Other PostgreSQL client applications Command-line tools

4. BACKUP & RESTORE using command-line tools

PostgreSQL Client Applications

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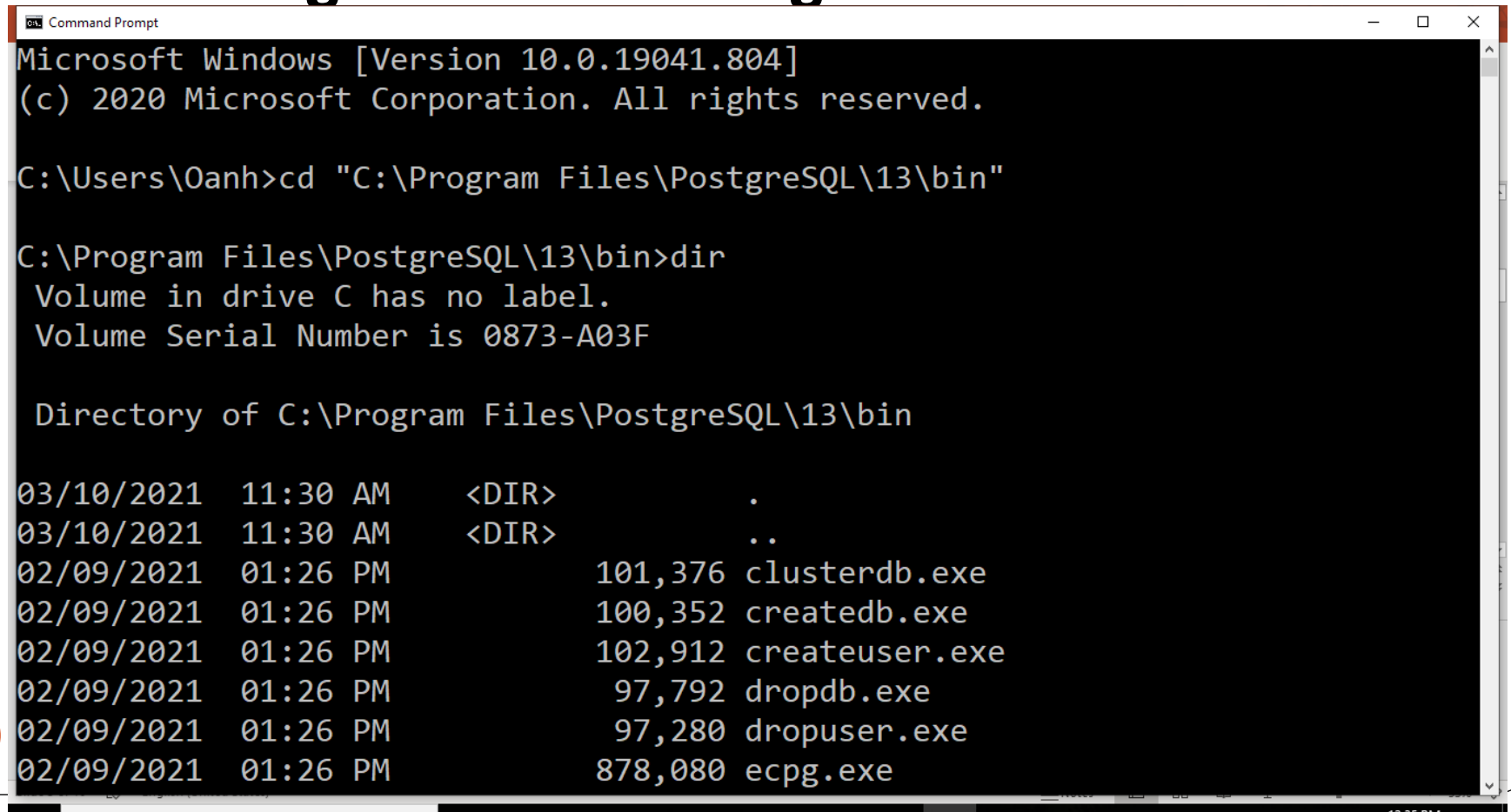
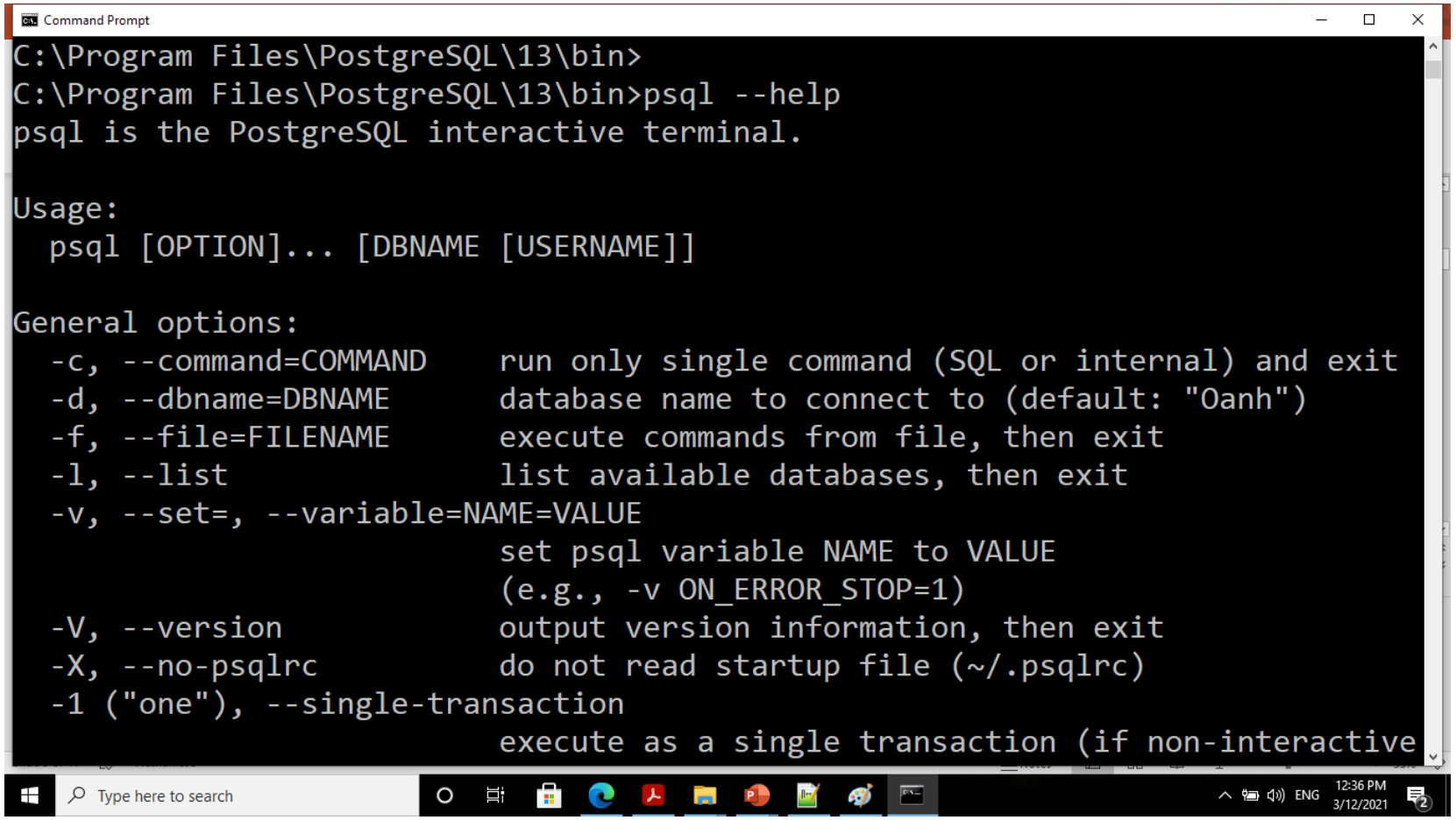
PostgreSQL Client Applications

