**Lab Exercise 5- Configuring postgresql.conf in PostgreSQL on Windows**

**Objective**

Learn how to locate, modify, and apply changes to PostgreSQL settings using the postgresql.conf configuration file on a Windows system.

**Step 1: Locate postgresql.conf**

1. Open the **SQL Shell (psql)**.
2. Connect to your PostgreSQL instance.
3. Run the following command:

SHOW config\_file;

1. Note the file path shown, for example:

C:\Program Files\PostgreSQL\15\data\postgresql.conf

**Step 2: Back Up the Configuration File**

1. Open **File Explorer**.
2. Navigate to the folder shown in Step 1.
3. Right-click on postgresql.conf and choose **Copy**.
4. Paste it into the same folder or elsewhere and rename it as postgresql\_backup.conf.

**Step 3: Edit postgresql.conf**

1. Right-click on the original postgresql.conf file.
2. Choose **Open with > Notepad** or any text editor.
3. Search for the following parameters and modify them by removing the number sign if present and changing the values:

* listen\_addresses = '\*'  
  This allows PostgreSQL to listen on all IP addresses.
* port = 5432  
  Confirm or change the port number for PostgreSQL connections.
* shared\_buffers = 256MB  
  This controls the amount of memory used for shared buffers.
* work\_mem = 8MB  
  This defines memory used for each sort or join operation.
* max\_connections = 100  
  This sets how many client connections are allowed at the same time.
* logging\_collector = on  
  Enables logging of server messages to files.
* log\_directory = 'log'  
  Sets the folder for log files (relative to data directory).
* log\_filename = 'postgresql-%Y-%m-%d.log'  
  Defines the log file naming pattern.

1. Save the file and close the editor.

**Step 4: Restart PostgreSQL Service**

1. Press the **Windows key** and type services.
2. Open **Services**.
3. Scroll down to find **PostgreSQL service**, for example:  
   postgresql-x64-15 or similar.
4. Right-click the service and select **Restart**.

This applies your configuration changes.

**Step 5: Verify Changes**

1. Open the SQL Shell (psql) again.
2. Run commands like:

SHOW shared\_buffers;

SHOW work\_mem;

SHOW listen\_addresses;

This confirms that your changes are active.

**Notes**

* Be careful when editing the configuration file. Incorrect changes may prevent PostgreSQL from starting.
* Always restart the service after making changes.
* Do not include quote marks unless they are already present in the file.