

[Swift](#) / `withUnsafePointer(to:_:)`

## Function

# withUnsafePointer(to:\_:)

Invokes the given closure with a pointer to the given argument.

iOS 8.0+ | iPadOS 8.0+ | Mac Catalyst 13.0+ | macOS 10.10+ | tvOS 9.0+ | visionOS 1.0+ | watchOS 2.0+

```
func withUnsafePointer<T, E, Result>(
    to value: borrowing T,
    _ body: (UnsafePointer<T>) throws(E) -> Result
) throws(E) -> Result where E : Error, T : ~Copyable, Result : ~Copyable
```

## Parameters

### value

An instance to temporarily use via pointer.

### body

A closure that takes a pointer to `value` as its sole argument. If the closure has a return value, that value is also used as the return value of the `withUnsafePointer(to:_:)` function.

The pointer argument is valid only for the duration of the function's execution. It is undefined behavior to try to mutate through the pointer argument by converting it to `UnsafeMutablePointer` or any other mutable pointer type. If you need to mutate the argument through the pointer, use `withUnsafeMutablePointer(to:_:)` instead.

## Return Value

The return value, if any, of the body closure.

## Discussion

The `withUnsafePointer(to:_:)` function is useful for calling Objective-C APIs that take in parameters by const pointer.

The pointer argument to body is valid only during the execution of `withUnsafePointer(to:_:)`. Do not store or return the pointer for later use.

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## See Also

### Pointers to Values

```
func withUnsafePointer<T, E, Result>(to: inout T, (UnsafePointer<T>) throws(E) -> Result) throws(E) -> Result
```

Invokes the given closure with a pointer to the given argument.

```
func withUnsafeMutablePointer<T, E, Result>(to: inout T, (UnsafeMutablePointer<T>) throws(E) -> Result) throws(E) -> Result
```

Calls the given closure with a mutable pointer to the given argument.

```
func withUnsafeBytes<T, E, Result>(of: inout T, (UnsafeRawBufferPointer) throws(E) -> Result) throws(E) -> Result
```

Invokes the given closure with a buffer pointer covering the raw bytes of the given argument.

```
func withUnsafeBytes<T, E, Result>(of: borrowing T, (UnsafeRawBufferPointer) throws(E) -> Result) throws(E) -> Result
```

Invokes the given closure with a buffer pointer covering the raw bytes of the given argument.

```
func withUnsafeMutableBytes<T, E, Result>(of: inout T, (UnsafeMutableRawBufferPointer) throws(E) -> Result) throws(E) -> Result
```

Invokes the given closure with a mutable buffer pointer covering the raw bytes of the given argument.