DBMS

LAB – 3

DDL – COMMANDS

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1. PK and FK Constraints for all applicable Relations :

CODE :

```sql
1   CREATE TABLE USER_385 (
2       User_id int(20) NOT NULL,
3       F_Name varchar(50),
4       L_Name varchar(20),
5       DOB date,
6       User_type varchar(20),
7       Phone int(10),
8       Street_no int(4),
9       PIN int(6),
10      PRIMARY KEY (User_id)
11  );
12
13
14  CREATE TABLE FARE_TABLE_385 (
15      Train_type varchar(20) NOT NULL,
16      FarePerKM decimal(4,2),
17      Compartment_Type int,
18      PRIMARY KEY (Train_type)
19  );
20
21
22  CREATE TABLE TRAIN_385 (
23      Train_no int(6) NOT NULL,
24      Source varchar(30),
25      Destinationn varchar(30),
26      Train_name varchar(100),
27      Train_type varchar(20),
28      Availability boolean,
29      PRIMARY KEY (Train_No)
30  );
31
32
33  CREATE TABLE ROUTE_INFO_385 (
34      Train_no int(6),
35      To_Station_No int(6),
36      To_Station_Name varchar(50),
37      From_Station_No int(6),
38      From_Station_name varchar(50),
39      Distance decimal(7,2),
40      FOREIGN KEY (Train_no) REFERENCES TRAIN_385 (Train_no)
41  );
42
43
44  CREATE TABLE COMPARTMENT_385 (
45      Train_no int(6),
46      Compartment_no int(3),
47      Type varchar(20),
48      Capacity int(3),
49      Availability boolean,
50      FOREIGN KEY (Train_no) REFERENCES TRAIN_385 (Train_no)
51  );
52
53
54  CREATE TABLE TICKET_385 (
55      PNR int(10) NOT NULL,
56      Train_no int(6),
57      Seat_no int(6),
58      Departure varchar(50),
59      Departure_Time datetime,
60      Arrival varchar(50),
61      Arrival_Time datetime,
62      Compartment_type int,
63      Compartment_no int(3),
64      Travel_Date date,
65      Train_type varchar(20),
66      User_id int(20),
67      PRIMARY KEY (PNR),
68      FOREIGN KEY (User_id) REFERENCES USER_385 (User_id),
69      FOREIGN KEY (Train_type) REFERENCES FARE_TABLE_385 (Train_type)
70  );
71
72
73  CREATE TABLE TICKET_PASSENGER_385 (
74      PNR int(10),
75      Name varchar(70),
76      Age int(3),
77      FOREIGN KEY (PNR) REFERENCES TICKET_385 (PNR)
78  );
79
80
81  CREATE TABLE PAYMENT_INFO_385 (
82      Transaction_ID varchar(20) NOT NULL,
83      Price decimal(10,2),
84      Bank varchar(50),
85      Card_No int(16),
86      PNR int(10),
87      PRIMARY KEY (Transaction_ID),
88      FOREIGN KEY (PNR) REFERENCES TICKET_385 (PNR)
89  );
90
91
92
93  CREATE TABLE USER_PHONE_385 (
94      User_ID int(20),
95      Phone_no int(10),
96      FOREIGN KEY (User_id) REFERENCES USER_385 (User_id)
97  );
98
99
100 CREATE TABLE USER_TRAIN_385 (
101     Date_Time_Stamp datetime,
102     Train_No int(6),
103     User_ID int(20),
104     FOREIGN KEY (Train_no) REFERENCES TRAIN_385 (Train_no),
105     FOREIGN KEY (User_id) REFERENCES USER_385 (User_id)
106 );
```

OUTPUT :

