

1. SQL Dependency (SqlDependency)

This is a common way to listen for changes in a SQL Server database. When data changes (e.g., insert, update, delete), a notification is triggered.

Example:

```
using System;
using System.Data.SqlClient;

class Program
{
    static void Main(string[] args)
    {
        string connectionString = "your_connection_string";
        string query = "SELECT ColumnName FROM TableName";

        using (SqlConnection connection = new SqlConnection(connectionString))
        {
            connection.Open();

            SqlCommand command = new SqlCommand(query, connection);
            SqlDependency dependency = new SqlDependency(command);

            // Subscribe to the OnChange event
            dependency.OnChange += new OnChangeEventHandler(OnDatabaseChange);

            // Execute the query
            command.ExecuteReader();
        }

        Console.WriteLine("Listening for database changes...");
        Console.ReadLine();
    }

    static void OnDatabaseChange(object sender, SqlNotificationEventArgs e)
    {
        Console.WriteLine("Database change detected!");
        // Logic for handling changes
    }
}
```

Note: This requires configuring your SQL Server to support query notifications.

2. Entity Framework Core with Triggers

You can use **triggers** in the database to log changes into a table and then use **polling** in your application to fetch the changes.

3. Change Tracking APIs

SQL Server has features like **Change Tracking** or **Change Data Capture (CDC)**, which allow applications to track changes to a database.

You can then poll for changes periodically and process them.

4. SignalR for Real-Time Notifications

You can integrate **SignalR** to broadcast database changes in real time. This is particularly useful for web applications.

Steps:

1. Use a mechanism like **SqlDependency** or **Change Tracking** to detect changes.
 2. Push changes to clients via **SignalR**.
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5. FileSystemWatcher for File-Based Databases

If the data source is file-based (e.g., SQLite), you can use **.NET FileSystemWatcher** to monitor changes to the database file.