seat\_reservation where seat\_number=5;

Select \* from test2;

트랜잭션

show variables like '%commit%';

START TRANSACTION;

INSERT INTO Seat\_reservation VALUES(“S2J”, “1”, “2021-12-01”,”51”,”LDK”,”33333”);

IF ((select \* from seat\_reservation where Seat\_number=”51”) != null) rollback;

COMMIT;

START TRANSACTION

INSERT INTO Seat\_reservation VALUES(“S2J”, “1”, “2021-12-01”,”51”,”LDK”,”33333”);

IF ((select \* from Flight\_number where Flight\_number=”S2J”) != null) rollback;

COMMIT;