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0006 seconds.)

```sql
CREATE TABLE USER_385 ( User_id int(20) NOT NULL, F_Name varchar(50), L_Name varchar(20), DOB date, User_type varchar(20), Phone int(10), Street_no int(4), PIN int(6),
PRIMARY KEY (User_id) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE FARE_TABLE_385 ( Train_type varchar(20) NOT NULL, FarePerKM decimal(4,2), Compartment_Type int, PRIMARY KEY (Train_type) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```sql
CREATE TABLE TRAIN_385 ( Train_no int(6) NOT NULL, Source varchar(30), Destinationn varchar(30), Train_name varchar(100), Train_type varchar(20), Availability boolean,
PRIMARY KEY (Train_No) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE ROUTE_INFO_385 ( Train_no int(6), To_Station_No int(6), To_Station_Name varchar(50), From_Station_No int(6), From_Station_name varchar(50), Distance
decimal(7,2), FOREIGN KEY (Train_no) REFERENCES TRAIN_385 (Train_no) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE COMPARTMENT_385 ( Train_no int(6), Compartment_no int(3), Type varchar(20), Capacity int(3), Availability boolean, FOREIGN KEY (Train_no) REFERENCES TRAIN_385
(Train_no) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE TICKET_385 ( PNR int(10) NOT NULL, Train_no int(6), Seat_no int(6), Departure varchar(50), Departure_Time datetime, Arrival varchar(50), Arrival_Time datetime,
Compartment_type int, Compartment_no int(3), Travel_Date date, Train_type varchar(20), User_id int(20), PRIMARY KEY (PNR), FOREIGN KEY (User_id) REFERENCES USER_385
(User_id), FOREIGN KEY (Train_type) REFERENCES FARE_TABLE_385 (Train_type) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE TICKET_PASSENGER_385 ( PNR int(10), Name varchar(70), Age int(3), FOREIGN KEY (PNR) REFERENCES TICKET_385 (PNR) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE PAYMENT_INFO_385 ( Transaction_ID varchar(20) NOT NULL, Price decimal(10,2), Bank varchar(50), Card_No int(16), PNR int(10), PRIMARY KEY (Transaction_ID),
FOREIGN KEY (PNR) REFERENCES TICKET_385 (PNR) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE USER_PHONE_385 ( User_ID int(20), Phone_no int(10), FOREIGN KEY (User_id) REFERENCES USER_385 (User_id) );
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```sql
CREATE TABLE USER_TRAIN_385 ( Date_Time_Stamp datetime, Train_No int(6), User_ID int(20), FOREIGN KEY (Train_no) REFERENCES TRAIN_385 (Train_no), FOREIGN KEY (User_id)
REFERENCES USER_385 (User_id) );
```

[Edit inline] [Edit] [Create PHP code]

2. Adding NOT NULL Constraints :

Run SQL query/queries on database railway_reservation: ⓘ

```
1  ALTER TABLE TRAIN_385
2  MODIFY Train_name varchar(100) NOT NULL,
3  MODIFY Train_type varchar(20) NOT NULL;
```

[Clear] [Format] [Get auto-saved query]

☐ Bind parameters ⓘ

Bookmark this SQL query: [_____]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐ Rollback when finished   ☑ Enable foreig

(Hide query box)

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0009 seconds.)

ALTER TABLE TRAIN_385 MODIFY Train_name varchar(100) NOT NULL, MODIFY Train_type varchar(20) NOT NULL;

[Edit inline] [Edit] [Create PHP code]

3. Adding DEFAULT Constraints :

Run SQL query/queries on database railway_reservation: ⓘ

```
1  ALTER TABLE COMPARTMENT_385
2  ALTER Availability SET DEFAULT 1;
```

[Clear] [Format] [Get auto-saved query]

☐ Bind parameters ⓘ

Bookmark this SQL query: [_____]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐ Rollback when finished

(Hide query box)

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

ALTER TABLE COMPARTMENT_385 ALTER Availability SET DEFAULT 1;

[Edit inline] [Edit] [Create PHP code]

4. Adding UNIQUE Constraints :

```
1 ALTER TABLE TICKET_385
2 ADD UNIQUE (PNR);
3
```

Clear | Format | Get auto-saved query

☐ Bind parameters 🔵

Bookmark this SQL query: [   ]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐ Rollback whe

