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API Collection

# MapKit for AppKit and UIKit

## Topics

### Essentials

📄 Enabling Maps capability in Xcode

Configure your routing app to support providing directions.

📄 Identifying unique locations with Place IDs

Obtain information about a point of interest that persists over its lifetime.

`class` `MKMapView`

An embeddable map interface, similar to the one that the Maps app provides.

`class` `MKMapItem`

A point of interest on the map.

### Map coordinates

`struct` `MKCoordinateRegion`

A rectangular geographic region that centers around a specific latitude and longitude.

`struct` `MKCoordinateSpan`

The width and height of a map region.

`struct` `MKMapRect`

A rectangular area on a two-dimensional map projection.

`struct MKMapPoint`

A point on a two-dimensional map projection.

`struct MKMapSize`

Width and height information on a two-dimensional map projection.

`class MKDistanceFormatter`

A utility object that converts between a geographic distance and a string-based expression of that distance.

## Map customization

`class MKMapCamera`

A virtual camera for defining the appearance of the map.

`class MKCompassButton`

A specialized view that displays the compass heading for its associated map.

`class MKScaleView`

A specialized view that displays the scale information for its associated map.

`class MKZoomControl`

A specialized view that displays and controls the zoom level of the map view.

`class MKPitchControl`

A specialized view that displays and controls the pitch angle of the map view.

`class MKUserTrackingButton`

A specialized button that allows the user to toggle whether the map tracks to the heading the user is facing.

`class MKUserTrackingBarButtonItem`

A specialized bar button item that allows the user to toggle whether the map tracks to the heading the user is facing.

## Annotations and overlays

☰ MapKit annotations

Create annotations to add indicators and additional details for specific locations on a map.

☰ MapKit overlays

Create overlays to highlight geographic regions or paths.

## Directions

`class MKDirections`

A utility object that computes directions and travel-time information based on the route information you provide.

`class Request`

The start and end points of a route, along with the planned mode of transportation.

`class Response`

The route information that Apple servers return in response to your request for directions.

`class ETAResponse`

The travel-time information that Apple servers return.

`class MKRoute`

A single route between a requested start and end point.

`class Step`

One portion of an overall route.

## Geographical features

`{}` Displaying an Indoor Map

Use the Indoor Mapping Data Format (IMDF) to show an indoor map with custom overlays and points of interest.

`class MKGeoJSONDecoder`

An object that decodes GeoJSON objects into MapKit types.

`class MKGeoJSONFeature`

The decoded representation of a GeoJSON feature.

`protocol MKGeoJSONObject`

Objects that the GeoJSON decoder can return.

## Local search

`{}` Interacting with nearby points of interest

Provide automatic search completions for a partial search query, search the map for relevant locations nearby, and retrieve details for selected points of interest.

`enum MKLocalSearchRegionPriority`

A value that indicates the importance of the configured region.

`struct ResultType`

Options that indicate types of search results.

`class MKLocalSearch`

A utility object for initiating map-based searches and processing the results.

`struct Options`

A structure that contains options for filtering results in a search.

`class MKAddressFilter`

An object that filters which address options to include or exclude in search results.

`struct ResultType`

Options that indicate types of search completions.

`class MKLocalSearchCompleter`

A utility object for generating a list of completion strings based on a partial search string that you provide.

`class MKLocalSearchCompletion`

A fully formed string that completes a partial string.

`class MKLocalPointsOfInterestRequest`

A structured request to use when searching for points of interest.

## Exploring at street level

`class MKLookAroundScene`

A utility class that encapsulates information the framework requires to retrieve and display a specific Look Around location's imagery.

`class MKLookAroundSceneRequest`

A class you use to request a LookAround scene at the location you specify.

`class MKLookAroundViewController`

A class that manages the presentation and display of a LookAround view.

`class MKLookAroundSnapshotter`

A utility class that you use to create a static image from a LookAround scene.

## Place information

`protocol MKMapItemDetailViewControllerDelegate`

The methods that you use to receive events from an associated map view controller.

`class MKMapItemDetailViewController`

An object that displays detailed information about a map item.

`class MapItemDetailPresentationStyle`

The type of map item detail accessory presentation to use.

`class MKSelectionAccessory`

The type of accessory to display for a selected annotation.

`enum CalloutStyle`

The style to use for a map item detail callout presentation.

## Points of interest

 Identifying unique locations with Place IDs

Obtain information about a point of interest that persists over its lifetime.

`class MKMapFeatureAnnotation`

A class that describes an annotation element on the map's display such as a point of interest, territorial boundary, or physical feature.

`struct MKMapFeatureOptions`

A structure you use to tell the map which kinds of features users can interact with.

`class MKMapItemRequest`

A utility class you use to request additional information about a map feature.

`class MKIconStyle`

A class you use to customize the annotation view icon of a point of interest (POI) on the map.

`class MKPointOfInterestFilter`

A filter that includes or excludes point of interest categories from a map view, local search, or local search completer.

`struct MKPointOfInterestCategory`

A point of interest category.

## Static map snapshots

`class MKMapSnapshotter`

A utility class for capturing a map and its content into an image.

`class Snapshot`

An image that a snapshotter object generates.

## Reference

 [MapKit Functions](#)

The functions of the MapKit framework provide convenient ways to package map-related data structures.

## Errors

`let NSErrorDomain: String`

The error domain for MapKit.

`struct NSError`

Error constants for the MapKit framework.

`enum Code`

Error constants for the MapKit framework.

## Deprecated

 [Deprecated Symbols](#)

Map protocols and view modifiers that are no longer supported.

## See Also

### The MapKit APIs

## MapKit for SwiftUI

MapKit for SwiftUI allows you to build map-centric views and apps across Apple platforms. You can design expressive and highly interactive Maps with minimal code by composing views, using ViewBuilders and view modifiers.

## Adopting unified Maps URLs

Access Maps URLs and options for displaying Maps information across Apple platforms.