- **Open Terminal**
- **cd C:\Program Files\Postgres\13\bin**



PostgreSQL Client Applications

- **Help:** `Program_name --help`



PostgreSQL Client Applications

- **pg_config:** see the current configuration values used to compile and install the PostgreSQL package

```
pg_config --help
pg_config --version
Pg_config --bindir
```

PostgreSQL Client Applications

- **psql:** a command-line interface to the PostgreSQL system
- **Simple usage:**
  - Connect to the postgres (or test) database with postgres (barney) account

```
psql postgres postgres
psql test barney
```

  - Meta-command in psql
    - to list all databases: `\l`
    - to quit psql: `\q`
    - Connect to other database: `\c test`
    - View list of tables: `\dt ; \dt store.*`
    - Show table schema: `\dt store."Customer"`

PostgreSQL Client Applications

- **createdb:** create a new database

```
createdb -U postgres test2
```

- **dropdb:** drop a database

```
dropdb -U postgres test2
```

PostgreSQL Client Applications

- **pg_dump:** dump (or back up) the contents of a database on the PostgreSQL system to a file
  - Script: SQL files
  - Archived: compressed binary files (using **pg_restore** to restore)

```
pg_dump -U postgres -f D:\testDB_bk.sql test

pg_dump -U postgres test >D:\testDB_bk.sql

pg_dump -U postgres -Fc test >D:\testDB_bk.dump
```

-F: output file format (custom (-Fc), directory (-Fd), tar (-Ft), plain (-Fp default))
-U: login user
-f : output filename

PostgreSQL Client Applications

- **pg_dumpall:** similar to the pg_dump program, except it dumps all of the databases to a file

```
pg_dumpall -U postgres -f D:\postgres_allDB.sql
```

- **pg_restore:** restore a PostgreSQL database from an archive file created by ***pg_dump***

PostgreSQL Client Applications

- **pg_restore:** restore a PostgreSQL database from an archive file created by ***pg_dump***

--restore from an archive file (format custom, tar, directory)

```
createdb -U postgres test2 (if test2 does not exist)
pg_restore -d test2 -U postgres D:\testDB_bk.dump
```

-- clean the database objects before recreating

```
pg_restore -c -d test2 -U postgres D:\testDB_bk.dump
```

PostgreSQL Client Applications

- **pg_restore:** can not restore from an plain format
  ➔ use ***psql***

-- drop and create a new database if need

```
dropdb -U postgres test2
createdb -U postgres test2
```

-- restore

```
psql -d test2 -U postgres -f D:\testDB_bk.sql
```