

**Create new Database:**

```

MariaDB [(none)]> create database PES1UG20CS516_Vrushank;
Query OK, 1 row affected (0.003 sec)

MariaDB [(none)]> use PES1UG20CS516_Vrushank;
Database changed
MariaDB [PES1UG20CS516_Vrushank]>

```

**Create Table Train:**

```

MariaDB [PES1UG20CS516_Vrushank]> create table Train(train_no int primary key not null, name varchar(30) not null, source varchar(20), destination varchar(20), train_type varchar(20) not null, availability boolean);
Query OK, 0 rows affected (0.014 sec)

MariaDB [PES1UG20CS516_Vrushank]> desc train;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| train_no | int(11) | NO | PRI | NULL | |
| name | varchar(30) | NO | | NULL | |
| source | varchar(20) | YES | | NULL | |
| destination | varchar(20) | YES | | NULL | |
| train_type | varchar(20) | NO | | NULL | |
| availability | tinyint(1) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.009 sec)

```

**Create Table Compartment:**

```

MariaDB [PES1UG20CS516_Vrushank]> create table compartment(type varchar(20), compartment_no int, capacity int, availability boolean, train_no int, foreign key(train_no) references train(train_no), primary key(train_no, compartment_no));
Query OK, 0 rows affected (0.019 sec)

MariaDB [PES1UG20CS516_Vrushank]> desc compartment;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| type | varchar(20) | YES | | NULL | |
| compartment_no | int(11) | NO | PRI | NULL | |
| capacity | int(11) | YES | | NULL | |
| availability | tinyint(1) | YES | | NULL | |
| train_no | int(11) | NO | PRI | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.009 sec)

```

**Alter Table Compartment add default availability to true:**

```

MariaDB [PES1UG20CS516_Vrushank]> alter table compartment
-> alter availability set default true;
Query OK, 0 rows affected (0.008 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [PES1UG20CS516_Vrushank]> desc compartment;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| type | varchar(20) | YES | | NULL | |
| compartment_no | int(11) | NO | PRI | NULL | |
| capacity | int(11) | YES | | NULL | |
| availability | tinyint(1) | YES | | 1 | |
| train_no | int(11) | NO | PRI | NULL | |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.007 sec)

```

**Create Table Route Info:**

```

MariaDB [PES1UG20CS516_Vrushank]> create table route_info(from_station_no int, from_station_name varchar(20), to_station_no int, to_station_name varchar(50), distance float, train_no int, foreign key(train_no) references train(train_no), primary key(from_station_no,to_station_no, train_no));
Query OK, 0 rows affected (0.017 sec)

MariaDB [PES1UG20CS516_Vrushank]> desc route_info;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| from_station_no | int(11) | NO | PRI | NULL | |
| from_station_name | varchar(20) | YES | | NULL | |
| to_station_no | int(11) | NO | PRI | NULL | |
| to_station_name | varchar(50) | YES | | NULL | |
| distance | float | YES | | NULL | |
| train_no | int(11) | NO | PRI | NULL | |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.009 sec)

```

**Create Table User:**

```

MariaDB [PES1UG20CS516_Vrushank]> create table user(user_id varchar(50) primary key,user_type varchar(20), fname varchar(30), lname varchar(30), age int, dob date, pincode int, street_no int);
Query OK, 0 rows affected (0.013 sec)

MariaDB [PES1UG20CS516_Vrushank]> desc user;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| user_id | varchar(50) | NO | PRI | NULL | |
| user_type | varchar(20) | YES | | NULL | |
| fname | varchar(30) | YES | | NULL | |
| lname | varchar(30) | YES | | NULL | |
| age | int(11) | YES | | NULL | |
| dob | date | YES | | NULL | |
| pincode | int(11) | YES | | NULL | |
| street_no | int(11) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.009 sec)

```

## DBMS Lab-3

Name: Vrushank G

SRN: PES1UG20CS516

Section: I

### Create Table User Train:

```
MariaDB [PES1UG20CS516_Vrushank]> create table user_train(train_no int, user_id varchar(30),date_time_stamp timestamp, foreign key(train_no) references train(train_no), foreign key(user_id) references user(user_id), primary key(train_no, user_id, date_time_stamp));
Query OK, 0 rows affected (0.018 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> desc user_train;
```

Field	Type	Null	Key	Default	Extra
train_no	int(11)	NO	PRI	NULL	
user_id	varchar(30)	NO	PRI	NULL	
date_time_stamp	timestamp	NO	PRI	current_timestamp()	on update current_timestamp()

