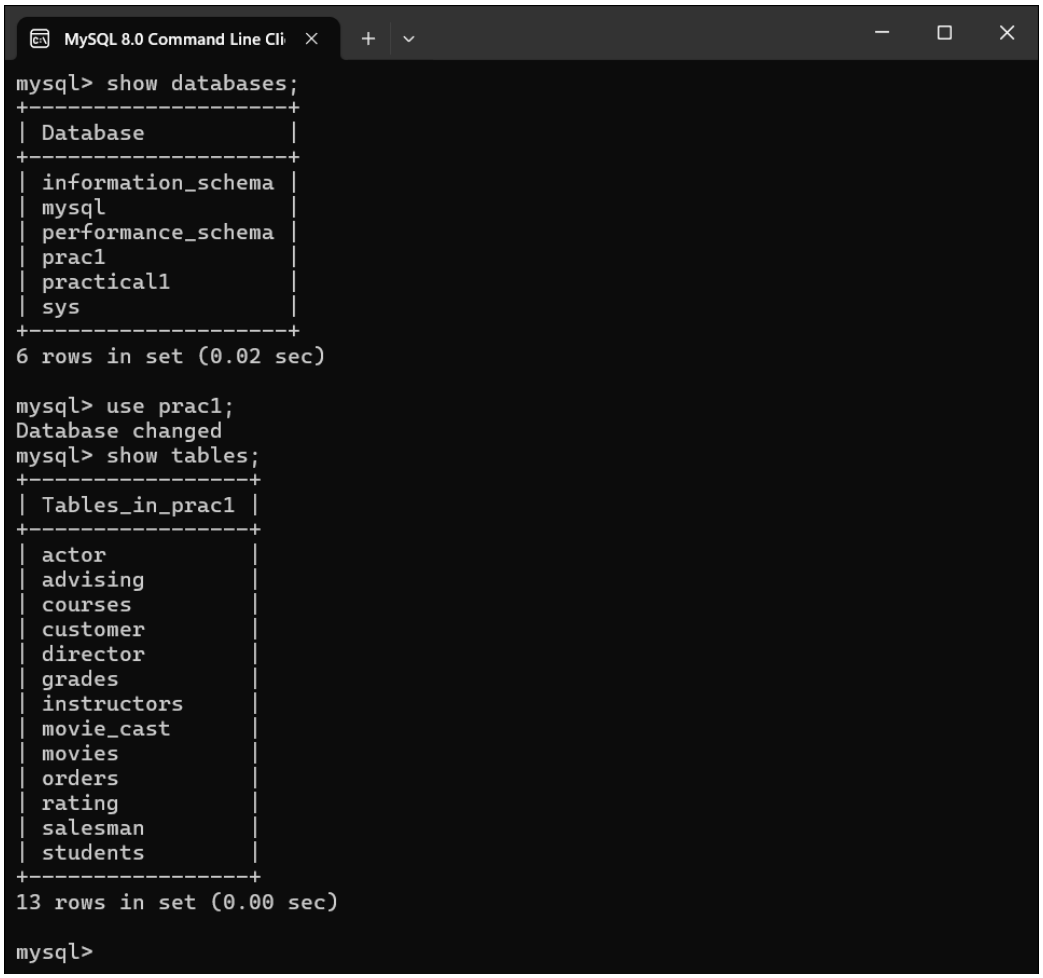
Practical No. 08

Aim: Database Backup and Restore.

Date: 07/03/2025 **Submission Date: 11/03/2025**

Implement database backup and restore it (for practical 1 and 2)

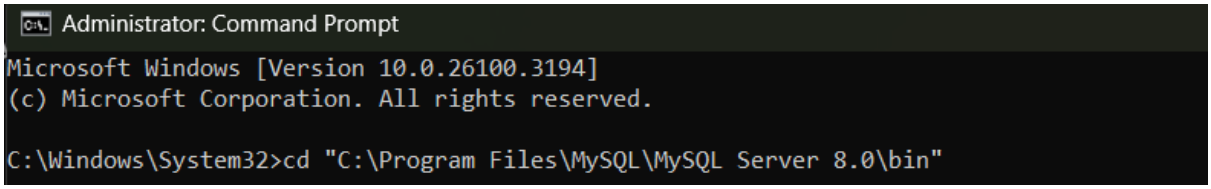
https://sqlbak.com/blog/how-to-backup-mysql-database-on-windows/



When installing a MySQL server, the main backup utility is automatically installed – mysqldump. This command-line utility creates a backup file with a set of commands to recreate the database.

