To **access an Azure SQL Database**, you can use several tools and methods depending on your environment and purpose. Below are the most common ways to access it, along with step-by-step instructions.

**✅ Pre-requisites**

Before accessing:

1. Azure SQL Database must be deployed.
2. You must have:
   * **Server name** (e.g., yourserver.database.windows.net)
   * **Database name**
   * **Username** and **password**
3. Client IP must be allowed in the **Azure SQL Server firewall rules**.

**🔹 1. Access via Azure Portal (Query Editor)**

**Steps:**

1. Go to **Azure Portal** → Find your **SQL Database**.
2. Click on **Query Editor (Preview)**.
3. Sign in using **SQL Authentication** (username/password).
4. You can run queries directly.

**🔹 2. Access via SQL Server Management Studio (SSMS)**

**Steps:**

1. Open **SSMS**.
2. Server Name: yourserver.database.windows.net
3. Authentication: **SQL Server Authentication**
   * Login: your username
   * Password: your password
4. Connect.
5. Select your database and run queries.

**🔹 3. Access via Azure Data Studio**

1. Install **Azure Data Studio**.
2. Click on **New Connection**.
3. Fill in:
   * Server: yourserver.database.windows.net
   * Authentication Type: SQL Login
   * Username & Password
   * Database: Optional (or leave as default)
4. Click **Connect**.

**🔹 4. Access via Command Line using sqlcmd**

Install sqlcmd tool (part of **MS ODBC Driver** or **SQL Server CLI tools**):

sqlcmd -S yourserver.database.windows.net -d your\_database -U your\_username -P your\_password

Example:

sqlcmd -S myserver.database.windows.net -d salesdb -U sqladmin -P MyPassword123

**🔹 5. Access from Application (e.g., Python, Java, .NET)**

**Example in Python (using pyodbc):**

import pyodbc

conn = pyodbc.connect(

'DRIVER={ODBC Driver 17 for SQL Server};'

'SERVER=yourserver.database.windows.net;'

'DATABASE=your\_database;'

'UID=your\_username;'

'PWD=your\_password'

)

cursor = conn.cursor()

cursor.execute("SELECT TOP 10 \* FROM your\_table")

for row in cursor:

print(row)

**🔐 Important Security Note**

* Avoid hardcoding passwords. Use **Azure Key Vault** or **Managed Identity**.
* For public access, ensure firewall rules are set correctly.