

DBMS LAB

Week – 4

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Task 1 - Use INSERT/SELECT/UPDATE queries for the following tasks:

2. Calculate and update age attribute in User Table.

Server: localhost - Database: Railway_Res_CS140 - Table: passenger

6 rows affected. (Query took 0.0004 seconds.)

```
UPDATE `passenger` SET age = YEAR(CURRENT_TIMESTAMP) - YEAR(dob) - (RIGHT(CURRENT_TIMESTAMP, 5) < RIGHT(dob, 5));
```

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

3. Display all the route information whose distance falls in a range from 70 to 150 km.

Server: localhost - Database: Railway_Res_CS140 - Table: route_info

Showing rows 0 - 11 (12 total, Query took 0.0001 seconds.)

```
SELECT * FROM `route_info` WHERE distance BETWEEN 70 and 150;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

	from_station_no	to_station_no	from_station_name	to_station_name	distance	Train_No
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	2	Mangaluru	Kannur	131	25260
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	2	Chennai	Palakkad	130	25261
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	2	Bengaluru	Mysore	139	58451
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	2	Chennai	Sholingur	90	62620
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	2	Bengaluru	Bangarpet	71	62621
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	3	Chennai	Katpadi	129	62620
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	4	Kannur	Mangaluru	131	25261
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	4	Mysore	Bengaluru	139	58450
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	5	Katpadi	Chennai	130	62621
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	4	Palakkad	Chennai	130	25260
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	5	Bangarpet	Bengaluru	71	62620
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	5	Sholingur	Chennai	90	62621

Console

```
>SELECT * FROM `passenger`  
>SELECT * FROM `fare`  
>INSERT INTO `fare`(`compartment_type`, `train_type`, `fare_per_km`) VALUES ('IV Class','F',21);  
>SELECT * FROM `ticket`
```

4. Display the train route information which are run between Chennai and Sholingur.

Showing rows 0 - 0 (1 total, Query took 0.0001 seconds.)

```
SELECT * FROM `route_info` WHERE from_station_name= "CHENNAI" AND to_station_name="Sholingur";
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

	from_station_no	to_station_no	from_station_name	to_station_name	distance	Train_No
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	2	Chennai	Sholingur	90	62620

☐ Check all | With selected: ☐ Edit ☐ Copy ☐ Delete ☐ Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

☐ Print ☐ Copy to clipboard ☐ Export ☐ Display chart ☐ Create view

☐ Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Console

```
>UPDATE `passenger` SET age = YEAR(CURRENT_TIMESTAMP) - YEAR(dob) - (RIGHT(CURRENT_TIMESTAMP, 5) < RIGHT(dob, 5));
>SELECT * FROM `route_info`
>SELECT * FROM `route_info` WHERE distance BETWEEN 70 and 150;
>SELECT * FROM `train`
>SELECT * FROM `train` WHERE source = "CHENNAI" AND destination="Mangaluru";
>SELECT * FROM `train` WHERE Train_Type != "Mail";
>SELECT Train_name FROM `train` WHERE source="CHENNAI" AND destination="Bengaluru";
```

5. Display the train details whose type is not mail

Show query box

Showing rows 0 - 3 (4 total, Query took 0.0001 seconds.)

```
SELECT * FROM `train` WHERE Train_Type != "Mail";
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	Train_no	Train_name	Train_Type	source	destination	availability
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	58450	MAN-BEN Express	Fast	Mangaluru	Bengaluru	yes
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	58451	BEN-MAN Express	Fast	Bengaluru	Mangaluru	yes
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	62620	CHE-BEN Shatabdi	Superfast	Chennai	Bengaluru	No
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	62621	BEN-CHE Shatabdi	Superfast	Bengaluru	Chennai	yes

☐ Check all | With selected: ☐ Edit ☐ Copy ☐ Delete ☐ Export

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

☐ Print ☐ Copy to clipboard ☐ Export ☐ Display chart ☐ Create view

☐ Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Console

```
>SELECT * FROM `passenger`
```

6.Display the train name which goes to Chennai from Bangalore.

Showing rows 0 - 0 (1 total, Query took 0.0001 seconds.)