3 rows in set (0.009 sec)

### Create Table User Phone:

```
MariaDB [PES1UG20CS516_Vrushank]> create table user_phone(user_id varchar(50), phone_no int, foreign key(user_id) references user(user_id), primary key(user_id,phone_no));
Query OK, 0 rows affected (0.016 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> desc user_phone;
```

Field	Type	Null	Key	Default	Extra
user_id	varchar(50)	NO	PRI	NULL	
phone_no	int(11)	NO	PRI	NULL	

2 rows in set (0.009 sec)

```
MariaDB [PES1UG20CS516_Vrushank]>
```

### Create Table Ticket:

```
MariaDB [PES1UG20CS516_Vrushank]> create table ticket(pnr int primary key, train_no int,travel_date date, source varchar(20), destination varchar(20), arrival_time time, departure_time time, user_id varchar(20), train_type varchar(20), compartment_type varchar(20), compartment_no int, foreign key(user_id) references user(user_id));
Query OK, 0 rows affected (0.016 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> desc ticket;
```

Field	Type	Null	Key	Default	Extra
pnr	int(11)	NO	PRI	NULL	
train_no	int(11)	YES		NULL	
travel_date	date	YES		NULL	
source	varchar(20)	YES		NULL	
destination	varchar(20)	YES		NULL	
arrival_time	time	YES		NULL	
departure_time	time	YES		NULL	
user_id	varchar(20)	YES	MUL	NULL	
train_type	varchar(20)	YES		NULL	
compartment_type	varchar(20)	YES		NULL	
compartment_no	int(11)	YES		NULL	

11 rows in set (0.008 sec)

## DBMS Lab-3

Name: Vrushank G

SRN: PES1UG20CS516

Section: I

### Create Table Payment Info:

```
MariaDB [PES1UG20CS516_Vrushank]> create table payment_info(transaction_id int, bank varchar(20), card_number bigint, price float, pnr int, primary key(transaction_id, pnr), foreign key(pnr) references ticket(pnr));
Query OK, 0 rows affected (0.011 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> desc payment_info;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| transaction_id | int(11)       | NO   | PRI | NULL    |       |
| bank           | varchar(20)   | YES  |     | NULL    |       |
| card_number    | bigint(20)    | YES  |     | NULL    |       |
| price          | float         | YES  |     | NULL    |       |
| pnr            | int(11)       | NO   | PRI | NULL    |       |
+-----+-----+-----+-----+-----+-----+
5 rows in set (0.008 sec)
```

### Create Table Ticket Passenger:

```
MariaDB [PES1UG20CS516_Vrushank]> create table ticket_passenger(seat_no int, name varchar(30), age int ,pnr int, foreign key(pnr) references ticket(pnr) , primary key(seat_no,pnr));
Query OK, 0 rows affected (0.013 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> desc ticket_passenger;
+-----+-----+-----+-----+-----+-----+
| Field  | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| seat_no | int(11)       | NO   | PRI | NULL    |       |
| name    | varchar(30)   | YES  |     | NULL    |       |
| age     | int(11)       | YES  |     | NULL    |       |
| pnr     | int(11)       | NO   | PRI | NULL    |       |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.009 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]>
```

### Create Table Fare Info:

```
MariaDB [PES1UG20CS516_Vrushank]> create table fare_info(train_type varchar(20), compartment_type varchar(20), fore_per_km float, primary key(train_type, compartment_type));
Query OK, 0 rows affected (0.017 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> desc fare_info;
+-----+-----+-----+-----+-----+-----+
| Field          | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| train_type     | varchar(20)   | NO   | PRI | NULL    |       |
| compartment_type | varchar(20)   | NO   | PRI | NULL    |       |
| fore_per_km    | float         | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.008 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]>
```

**Create add check constraint for age > 5 in user table:**

```
MariaDB [PES1UG20CS516_Vrushank]> alter table user
-> add check(age>5);
Query OK, 0 rows affected (0.046 sec)
Records: 0 Duplicates: 0 Warnings: 0

MariaDB [PES1UG20CS516_Vrushank]> desc user;
+-----+-----+-----+-----+-----+-----+
| Field      | Type          | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| user_id    | varchar(50)   | NO   | PRI | NULL    |       |
| user_type  | varchar(20)   | YES  |     | NULL    |       |
| fname      | varchar(30)   | YES  |     | NULL    |       |
| lname      | varchar(30)   | YES  |     | NULL    |       |
| age        | int(11)       | YES  |     | NULL    |       |
| dob        | date          | YES  |     | NULL    |       |
| pincode    | int(11)       | YES  |     | NULL    |       |
| street_no  | int(11)       | YES  |     | NULL    |       |
+-----+-----+-----+-----+-----+-----+
8 rows in set (0.006 sec)
```

