Offline Data Sync Patterns

In this section you can find some common data synchronization patterns between the local storage (mobile device) and server database. The patterns are provided as samples you can use to create an implementation for your use case.

For each synchronization pattern, we provide a working sample module that you can use to explore the implementation of the synchronization mechanism. [Download an application from the Forge](https://success.outsystems.com/Documentation/11/Developing_an_Application/Use_Data/Offline/Offline_Data_Sync_Patterns) that contains all sample modules.

We approach the following patterns:

### Articles in this Section

- **Read-Only Data**
  Use this synchronization pattern when your users only need to read data while the app is offline and the amount of data to synchronize is small.

- **Read-Only Data Optimized**
  Use this synchronization pattern when your users only need to read data while the app is offline and there are large amounts of data to synchronize.

- **Read/Write Data Last Write Wins**
  Use this synchronization pattern when it is not likely for more than one user to change the same data while the app is offline.

- **Read/Write Data with Conflict Detection**
  Use this synchronization pattern when for advanced scenarios where more than one user will change the same data while the app is offline.
• **Read/Write Data One-to-Many**

  This data synchronization pattern is recommended for mobile apps with entities that follow a one-to-many relationship and where it is not likely for multiple end users to change the same data while the apps are offline.