

BEGINNING

# CORE DATA



HANDS-ON CHALLENGES

## Beginning Core Data

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# Challenge #2: Adding an Image

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As you saw in the demo, the app allows you to add quite a few attributes to each Person you add to your list. The only thing you still can't do is add a picture via the UI.

## Adding an Image Picker

In order to pick an image for each Person, you'll need to add a `UIImagePickerController`.

The first thing you need to do is add a property to keep track of which person you're picking an image for.

Add the following at the top of the **ViewController.swift** with the other property definitions.

```
var imagePickerIndexPath = IndexPath(item: 0, section: 0)
```

Next, make `ViewController` the `collectionView`'s delegate by adding the following line to `viewDidLoad()` after the line that makes it up as the `dataSource`.

```
collectionView.delegate = self
```

Now, add an extension where so that you can implement a collection view delegate method.

```
extension ViewController: UICollectionViewDelegate {  
}
```

The only delegate method you need is for selecting a cell. Add the following method to the delegate extension.

```
func collectionView(_ collectionView: UICollectionView,
                  didSelectItemAt indexPath: IndexPath) {
    //1
    imagePickerIndexPath = indexPath

    //2
    let pickerController = UIImagePickerController()
    pickerController.delegate = self
    self.navigationController?.present(pickerController,
        animated: true,
        completion: nil)
}
```

1. When a user selects a cell, first you save off the chosen index path.
2. Then you display an image picker controller.

```
if let pictureData = person.picture {
    cell.pictureImageView.image = UIImage(data: pictureData as Data)
}
```

## Implementing the Picker Delegate

Now that you're showing the image picker, you need to react to an image being chosen.

First, add the following extension conforming ViewController to the UIImagePickerControllerDelegate protocol.

```
extension ViewController: UIImagePickerControllerDelegate,
    UINavigationControllerDelegate {

}
```

The only method you need to implement is `imagePickerController(_:didFinishPickingMediaWithInfo:)`.

Add the following method to the extension

```
func imagePickerController(_ picker: UIImagePickerController,
    didFinishPickingMediaWithInfo info: [String : Any]) {
    guard let appDelegate =
        UIApplication.shared.delegate as? AppDelegate else {
            return
    }
}
```

As usual, you need to add a guard statement to make sure you can access the context in the app delegate.

Next, retrieve the chosen image from the `info` dictionary and retrieve the chosen

Person from the people array using the cached index path.

```
let image = info[UIImagePickerControllerOriginalImage] as! UIImage  
let person = people[imagePickerIndexPath.row]
```

As you've seen, all you need to do to save the image is set it to the picture property of the person.

```
person.picture = UIImagePNGRepresentation(image)! as NSData
```

Now that the image has been set on the managed object, you can save the context to persist it.

```
do {  
    try appDelegate.persistentContainer.viewContext.save()  
} catch let error {  
    print(error)  
}
```

Finally, reload the altered person's cell and dismiss the picker controller.

```
collectionView.reloadItems(at: [imagePickerIndexPath])  
picker.dismiss(animated: true, completion: nil)
```

## Showing The Image

If you built and ran right now, you would technically be able to save images, but you haven't actually added any code to show the images in the cells.

Fixing this problem is a snap. Just go to `collectionView(_:cellForItemAt:)` located in the `UICollectionViewDataSource` extension.

Before the return statement, add

```
if let pictureData = person.picture {  
    cell.pictureImageView.image = UIImage(data: pictureData as Data)  
}
```

Now, build and run to see that any Person object that has a saved image will display that image in the corresponding cell.