

[App Intents](#) / EntityQuery

Protocol

EntityQuery

An interface for locating entities using their identifiers.

iOS 16.0+ | iPadOS 16.0+ | Mac Catalyst | macOS 13.0+ | tvOS 16.0+ | visionOS | watchOS 9.0+

```
protocol EntityQuery : DynamicOptionsProvider, Persistently
    Identifiable, Sendable
```

Mentioned in

 Integrating custom data types into your intents

Overview

The entity query provides the model object in which ways instances of a particular app entity type can be queried by Siri and the Shortcuts app, and implements the retrieval of such instances.

Conform to the EntityQuery Protocol

In order to allow Siri and Shortcuts to retrieve [AppEntity](#) instances, create a new type conforming to `EntityQuery`.

Resolving Entities by identifier

In some scenarios, Siri or Shortcuts already knows exactly which entity the user is referring to, and needs to retrieve the actual entity instance given its unique identifier.

To support this retrieval method, implement `entities(for:)`, which given an array of `AppEntity` identifiers, returns corresponding entity instances. The method should first lookup if said instance

already exists in memory. If the instance doesn't exist, then perform can make asynchronous calls to retrieve the entity (ex: from disk or from a remote back-end). If the entity corresponding to a supplied identifier is not available anymore, then it should be omitted from the returned array.

```
struct MyPhotoQuery: EntityQuery {  
    func entities(for identifiers: [UUID]) async throws -> [MyPhoto] {  
        myPhotoStore.filter { identifiers.contains($0.id) }  
    }  
}
```

Topics

Creating a query

`init()`

Required

Searching for entities

```
func entities(for: [Self.Entity.ID]) async throws -> [Self.Entity]
```

Retrieves instances by identifier.

Required Default implementation provided.

```
associatedtype Entity : AppEntity = Self.Result.Result.ValueType
```

The entity type that this query knows how to resolve.

Required

Suggesting entities

```
func suggestedEntities() async throws -> Self.Result
```

Returns the initial results shown when a list of options backed by this query is presented.

Required Default implementations provided.

Associated Types

```
associatedtype Result = [Self.Entity]
```

Required

Relationships

Inherits From

DynamicOptionsProvider
PersistentlyIdentifiable
Sendable
SendableMetatype

Inherited By

EntityPropertyQuery
EntityStringQuery
EnumerableEntityQuery
UniqueAppEntityQuery

Conforming Types

UniqueAppEntityProvider

See Also

Identifier-based queries

`protocol` EnumerableEntityQuery

An interface you use to provide a short list of entities that are relatively small in size.