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Documentation Foundation
URL Loading System
URLRequest
Language: Swift
API Changes: None

URLRequest

A URL load request that is independent of protocol or URL scheme.

Declaration

```
struct URLRequest
```

Overview

`URLRequest` encapsulates two basic data elements of a load request: the URL to load, and the policy to use when consulting the URL content cache made available by the implementation.

> **Important**
>
> This type serves only to encapsulate information about a URL request. You must use other classes such as `URLSession` to send these requests to a server. See Fetching Website Data into Memory and Uploading Data to a Website for an introduction to these techniques.

Topics

Creating a Request

`init(url: URL, cachePolicy: URLRequest.CachePolicy, timeoutInterval: TimeInterval)`

Creates and initializes a URL request with the given URL, cache policy, and timeout interval.

SDKs

iOS 7.0+

macOS 10.9+

tvOS 9.0+

watchOS 2.0+

Xcode 8.0+

Framework

Foundation

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Working with a Cache Policy

```
var cachePolicy: URLRequest.CachePolicy
```
The request's cache policy.

```
typealias URLRequest.CachePolicy
```
An alias for the cache policy.

```
enum NSURLRequest.CachePolicy
```
The constants used to specify interaction with the cached responses.

Accessing Request Components

```
var httpMethod: String?
```
The HTTP request method.

```
var url: URL?
```
The URL of the request.

```
var httpBody: Data?
```
The data sent as the message body of a request, such as for an HTTP POST request.

```
var httpBodyStream: InputStream?
```
The stream used to deliver the HTTP body.

```
var mainDocumentURL: URL?
```
The main document URL associated with this request.

Accessing Header Fields

```
var allHTTPHeaderFields: [String : String]?
```
A dictionary containing all the request's HTTP header fields.

```
func addValue(String, forHTTPHeaderField: String)
```
Adds one value to the header field.

```
func setValue(String?, forHTTPHeaderField: String)
```
Sets a value for a header field.

```
func value(forHTTPHeaderField: String) -> String?
```
Retrieves a header value.

Controlling Request Behavior

`var timeoutInterval: TimeInterval`

The timeout interval of the request.

`var httpShouldHandleCookies: Bool`

A Boolean value indicating whether cookies will be sent with and set for this request.

`var httpShouldUsePipelining: Bool`

A Boolean value indicating whether the request should transmit before the previous response is received.

`var allowsCellularAccess: Bool`

A Boolean value indicating whether the request is allowed to use the built-in cellular radios to satisfy the request.

Accessing the Service Type

`var networkServiceType: URLRequest.NetworkServiceType`

The service type associated with this request.

`typealias URLRequest.NetworkServiceType`

An alias for the network service type.

`enum NSURLRequest.NetworkServiceType`

The constants used to specify the network service type of a request.

Comparing Requests

`static func != (URLRequest, URLRequest) -> Bool`

Returns a Boolean value indicating whether two values are not equal.

`static func == (URLRequest, URLRequest) -> Bool`

Indicates whether two URL requests are the same.

Describing Requests

`var description: String`

A textual description of the request.

`var debugDescription: String`

A textual description of the request suitable for debugging.

`var customMirror: Mirror`

A mirror that reflects the request.

`var hashValue: Int`

The computed hash value for the request.

Using Reference Types

`class NSURLRequest`

A representation of a URL load request that you use when you need reference semantics or other Foundation-specific behavior.

`class NSMutableURLRequest`

A mutable URL load request that bridges to `NSURLRequest`; use `NSMutable URLRequest` when you need reference semantics or other Foundation-specific behavior

~~`typealias MutableURLRequest`~~ Deprecated

`typealias URLRequest.ReferenceType`

An alias for this value type's equivalent reference type.

Relationships

Conforms To

```
CustomDebugStringConvertible
CustomReflectable
CustomStringConvertible
Equatable
Hashable
ReferenceConvertible
```

See Also

Requests and Responses

`class` `URLResponse`

The metadata associated with the response to a URL load request, independent of protocol and URL scheme.

`class` `HTTPURLResponse`

The metadata associated with the response to an HTTP protocol URL load request.