

# ODBC, DB API, and pyodbc

## An introduction to ODBC

- ❖ Open Database Connectivity (ODBC) is a standard application programming interface (API) for accessing database management systems (DBMS).
- ❖ The aim of ODBC is to make connectivity to databases independent of a particular database system and operating system.
- ❖ An application written using ODBC can be ported to other platforms, both on the client and server side, with few changes to the data access code.
- ❖ ODBC accomplishes database independence by using an **ODBC driver** as a translation layer between the application and the DBMS.

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## An introduction to Python DB API

- ❖ The Python DB API defines a database-neutral interface to data in relational databases.
- ❖ Python DB API was designed to allow conformant modules to provide a consistent interface to different database products.
- ❖ It helps developers write Python applications that are portable across a myriad of databases.
- ❖ Like what jQuery is for JavaScript, many modules have been developed that take advantage of the DB API standard. Each module supports its particular set of databases and outlines a variety of features that might not be available by DB API directly.

- ❖ For a list of Python modules that make use of DB API, visit <https://>

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## An introduction to pyodbc

- ❖ pyodbc is an open source Python module that provides access to ODBC databases like MySQL, SQL Server, Sybase, Oracle, DB2, and more.
- ❖ pyodbc implements the Python DB API 2.0 specification.
- ❖ To use pyodbc, you need to install an ODBC driver on the machine that Python is installed on.
- ❖ On basic level, pyodbc acts as the intermediary between your Python application and the ODBC driver on your (and other) computers / servers.
- ❖ You'll learn how to install pyodbc and specific ODBC drivers for your favorite database later.