

CAMERA

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LEARNING OBJECTIVES

- + Take photos from your app
- + Import a user's images into your app

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PERMISSION

To use the device's camera, you need permission from the user.

The following code takes care of that:

```
AVCaptureDevice.requestAccess(forMediaType: AVMediaTypeVideo,  
completionHandler: { (authorized) in  
    authorized ? print("AUTHORIZED!") : print("NO DICE!")  
})
```

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IMAGE PICKER CONTROLLER

The class `UIImagePickerController` is your gateway to taking new photos and retrieving a users' existing photos. Here's how you would use it to access a user's photo library:

```
let imagePicker = UIImagePickerController()  
imagePicker.delegate = self  
imagePicker.sourceType =  
UIImagePickerControllerSourceType.photoLibrary;  
imagePicker.allowsEditing = true  
  
present(imagePicker, animated: true) { }
```

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IMAGE PICKER CONTROLLER

The code for engaging the camera is quite similar:

```
let imagePicker = UIImagePickerController()  
imagePicker.delegate = self  
imagePicker.sourceType =  
UIImagePickerControllerSourceType.camera;  
imagePicker.allowsEditing = true  
  
present(imagePicker, animated: true) { }
```

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RECEIVING AN IMAGE

But how do we return from picking a photo or taking one? And how do we get a reference to the image in question?

We'll need the UIImagePickerControllerDelegate protocol for that.

```
func UIImagePickerController(_ picker:
UIImagePickerController, didFinishPickingMediaWithInfo
info: [String : Any]) {
    // Use the info object
    self.dismiss(animated: true, completion: { })
}
```

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RECEIVING AN IMAGE

Finally, we have to parse the data that the image picker returned to us.

Here's an example of a function that does that:

```
func retrieveImage(from mediaInfo: [String : Any]) -> UIImage? {  
    if let image =  
presentMediaInfo[UIImagePickerControllerEditedImage] as? UIImage {  
        return image  
    }  
    return nil  
}
```

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Practice:

- 1) On your first view controller, create a button that, when tapped, will ask permission to use the camera.
- 2) Once you have permission, a new button should appear. When this button is tapped, it should bring up the camera.
- 3) When the camera takes a picture, the app should return to its main view controller and display the taken picture in a UIImageView.
- 4) The image view should take on the aspect ratio of the picture taken.