Mysqldump is to be run on terminal (cmd or shell), not on mysql client.

Change the directory to MySQL server bin and perform the following command:

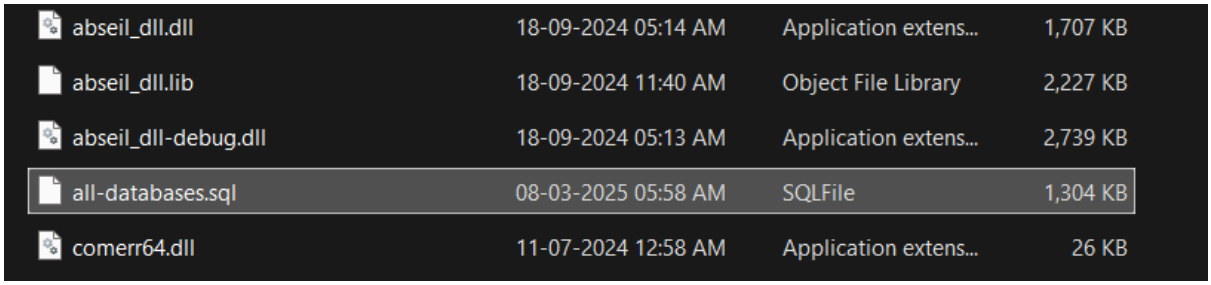


To create a backup of all MySQL server databases, run the following command:

mysqldump --user root --password --all-databases > all-databases.sql

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysqldump --user root --password  --all-databases > all-databases.sql
Enter password: ****

C:\Program Files\MySQL\MySQL Server 8.0\bin>
```

Backup file is created:

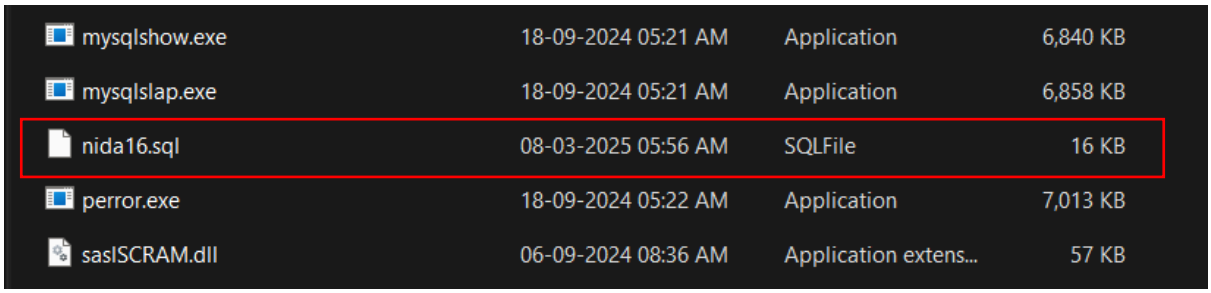


To dump a specific database, use the name of the database instead of the –all-database parameter.

mysqldump --user=root --password prac1 > nida16.sql

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysqldump --user=root --password prac1 > nida16.sql
Enter password: ****
```

Backup file is created.



To recover data, use the following command:

mysql --user root --password backupdb < nida16.sql

```
mysql> create database backupdb
    -> ;
Query OK, 1 row affected (0.01 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| backupdb           |
| information_schema |
| mysql              |
| performance_schema |
| prac1              |
| practical1         |
| sys                |
+--------------------+
7 rows in set (0.00 sec)

mysql> use backupdb;
Database changed
mysql> show tables;
Empty set (0.00 sec)
```

```
C:\Program Files\MySQL\MySQL Server 8.0\bin>mysql --user root --password backupdb < nida16.sql
Enter password: ****

C:\Program Files\MySQL\MySQL Server 8.0\bin>
```

