

Progress Bar Introduction

Progress bar, formally known as `UIProgressView` in swift 4.1, is a common element of a page. It is used to indicate the progress of a **computable** process, such as downloading a file. It should not be used for **incomputable** process, such as attempting to establish Internet connection or searching for a content (for such use, please see `spinner` to the right.)

Image of Progress Bar



Useful Class Method

```
func setProgress(Float, animated: Bool)
```

A function to set progress of the progress bar. The first positional argument is within range 0.0 to 1.0 inclusive, indicating the progress of the task.

The second argument `animated` indicates whether the change in progress should be animated. When set to `false`, the progress bar will "jump" to the updated progress. Otherwise, it will be filled/unfilled gradually to the updated progress.

Useful Instance Variables

```
var isHidden
```

A `Bool` determines whether the progress bar is hidden or not.

```
var progress
```

A `Float` within range 0.0 to 1.0 inclusive, indicating the progress.

MCVE (Minimal Complete Verifiable Example)

```
/*\ to run this example, simply
create up a new project, then
| | copy and paste the code below
to ViewController.swift
| | create a button and a progress
bar in the storyboard, then
| | create a reference outlet from
the progress bar to
| | progressBar variable, then
create
| | an action outlet from the
button to startTask() function
*/
import UIKit
class ViewController:
UIViewController {
    @IBOutlet weak var
progressBar: UIProgressView!
    //outlet of the progressBar

    override func viewDidLoad() {
        super.viewDidLoad()
        //set the progressBar to 0,
default value is 0.5
        progressBar.setProgress(0,
animated: false)
        //hide the progressBar
        progressBar.isHidden=true
    }
    var t:Timer!
    @objc func updateProgress(){
        // an example function to
increase the progress of the task
by 1%
        // only called by timer in the
following function
        //@objc decorator exposes the
function to timer
        progressBar.setProgress(pr
ogress.progress+0.01,animated:
true)
        if
progressBar.progress>=1.0{
```

MCVE (Minimal Complete Verifiable Example) (cont)

```
        t.invalidate() // stop
the timer
        progressBar.isHidden=true
// hide the progress bar
        progressBar.setProgress
(0, animated: false) // reset the
progress bar
    }
}

@IBAction func startTask(_
sender: Any) { // outlet of the
button that activates this function
        // an example function that
increases the progress of
        // progress bar by 0.1
every 0.05 second (simulating a
        // task that takes 5
seconds to complete)
        progressBar.isHidden=false
// display the progress bar
        t=Timer.scheduledTimer(tim
eInterval: 0.05, target: self,
selector:
#selector(updateProgress),
userInfo: nil, repeats: true) //
set the timer
    }
}
```

Spinner Introduction

Spinner, formally known as `UIActivityIndicatorView` in swift 4.1, is a common element for an application. It is used to indicate that there is an ongoing process (either executing in the front or background) that consumes unknown amount of time, such as searching for a specific content or making computation.

Image of Spinner



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