ALPHAcamp

iOS Dev Camp #3 Week 4
Foundation Framework with String

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Today

NSString

- Creating and Initializing
- Length
- Format
- Getting Numeric Values

NSMutableString

NSString

NSString

- The NSString class declares the programmatic interface for an object that manages immutable strings. An immutable string is a text string that is defined when it is created and subsequently cannot be changed. NSString is implemented to represent an array of Unicode characters, in other words, a text string.
- The NSString class has two primitive methods—length and characterAtIndex:—that provide the basis for all other methods in its interface. The length method returns the total number of Unicode characters in the string. characterAtIndex: gives access to each character in the string by index, with index values starting at 0.

NSString

- NSString declares methods for finding and comparing strings. It also declares methods for reading numeric values from strings, for combining strings in various ways, and for converting a string to different forms (such as encoding and case changes).
- Use to compare strings against one another.
- Search them for substrings.
- Combine them into new strings.

Creating and Initializing

+ string

- Return an empty string.

- init

- Return an initialized NSString object that contains no characters.

- initWithString:

- Return an NSString object initialized by copying the characters from another given string.

- initWithFormat:

- An NSString object initialized by using format as a template into which the remaining argument values are substituted according to the system locale.

String Format Specifiers

- The format specifiers supported by the NSString formatting methods and CFString formatting functions.
  - %@
  - %i
  - %f
  - %d
  - %ld

```
NSInteger i = 42;
printf("%ld\n", (long)i);
```

- More information. https://developer.apple.com/library/mac/documentation/Cocoa/Conceptual/Strings/Articles/formatSpecifiers.html

Combining and Extracting Strings

- You can combine and extract strings in various ways. The simplest way to combine two strings is to append one to the other. The stringByAppendingString: method returns a string object formed from the receiver and the given argument.

  ```
  NSString *beginning = @"beginning";
  NSString *alphaAndOmega = [beginning stringByAppendingString:@" and end"];
  // alphaAndOmega is @"beginning and end"
  ```

- You can extract substrings from the beginning or end of a string to a particular index, or from a specific range, with the substringToIndex:, substringFromIndex:, and substringWithRange: methods.

Searching, Comparing, and Sorting

- You use the rangeOfString:... methods to search for a substring within the receiver. The rangeOfCharacterFromSet:... methods search for individual characters from a supplied set of characters.
- The compare:... methods return the lexical ordering of the receiver and the supplied string. Several other methods allow you to determine whether two strings are equal or whether one is the prefix or suffix of another, but they don't have variants that allow you to specify search options or ranges.
- NSCaseInsensitiveSearch

Separating a String “By Paragraph”

- A common approach to separating a string “by paragraph” is simply to use:

  ```
  NSArray *arr = [myString componentsSeparatedByString:@"\n"];
  ```

Scanners

- An NSScanner object scans the characters of an NSString object, typically interpreting the characters and converting them into number and string values. You assign the scanner’s string on creation, and the scanner progresses through the characters of that string from beginning to end as you request items.

Getting Numeric Values

doubleValue

- The floating-point value of the string as a double.

floatValue

- The floating-point value of the string as a float.

intValue

- The integer value of the string. This property is 0 if the string doesn’t begin with a valid decimal text representation of a number.

integerValue

- The NSInteger value of the string. This property is 0 if the string doesn’t begin with a valid decimal text representation of a number.
- More like longLongValue, boolValue,

NSMutableString

NSMutableString

- The NSMutableString class declares the programmatic interface to an object that manages a mutable string—that is, a string whose contents can be edited—that conceptually represents an array of Unicode characters.

- appendFormat:

  - Adds a constructed string to the receiver.

- appendString:

  - Adds to the end of the receiver the characters of a given string.

- deleteCharactersInRange:

  - Removes from the receiver the characters in a given range.

- inserString:atIndex:

  - Inserts into the receiver the characters of a given string at a given location.

Todays Homework

- Use NSString to
  - Combining and extracting
  - Formatting String objects
  - Searching, comparing
  - Scan

~ END ~

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