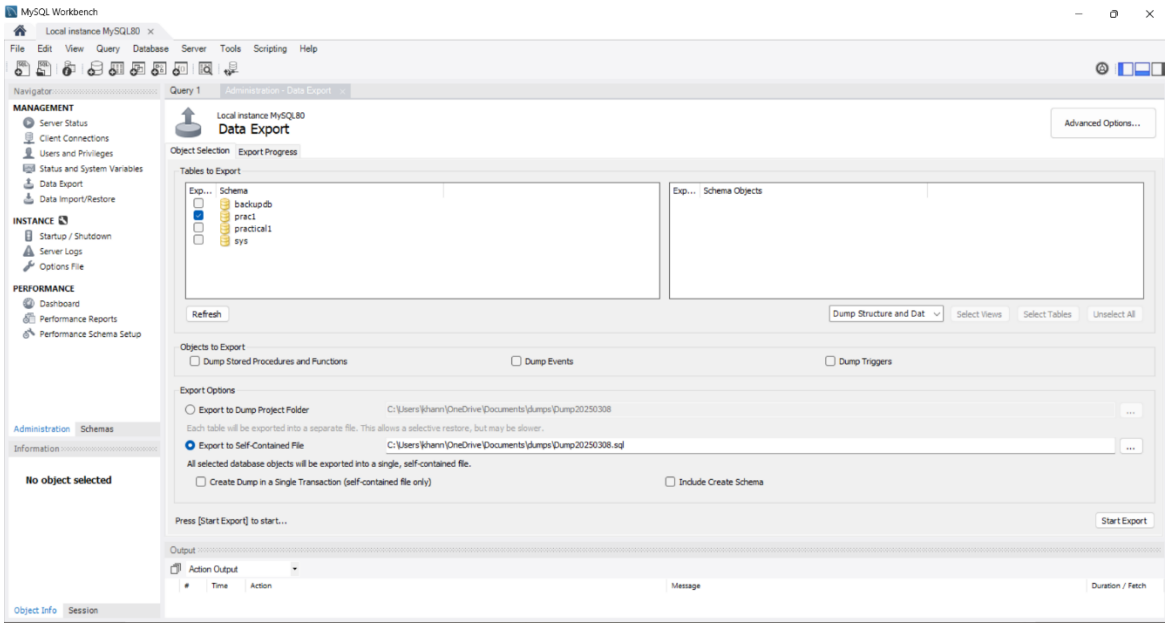
```
mysql> show tables from backupdb;
+--------------------+
| Tables_in_backupdb |
+--------------------+
| actor              |
| advising           |
| courses            |
| customer           |
| director           |
| grades             |
| instructors        |
| movie_cast         |
| movies             |
| orders             |
| rating             |
| salesman           |
| students           |
+--------------------+
13 rows in set (0.00 sec)

mysql>
```

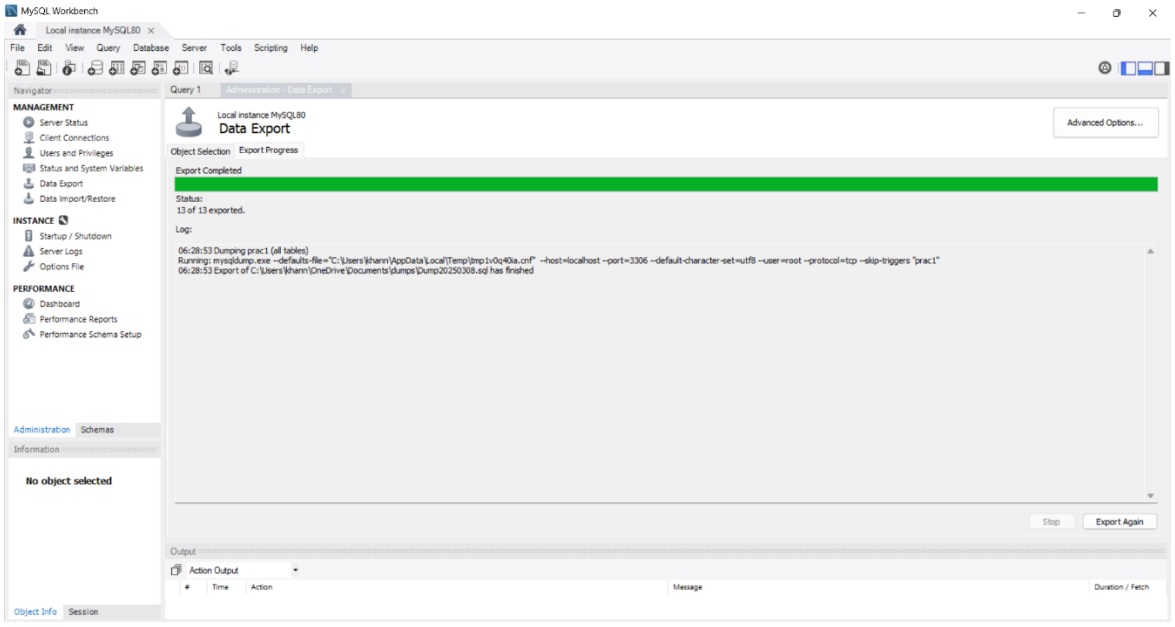
```
mysql> select * from actor;
+--------+----------+------------+
| ACT_ID | ACT_NAME | ACT_GENDER |
+--------+----------+------------+
|    301 | ANUSHKA  | F          |
|    302 | PRABHAS  | M          |
|    303 | PUNITH   | M          |
|    304 | JERMY    | M          |
+--------+----------+------------+
4 rows in set (0.03 sec)
```