```
SELECT Train_name FROM `train` WHERE source="CHENNAI" AND destination="Bengaluru";
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows:

Extra options

Train_name

☐ Edit ☐ Copy ☐ Delete CHE-BEN Shatabdi

☐ Check all | With selected: ☐ Edit ☐ Copy ☐ Delete ☐ Export

☐ Show all | Number of rows: 25 | Filter rows:

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create view](#)

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

Console

7.Display the list of trains starting from Chennai after 8:00.

Server: localhost - Database: Railway_Rpt_CS143 - Table: train

[Browse](#) [Structure](#) [SQL](#) [Search](#) [Insert](#) [Export](#) [Import](#) [Privileges](#) [Operations](#) [Tracking](#) [Triggers](#)

Show query box

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 2 (3 total, Query took 0.0002 seconds.)

```
SELECT * FROM train INNER JOIN ticket ON train.Train_no = ticket.Train_No WHERE source = "Chennai" and departure >= "08:00:00";
```

☐ Profiling [\[Edit inline \]](#) [\[Edit \]](#) [\[Explain SQL \]](#) [\[Create PHP code \]](#) [\[Refresh \]](#)

☐ Show all | Number of rows: 25 | Filter rows: Sort by key: None

Extra options

Train_no	Train_name	Train_Type	source	destination	availability	PNR	Train_No	Travel_date	Passenger_id	arrival	departure	Train_Type	compartment_type	compartment_No	age
62620	CHE BEN Shatabdi	Superfast	Chennai	Bengaluru	No	PNR002	62620	2022-08-14	ADM_001	12:25:00	08:00:00	Superfast	I Class	F02	NULL
25261	Managaluru Mail	Mail	Chennai	Mangaluru	Yes	PNR003	25261	2022-08-01	ADM_003	07:30:00	18:00:00	Mail	III Class	G02	NULL
62620	CHE BEN Shatabdi	Superfast	Chennai	Bengaluru	No	PNR008	62620	2022-08-02	ADM_002	09:00:00	08:00:00	Superfast	I Class	F01	NULL

☐ Show all | Number of rows: 25 | Filter rows: Sort by key: None

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create view](#)

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

Console

8. Display the list of users who are born between 1980 to 1990.

Server: localhost - Database: Railway_Res_CS143 - Table: passenger

Showing rows 0 - 10 (11 total, Query took 0.0001 seconds.)

```
SELECT * FROM 'passenger' WHERE YEAR(DOB) BETWEEN 1980 and 1990;
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this Table | Sort by key: None

Extra options

	User_ID	Firstname	Lastname	age	DOB	phone	pincode	user_type	street_number
<input type="checkbox"/>	ADM_001	Narendra	Modi	33	1989-04-14	NULL	600047	ADMIN	Old jail Road
<input type="checkbox"/>	ADM_002	Droupadi	Murmu	32	1990-04-14	NULL	640012	ADMIN	High Street
<input type="checkbox"/>	USR_022	Srihari	Udupa	42	1980-04-14	NULL	560015	PSGR	Suranjan Das Road
<input type="checkbox"/>	USR_023	Satish	Kotian	41	1981-04-14	NULL	600044	PSGR	T Nagar
<input type="checkbox"/>	USR_024	Shradha	Nayar	40	1982-04-08	NULL	560006	PSGR	M G Road, Bangalore
<input type="checkbox"/>	USR_025	Manisha	Solaniki	39	1983-04-08	NULL	575030	PSGR	M G Road
<input type="checkbox"/>	USR_026	Bharti	Devgan	38	1984-04-14	NULL	560059	PSGR	NAL Wind Tunnel Road
<input type="checkbox"/>	USR_027	Roopa	Ram	37	1985-04-14	NULL	575023	PSGR	Bunder Road
<input type="checkbox"/>	USR_028	Pallavi	Ram	36	1986-04-08	NULL	560044	PSGR	Lavelle Road
<input type="checkbox"/>	USR_029	Ravi	Naik	35	1987-04-14	NULL	600045	PSGR	Thiru V ka Salai
<input type="checkbox"/>	USR_030	Virat	Murthy	34	1988-04-14	NULL	575011	PSGR	Bojai New Road

Check all | With selected: Edit Copy Delete Export

Console

