**Installation Guide:**

Install Docker Desktop on the Windows VM

**Install WSL 2:**

Docker Desktop on Windows requires WSL 2 (Windows Subsystem for Linux).

Open PowerShell as an administrator and run the following commands:

powershell

wsl --install

Restart your computer if prompted.

**Install Docker Desktop:**

Download Docker Desktop for Windows from the Docker website.

Run the installer and follow the instructions.

Ensure you check the box to enable WSL 2 integration during the installation.

**Configure Docker to Use WSL 2:**

After installation, Docker Desktop will start automatically.

Go to "Settings" -> "General" and ensure that the "Use the WSL 2 based engine" option is checked.

Go to "Settings" -> "Resources" -> "WSL INTEGRATION" and ensure that your WSL 2 distributions are enabled.

**Verify Docker Installation:**

Open PowerShell or Command Prompt.

Run the following command to verify Docker is installed correctly:

docker --version

You should see the Docker version information.

3. Test Docker Installation

**Run a Test Container:**

Open PowerShell or Command Prompt.

Run the following command to start a test container:

docker run hello-world

You should see a message indicating that Docker is working correctly.

**Step-by-Step Guide**

**1. Pull the Oracle Database Docker Image**

Oracle provides Docker images for its databases on the Oracle Container Registry and Docker Hub. You can pull the Oracle Database 23c image directly from the Oracle Container Registry.

Log in to Oracle Container Registry:

You need to have an Oracle account to pull the image.

Go to [Oracle Container Registry](https://container-registry.oracle.com/).

Pull the Image:

Open your command line (PowerShell or Command Prompt) and log in to the Oracle Container Registry:

docker login container-registry.oracle.com

Enter your Oracle account credentials.

Pull the Oracle Database 23c image:

docker pull container-registry.oracle.com/database/express:23c

**2. Create and Run the Oracle Database Container**

Run the Container:

Create a Docker container from the pulled image:

docker run -d --name oracle-db-23c \

-p 1521:1521 -p 5500:5500 \

-e ORACLE\_PWD=<YourPassword> \

-e ORACLE\_CHARACTERSET=AL32UTF8 \

container-registry.oracle.com/database/express:23c

Replace <YourPassword> with your desired password for the SYS, SYSTEM, and PDBADMIN users.

Verify the Container:

Check if the container is running:

docker ps

You should see the oracle-db-23c container listed and running.

**3. Connect to the Oracle Database**

Use SQL\*Plus:

Open a bash shell inside the running container:

docker exec -it oracle-db-23c /bin/bash

Connect to the database using SQL\*Plus:

sqlplus sys/<YourPassword>@localhost:1521/XEPDB1 as sysdba

Replace <YourPassword> with the password you set earlier.

Verify the Connection:

You should now be connected to the Oracle Database 23c instance. You can run SQL commands to verify.

SELECT \* FROM dual;