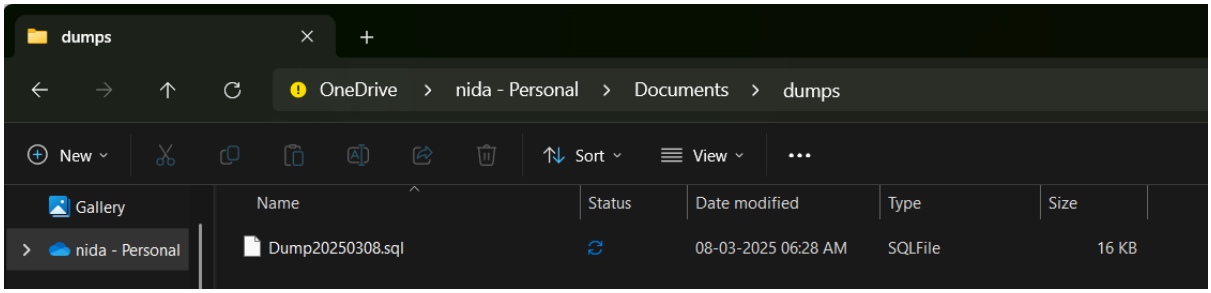
Alternative: Backup using MySQL Workbench.

To create a backup using MySQL Workbench follow these steps:

1. Go to the Administration tab, on the Navigation panel (on the left by default)
2. Select Data Export
3. From the Data Export tab in the Tables to Export section, select the databases and tables that will be added to the backup file
4. From the Export Option section, select the format for the exported data. Either each table will be exported to a separate .sql file, or one common .sql file will be created.
5. Press the export button to create a backup file.