```
>SELECT * FROM 'train'
```

9. Display the train users whose name starts with the letter 'S'

Server: localhost - Database: Railway_Res_CS143 - Table: passenger

Showing rows 0 - 8 (9 total, Query took 0.0001 seconds.)

```
SELECT * FROM 'passenger' WHERE Firstname LIKE 'S%';
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this Table | Sort by key: None

Extra options

	User_ID	Firstname	Lastname	age	DOB	phone	pincode	user_type	street_number
<input type="checkbox"/>	USR_003	Sai Deepak	Reddy	26	1996-12-12	NULL	600001	PSGR	14, Kailash Marg
<input type="checkbox"/>	USR_007	Smriti	Irani	23	1999-12-16	NULL	575014	PSGR	4, Banyan Avenue
<input type="checkbox"/>	USR_010	Samanta	Prabhu	54	1968-04-14	NULL	600042	PSGR	8, Clone Colony
<input type="checkbox"/>	USR_016	Subbu	Saravana	48	1974-04-14	NULL	600043	PSGR	American Street
<input type="checkbox"/>	USR_017	Sheela	Dixit	47	1975-04-08	NULL	560048	PSGR	Kasturba Road
<input type="checkbox"/>	USR_021	Suma	Sampat	43	1979-04-08	NULL	560012	PSGR	Old Airport Road, Bangalore
<input type="checkbox"/>	USR_022	Srihari	Udupa	42	1980-04-14	NULL	560015	PSGR	Suranjan Das Road
<input type="checkbox"/>	USR_023	Satish	Kotian	41	1981-04-14	NULL	600044	PSGR	T Nagar
<input type="checkbox"/>	USR_024	Shradha	Nayar	40	1982-04-08	NULL	560006	PSGR	M G Road, Bangalore

Check all | With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this Table | Sort by key: None

10. Find the availability of I Class compartment of the train number 62621.

Server: localhost > Database: Railway_Res_CS143 > Table: compartment

Showing rows 0 - 0 (1 total, Query took 0.0001 seconds.)

```
SELECT availability FROM `compartment` WHERE train_number = 62621 AND type = "I Class";
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table

Extra options

availability

6

Check all | With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this table

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Bookmark this SQL query

11. Find the PNR and Transaction ID of the users who made payment via Union Bank.

Server: localhost > Database: Railway_Res_CS143 > Table: payment_info

Showing rows 0 - 3 (4 total, Query took 0.0001 seconds.)

