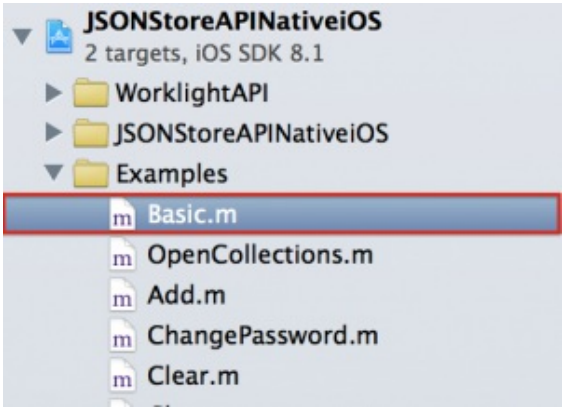
JSONStore - Objective-C API

fork and edit tutorial (https://github.ibm.com/MFPSamples/DevCenter/tree/master/tutorials/en/foundation/6.3/working-offline/jsonstore/jsonstore-objective-c-api.html) | report issue (https://github.ibm.com/MFPSamples/DevCenter/issues/new)

Follow along with the code sample:



1. Download the compressed file with the code sample that is associated with this tutorial.
2. Open the **Basic.m** file at `JSONStoreAPINativeiOS/Examples/Basic.m`. The sample image provides context.
3. Run the application by using Xcode. On the top bar, look for **Product** and then select **Test**. Alternatively, you can use the keyboard shortcut (⌘U).

> **Note:** The code sample uses the built-in Unit Test framework of the Xcode IDE. Explaining how this framework works is beyond the scope of this tutorial.

Code Sample Walkthough

```
    NSError* error = nil;
    [[JSONStore sharedInstance] destroyDataAndReturnError:&error]
;
    JSONStoreCollection* people = [[JSONStoreCollection alloc]
                                   initWithName:@"people"];
    [people setSearchField:@"name"
                  withType:JSONStore_String];
    [people setSearchField:@"age"
                  withType:JSONStore_Integer];
    [[JSONStore sharedInstance] openCollections:@[people]
                                    withOptions:nil
                                          error:nil];
    NSArray* data = @[@{@"name" : @"carlos", @"age" : @20},
                      @{@"name" : @"mike", @"age" : @30}];
    [people addData:data andMarkDirty:NO
        withOptions:nil
              error:nil];
    NSArray *actualResults = [people findAllWithOptions:nil
                                                  error:nil];
    NSArray* expectedResults =
    @[@{ @"_id" : @1,
        @"json" : @{@"name" : @"carlos", @"age" : @20}},
      @{ @"_id" : @2,
        @"json" : @{@"name" : @"mike",   @"age" : @30}}];
    XCTAssertEqualObjects(actualResults, expectedResults);
```

If an error occurs, the error variable contains information about the error, such as the error code. Otherwise, it remains `nil`.

The `destroy` API removes all JSONStore content from the application. It is used here to start with no data. Doing it this way ensures that the output is predictable in the code sample.

To persist data, you must first define at least one collection. These collections are entities that hold data. You can see here the definition of a collection that is called `people`.

Search fields are fields that are indexed inside a collection. You can use those fields when you search for data that is inside a collection.
You can see here the definition of two search fields:

- `name` (string)
- `age` (integer)

The data types, such as `string`, `integer`, `number`, `boolean`, are used to better store input data.

The `open` API is used to open one or more collections. If the collection was never opened before, a file is created on the file system to persist data that is inside the collection. Before the operation finishes, an accessor to that file is created.
The accessor allows the caller to call collection-level APIs such as `add` and `findAll`, which are shown later in this code sample walkthrough.

The data that is stored inside the `people` collection is defined here. Notice that the data is a hardcoded array of two JSON objects with key value pairs for `name` and `age`. This data can be acquired from multiple sources (for example: Network Request, File I/O, User Input).

The collection accessor provides access to store data inside the `people` collection. The input data must be in JSON format.

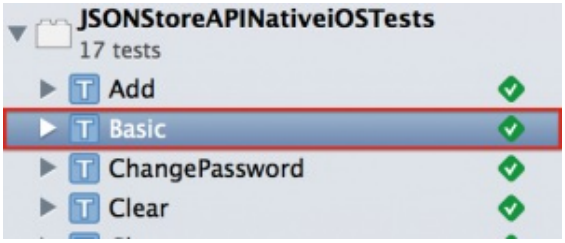
There are a couple of different ways to find documents inside a JSONStore collection (for example: `find`, `findById`). The easiest way, and the way that is shown here, is by using the `findAll` API. This method returns all the data that is stored inside a collection.

Data that is stored inside a collection is called a document. Documents have `_id` and `json` key value pairs. The `_id` pair is an internal identifier that is added automatically when data is added. The json pair contains all the data that was added.

Sample application

Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v630/JSONStoreAPIBasicsProject.zip) Studio project.
Click to download (http://public.dhe.ibm.com/software/products/en/MobileFirstPlatform/docs/v630/JSONStoreAPINativeiOSNativeProject.zip) Native project.

Expected Output



To execute the tests, select **Product** > **Test**.
When the tests are executed, the output looks similar to the sample image.
The green check mark next to the test indicates that everything is working as expected.

For more information

For more information about JSONStore, see the product user documentation.