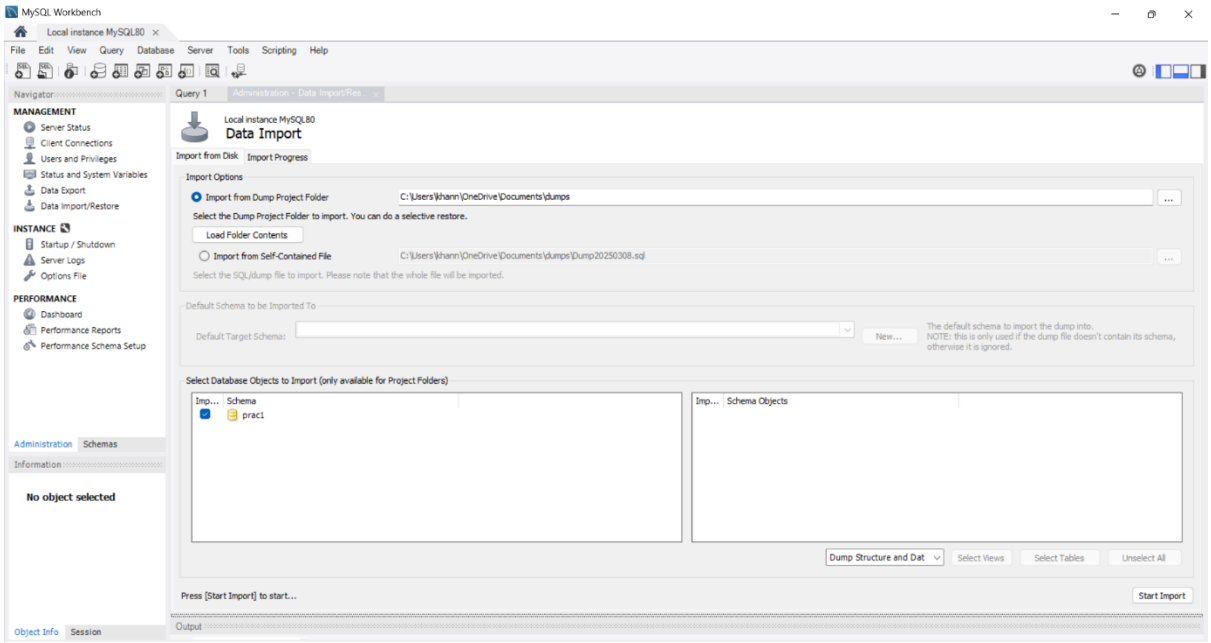


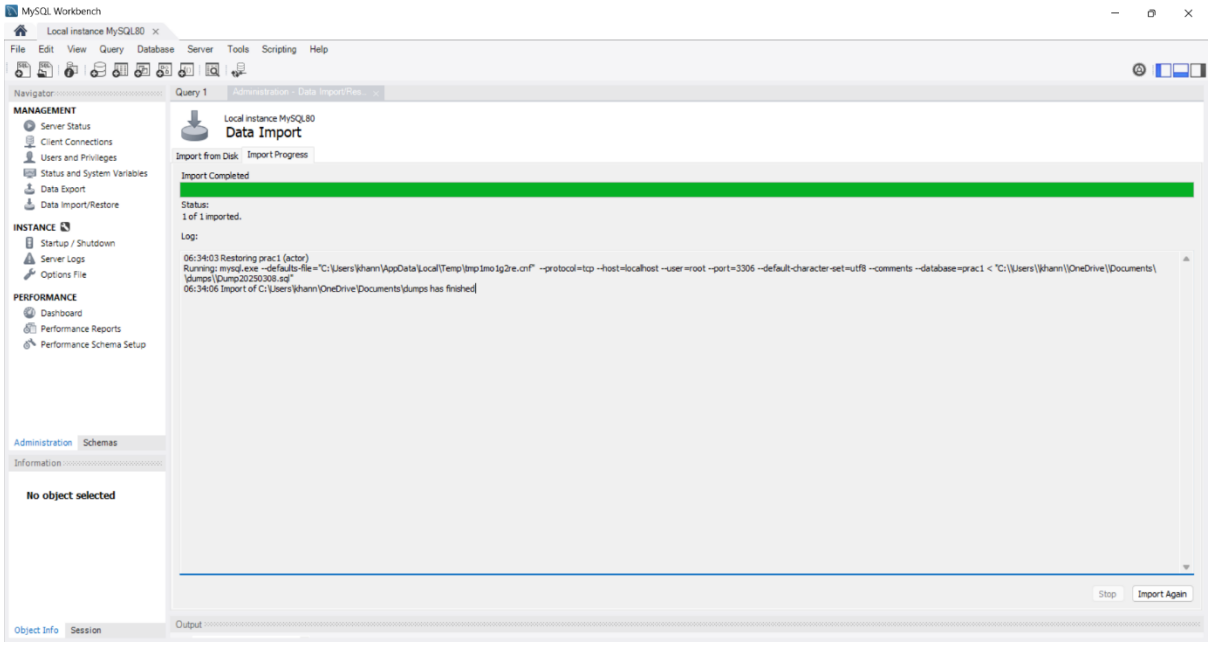




To restore the created backup, follow these steps:

1. Go to the Administration tab, on the Navigation panel (on the left by default)
2. Select Data Import\Restore
3. Select the source of the recovery Dump Project Folder or Self-Contained File, depending on what you selected at the backup stage
4. If you used a Dump Project Folder, then you can select the databases and tables that need to be restored.
5. If you use a Self-Contained File, then before restoring, you must select the schema into which you want to restore the dump. If you restore a dump to a server where the required schema does not exist, you can create it by clicking the New button.
6. Press the Start Import button.




MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Navigator
MANAGEMENT
Server Status
Client Connections
Users and Privileges
Status and System Variables
Data Export
Data Import/Restore
INSTANCE
Startup / Shutdown
Server Logs
Options File
PERFORMANCE
Dashboard
Performance Reports
Performance Schema Setup
Administration Schemas
Information
No object selected
Object Info Session
Query 1
Local instance MySQL80
Data Import
Import from Disk Import Progress
Import Completed
Status:
1 of 1 imported.
Log:
06:34:03 Restoring prac1 (actor)
Running: mysql.exe --defaults-file="C:\Users\khann\AppData\Local\Temp\tmp1mo1g2re.cnf" --protocol=tcp --host=localhost --user=root --port=3306 --default-character-set=utf8 --comments --database=prac1 < "C:\\Users\\khann\\OneDrive\\Documents\\dumps\\Dump20250308.sql"
06:34:06 Import of C:\Users\khann\OneDrive\Documents\dumps has finished
Stop
Import Again
Output

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