```
SELECT Transaction_no, PNR FROM `payment_info` WHERE bank = "Union Bank";
```

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Extra options

	Transaction_no	PNR
<input type="checkbox"/> Edit Copy Delete	243535	PNR012
<input type="checkbox"/> Edit Copy Delete	758900	PNR015
<input type="checkbox"/> Edit Copy Delete	867546	PNR010
<input type="checkbox"/> Edit Copy Delete	978776	PNR003

Check all | With selected: Edit Copy Delete Export

Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

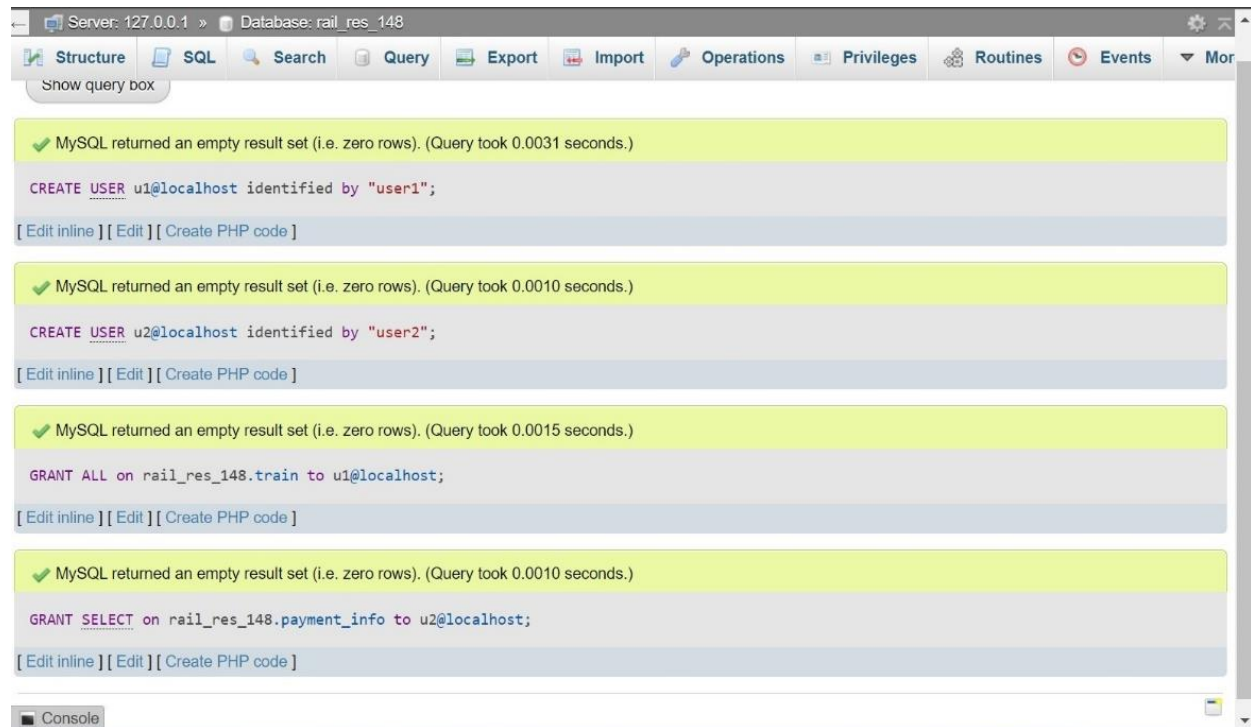
Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: ☐ Let every user access this bookmark

Task 2 - Use DCL and TCL statements for the following:

1. Grant privileges on different tables to users and observe the effect.



```
Server: 127.0.0.1 » Database: rail_res_148
Structure SQL Search Query Export Import Operations Privileges Routines Events More
Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0031 seconds.)
CREATE USER u1@localhost identified by "user1";
[ Edit inline ] [ Edit ] [ Create PHP code ]

