The [SqlDataAdapter](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqldataadapter?view=netframework-4.7.1), serves as a bridge between a [DataSet](https://docs.microsoft.com/en-us/dotnet/api/system.data.dataset?view=netframework-4.7.1) and SQL Server for retrieving and saving data. The [SqlDataAdapter](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqldataadapter?view=netframework-4.7.1) provides this bridge by mapping [Fill](https://docs.microsoft.com/en-us/dotnet/api/system.data.common.dbdataadapter.fill?view=netframework-4.7.1), which changes the data in the [DataSet](https://docs.microsoft.com/en-us/dotnet/api/system.data.dataset?view=netframework-4.7.1) to match the data in the data source, and [Update](https://docs.microsoft.com/en-us/dotnet/api/system.data.common.dbdataadapter.update?view=netframework-4.7.1), which changes the data in the data source to match the data in the [DataSet](https://docs.microsoft.com/en-us/dotnet/api/system.data.dataset?view=netframework-4.7.1), using the appropriate Transact-SQL statements against the data source. The update is performed on a by-row basis. For every inserted, modified, and deleted row, the [Update](https://docs.microsoft.com/en-us/dotnet/api/system.data.common.dbdataadapter.update?view=netframework-4.7.1) method determines the type of change that has been performed on it (Insert, Update, or Delete). Depending on the type of change, the Insert, Update, or Delete command template executes to propagate the modified row to the data source. When the [SqlDataAdapter](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqldataadapter?view=netframework-4.7.1) fills a [DataSet](https://docs.microsoft.com/en-us/dotnet/api/system.data.dataset?view=netframework-4.7.1), it creates the necessary tables and columns for the returned data if they do not already exist. However, primary key information is not included in the implicitly created schema unless the [MissingSchemaAction](https://docs.microsoft.com/en-us/dotnet/api/system.data.common.dataadapter.missingschemaaction?view=netframework-4.7.1) property is set to [AddWithKey](https://docs.microsoft.com/en-us/dotnet/api/system.data.missingschemaaction?view=netframework-4.7.1#System_Data_MissingSchemaAction_AddWithKey). You may also have the [SqlDataAdapter](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqldataadapter?view=netframework-4.7.1) create the schema of the [DataSet](https://docs.microsoft.com/en-us/dotnet/api/system.data.dataset?view=netframework-4.7.1), including primary key information, before filling it with data using FillSchema. For more information, see [Adding Existing Constraints to a DataSet](https://docs.microsoft.com/en-us/dotnet/framework/data/adonet/adding-existing-constraints-to-a-dataset?view=netframework-4.7.1).

[SqlDataAdapter](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqldataadapter?view=netframework-4.7.1) is used in conjunction with [SqlConnection](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqlconnection?view=netframework-4.7.1) and [SqlCommand](https://docs.microsoft.com/en-us/dotnet/api/system.data.sqlclient.sqlcommand?view=netframework-4.7.1) to increase performance when connecting to a SQL Server database

private static DataSet SelectRows(DataSet dataset, string connectionString, string queryString)

{

using (SqlConnection connection = new SqlConnection(connectionString))

{

SqlDataAdapter adapter = new SqlDataAdapter();

adapter.SelectCommand = new SqlCommand( queryString, connection);

adapter.Fill(dataset);

return dataset;

}

}