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Documentation

URLSession

URLSessionDataTask

Language: Swift

API Changes: None

# URLSessionDataTask

A URL session task that returns downloaded data directly to the app in memory.

## Declaration

```
class URLSessionDataTask : URLSessionTask
```

## Overview

A `URLSessionDataTask` is a concrete subclass of `URLSessionTask`. The methods in the `URLSessionDataTask` class are documented in `URLSessionTask`.

A data task returns data directly to the app (in memory) as one or more `NSData` objects. When you use a data task:

- During upload of the body data (if your app provides any), the session periodically calls its delegate's `urlSession(_:task:didSendBodyData:totalBytesSent:totalBytesExpectedToSend:)` method with status information.
- After receiving an initial response, the session calls its delegate's `urlSession(_:dataTask:didReceive:completionHandler:)` method to let you examine the status code and headers, and optionally convert the data task into a download task.
- During the transfer, the session calls its delegate's `urlSession(_:dataTask:didReceive:)` method to provide your app with the content as it arrives.
- Upon completion, the session calls its delegate's `urlSession(_:dataTask:willCacheResponse:completionHandler:)` method to let you determine whether the response should be cached.

For examples of using data tasks for fetching and uploading data, see [Fetching Website Data into Memory](#) and [Uploading Data to a Website](#).

## Relationships

SDKs

iOS 7.0+

macOS 10.9+

tvOS 9.0+

watchOS 2.0+

Framework

Foundation

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**Inherits From** URLSessionTask

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**Conforms To** CVarArg, Equatable, Hashable

## See Also

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### Adding Data Tasks to a Session

```
func dataTask(with: URL) -> URLSessionDataTask
```

Creates a task that retrieves the contents of the specified URL.

```
func dataTask(with: URL, completionHandler: (Data?,  
URLResponse?, Error?) -> Void) -> URLSessionDataTask
```

Creates a task that retrieves the contents of the specified URL, then calls a handler upon completion.

```
func dataTask(with: URLRequest) -> URLSessionDataTask
```

Creates a task that retrieves the contents of a URL based on the specified URL request object.

```
func dataTask(with: URLRequest, completionHandler: (Data?,  
URLResponse?, Error?) -> Void) -> URLSessionDataTask
```

Creates a task that retrieves the contents of a URL based on the specified URL request object, and calls a handler upon completion.

```
protocol URLSessionDataDelegate
```

A protocol defining methods that URL session instances call on their delegates to handle task-level events specific to data and upload tasks.