



Storing Data in Isolated Storage

Settings and other data

Isolated Storage

- All I/O operations restricted to isolated storage
 - Use Isolated File storage to create a files and folder structure hierarchy
 - Use Isolated Settings storage to store application settings

Logical Folder Structure

Application Data Store Folder

Local Settings

The local settings file is maintained by isolated storage and is updated when the developer persists changes to the application dictionary.

Files and Folders

Developers can create, delete, access files and folders using isolated storage file APIs.

Isolated Storage Classes

- IsolatedStorageFile
 - Represents an isolated storage area containing files and directories
- IsolatedFileStream
 - Exposes a file stream access to a file stored within isolated storage
- IsolatedStorageSettings
 - Dictionary<(Of <(TKey, TValue)>>) that stores key-value pairs in isolated storage

Quota Management

- There are no quotas on Windows Phone!
- Applications must make careful use of space
 - Use only what is necessary
 - Be transparent about storage usage
- Manage application data
 - Delete temporary data and files when no longer required
 - Consider synchronizing or archiving data to the cloud to reduce device storage

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Saving Data

```
1. //Obtain the virtual store for application
2. IsolatedStorageFile myStore =
   IsolatedStorageFile.GetUserStoreForApplication();
3.
4. //Create a new folder and call it "MyFolder"
5. myStore.CreateDirectory("MyFolder");
6.
7. //Create a new file and use a StreamWriter to write to it
8. StreamWriter writeFile = new StreamWriter(
   new IsolatedStorageFileStream("MyFolder\\myFile.txt",
   FileMode.OpenOrCreate, myStore));
9. writeFile.WriteLine(sometextdata);
10. writeFile.Close();
```

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Reading Data

```
1. //Obtain a virtual store for application
2. IsolatedStorageFile myStore =
   IsolatedStorageFile.GetUserStoreForApplication();
3.
4. //This code will open and read the contents of myFile.txt
5. StreamReader readFile = null;
6. readFile = new StreamReader(new
   IsolatedStorageFileStream("MyFolder\\myFile.txt",
   FileMode.Open, myStore));
7. string fileText = readFile.ReadLine();
8. readFile.Close();
```

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Application Settings

```
1. IsolatedStorageSettings appSettings =
    IsolatedStorageSettings.ApplicationSettings;
2.
3. string shortName;
4. try
5. {
6.     shortName = (string)appSettings["shortName"];
7. }
8. catch (System.Collections.Generic.KeyNotFoundException)
9. {
10.    // No preference is saved - use/set default
11.    shortName = "NotSet";
12.    appSettings["shortName"] = shortName;
13. }
14. this.shortNameTextBox.Text = shortName;
```

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Isolated Storage

Demo

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Local Database Support

- No built-in client-side database
- Simple file storage fine for simple apps
 - Can (de)serialize List<T>
- Databases for IsolatedStorage
 - Sterling: IsolatedStorage Database with LINQ
<http://sterling.codeplex.com>
 - **Perst** object database
See my blog at
<http://mobileworld.appamundi.com/blogs/andywigley>

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Review

Launchers are used to start phone services that do not return data

When you activate a Launcher or Chooser, your app is terminated

If the user cancels a Launcher or Chooser, your app is terminated

IsolatedStorage is subject to a 100MB Quota per application

You can create directories and files in IsolatedStorage

: True : False

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