**Rename Table:**

```
MariaDB [PES1UG20CS516_Vrushank]> show tables;
```

```
+-----+
| Tables_in_pes1ug20cs516_vrushank |
+-----+
| compartment |
| fare_info   |
| payment_info |
| route_info  |
| ticket      |
| ticket_passenger |
| train       |
| user        |
| user_phone  |
| user_train  |
+-----+
10 rows in set (0.001 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> rename table user_phone to user_contact;
Query OK, 0 rows affected (0.022 sec)
```

```
MariaDB [PES1UG20CS516_Vrushank]> show tables;
```

```
+-----+
| Tables_in_pes1ug20cs516_vrushank |
+-----+
| compartment |
| fare_info   |
| payment_info |
| route_info  |
| ticket      |
| ticket_passenger |
| train       |
| user        |
| user_contact |
| user_train  |
+-----+
10 rows in set (0.001 sec)
```

## DBMS Lab-3

Name: Vrushank G

SRN: PES1UG20CS516

Section: I

### Insert values into table:

```
MariaDB [PES1UG20CS516_Vrushank]> insert into fare_info(train_type,compartment_type, fare_per_km)
-> values
-> ("express","1A",80),
-> ("passenger","2S",6.33);
Query OK, 2 rows affected (0.004 sec)
Records: 2 Duplicates: 0 Warnings: 0

MariaDB [PES1UG20CS516_Vrushank]> insert info fare_info(train_type,compartment_type, fare_per_km)
-> values
-> ("express","SL",40);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'fare_info(train_type,compartment_type, fare_per_km)
values
('express','SL',40)' at line 1
MariaDB [PES1UG20CS516_Vrushank]> insert into fare_info(train_type,compartment_type, fare_per_km)
-> values
-> ("express","SL",40);
Query OK, 1 row affected (0.002 sec)

MariaDB [PES1UG20CS516_Vrushank]> select * from fare_info;
+-----+-----+-----+
| train_type | compartment_type | fare_per_km |
+-----+-----+-----+
| express    | 1A                | 80           |
| express    | SL                | 40           |
| passenger  | 2S                | 6.33         |
+-----+-----+-----+
3 rows in set (0.001 sec)
```

### Create view:

```
MariaDB [PES1UG20CS516_Vrushank]> create view express_train_fare as select * from fare_info where train_type="express";
Query OK, 0 rows affected (0.009 sec)

MariaDB [PES1UG20CS516_Vrushank]> select * from express_train_fare;
+-----+-----+-----+
| train_type | compartment_type | fare_per_km |
+-----+-----+-----+
| express    | 1A                | 80           |
| express    | SL                | 40           |
+-----+-----+-----+
2 rows in set (0.002 sec)
```

### Drop view:

```
MariaDB [PES1UG20CS516_Vrushank]> drop view express_train_fare;
Query OK, 0 rows affected (0.001 sec)

MariaDB [PES1UG20CS516_Vrushank]>
```

**Truncate Table:**

```

MariaDB [PES1UG20CS516_Vrushank]> select *from fare_info;
+-----+-----+-----+
| train_type | compartment_type | fare_per_km |
+-----+-----+-----+
| express    | 1A                | 80          |
| express    | SL                | 40          |
| passenger  | 2S                | 6.33        |
+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [PES1UG20CS516_Vrushank]> truncate table fare_info;
Query OK, 0 rows affected (0.024 sec)

MariaDB [PES1UG20CS516_Vrushank]> select *from fare_info;
Empty set (0.001 sec)

MariaDB [PES1UG20CS516_Vrushank]>

```

**Drop table**

```

MariaDB [PES1UG20CS516_Vrushank]> drop table fare_info;
Query OK, 0 rows affected (0.007 sec)

MariaDB [PES1UG20CS516_Vrushank]> show tables;
+-----+
| Tables_in_pes1ug20cs516_vrushank |
+-----+
| compartment                        |
| payment_info                      |
| route_info                        |
| ticket                            |
| ticket_passenger                  |
| train                             |
| user                              |
| user_contact                      |
| user_train                        |
+-----+
9 rows in set (0.001 sec)

MariaDB [PES1UG20CS516_Vrushank]>

```