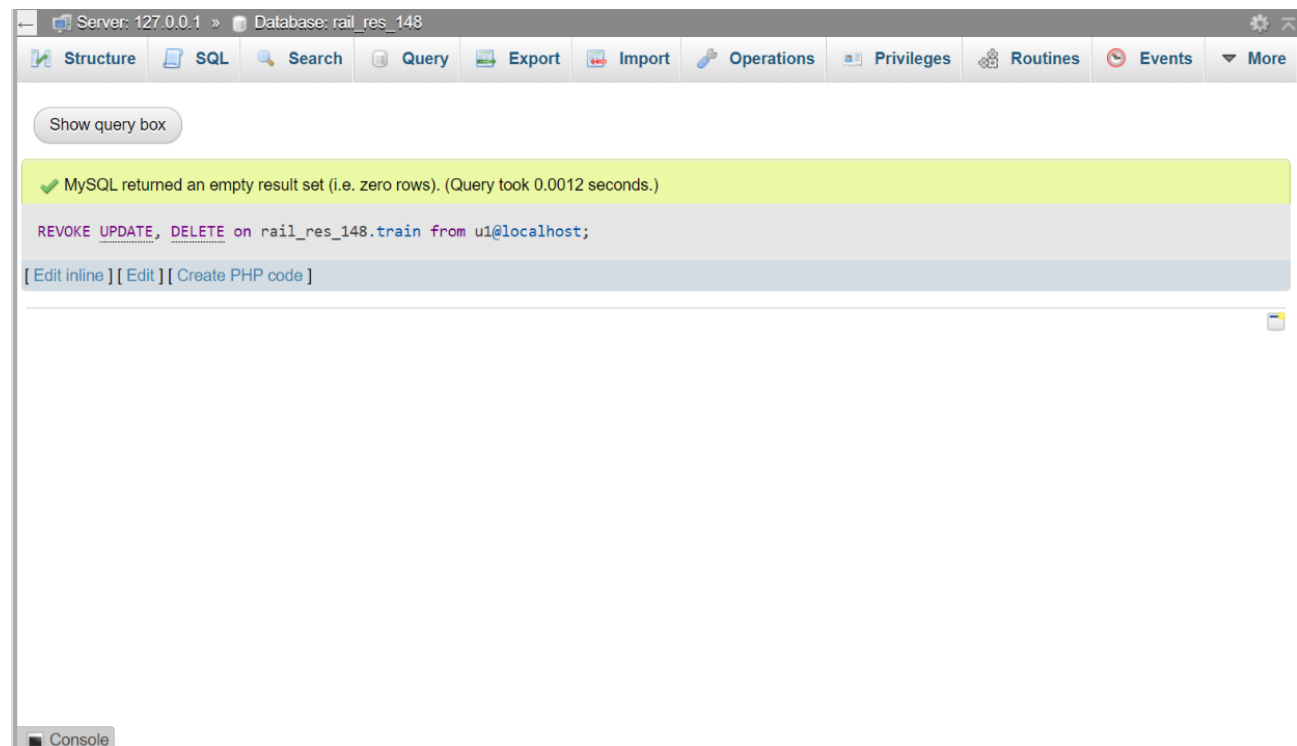
✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0010 seconds.)
CREATE USER u2@localhost identified by "user2";
[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0015 seconds.)
GRANT ALL on rail_res_148.train to u1@localhost;
[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0010 seconds.)
GRANT SELECT on rail_res_148.payment_info to u2@localhost;
[ Edit inline ] [ Edit ] [ Create PHP code ]

Console
```

2. Revoke UPDATE & DELETE privileges on any tables and observe the effect if any deletion/updation is performed.



```
Server: 127.0.0.1 » Database: rail_res_148
Structure SQL Search Query Export Import Operations Privileges Routines Events More
Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0012 seconds.)
REVOKE UPDATE, DELETE on rail_res_148.train from u1@localhost;
[ Edit inline ] [ Edit ] [ Create PHP code ]

Console
```

3. Create different save points and perform some insert/update/delete operations. Observe the effect of commit & rollback operations and release any created save points.

← Server: 127.0.0.1 » Database: rail_res_148

Structure SQL Search Query Export Import Operations Privileges

Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0002 seconds.)

```
SAVEPOINT s1;
```

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

← Server: 127.0.0.1 » Database: rail_res_148

Structure SQL Search Query Export Import Operations Privileges Routes

Show query box

✓ 2 rows affected. (Query took 0.0042 seconds.)

```
DELETE from payment_info where bank="Canara Bank";
```

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

Server: 127.0.0.1 » Database: rail_res_148

Structure SQL Search Query Export Import Operations Privileges Routines Events More

Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0002 seconds.)

```
COMMIT;
```

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

Console

Server: 127.0.0.1 » Database: rail_res_148

Structure SQL Search Query Export Import Operations Privileges Routines Events More

Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0002 seconds.)

```
ROLLBACK;
```

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

Console