Hide query box

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

ALTER TABLE TICKET_385 ADD UNIQUE (PNR);

[Edit inline] [Edit] [Create PHP code]

5. Adding CHECK Constraints :

```
1 ALTER TABLE TICKET_PASSENGER_385
2 ADD CONSTRAINT Check_age CHECK(Age>5);
```

Clear | Format | Get auto-saved query

☐ Bind parameters 🔵

Bookmark this SQL query: [   ]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐

Hide query box

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0015 seconds.)

ALTER TABLE TICKET_PASSENGER_385 ADD CONSTRAINT Check_age CHECK(Age>5);

[Edit inline] [Edit] [Create PHP code]

6. RENAMING TABLE :

```
1 ALTER TABLE PAYMENT_INFO_385
2 RENAME TO TRANSACTION_INFO_385
```

Clear   Format   Get auto-saved query

◯ Bind parameters ⓰

Bookmark this SQL query: [   ]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐

Hide query box

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
ALTER TABLE PAYMENT_INFO_385 RENAME TO TRANSACTION_INFO_385;
```

[Edit inline] [Edit] [Create PHP code]

7. Creating a VIEW :

Run SQL query/queries on database railway_reservation: ⓰

```
1 CREATE VIEW Trains_from_Bengluru_to_Belagavi AS
2 SELECT Train_no, Train_name, Train_type
3 FROM TRAIN_385
4 WHERE (Availability = 1)
5 AND (Source = 'Bengaluru')
6 AND (Destinationn = 'Belagavi');
```

Clear   Format   Get auto-saved query

☐ Bind parameters ⓰

Bookmark this SQL query: [   ]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐ Rollback when finished   ☑ Enable foreign key checks   Go

Hide query box

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
CREATE VIEW Trains_from_Bengluru_to_Belagavi AS SELECT Train_no, Train_name, Train_type FROM TRAIN_385 WHERE (Availability = 1) AND (Source = 'Bengaluru') AND (Destinationn = 'Belagavi');
```

[Edit inline] [Edit] [Create PHP code]

8. DROP and TRUNCATE commands :

```
1  TRUNCATE TABLE ROUTE_INFO_385;
2  DROP TABLE ROUTE_INFO_385;
```

Clear | Format | Get auto-saved query

☐ Bind parameters 🔵

Bookmark this SQL query: [   ]

Delimiter [;]   ☐ Show this query here again   ☐ Retain query box   ☐ Rollback wh

Hide query box

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)

```
TRUNCATE TABLE ROUTE_INFO_385;
```

[Edit inline] [Edit] [Create PHP code]

✔ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

```
DROP TABLE ROUTE_INFO_385;
```

[Edit inline] [Edit] [Create PHP code]

A. Database when only TRUNCATE is done :

	Table ▲	Action							Rows	Type	Collation	Size	Overhead
☐	compartment_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	fare_table_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	payment_info_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	route_info_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	ticket_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
☐	ticket_passenger_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	train_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	user_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	user_phone_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	user_train_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
	10 tables	Sum							0	InnoDB	utf8mb4_general_ci	304.0 KiB	0 B

↑ ☐ Check all   With selected: ▾

B. Database when DROP is done :

	Table ▲	Action							Rows	Type	Collation	Size	Overhead
☐	compartment_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	fare_table_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	payment_info_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	ticket_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
☐	ticket_passenger_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	train_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	user_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
☐	user_phone_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	32.0 KiB	-
☐	user_train_385	⭐	🔲 Browse	🔧 Structure	🔍 Search	➕ Insert	🗑 Empty	⊖ Drop	0	InnoDB	utf8mb4_general_ci	48.0 KiB	-
	9 tables	Sum							0	InnoDB	utf8mb4_general_ci	272.0 KiB	0 B

↑ ☐ Check all   With selected: ▾