

# CALayers

Hands-on Challenges

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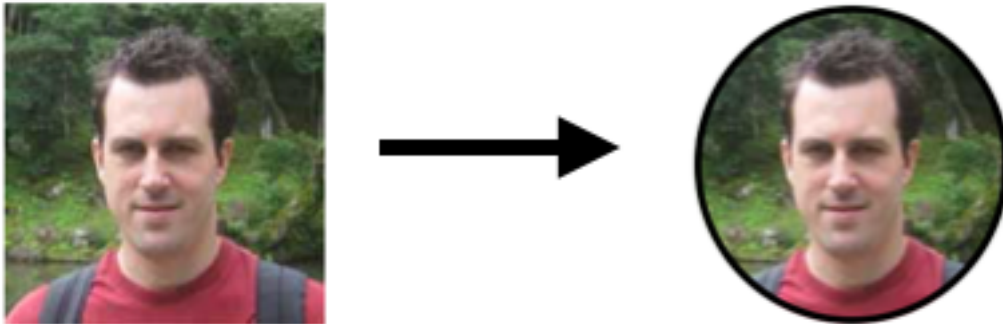
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# Challenge A: Circular Image

Currently, the user's image on the profile page is square. However, it would look a lot better if it was circular instead – so that's what you'll do in this challenge.



At this point, you should have enough knowledge to solve this on your own. Here are a few hints to get you started, and if you get stuck check out the challenge solution!

## Hints

You only need to modify one file: **AvatarView.swift**.

1. Make a property called `strokeColor` of type `UIColor`, and give it a default value of black.
2. At the top of `setup()`:
  - Set the `imageView`'s layer's border color based on `strokeColor`. Remember that layers take a `CGColor`.
  - Set the `imageView`'s layer's border width to 5.
  - Configure the `imageView`'s layer to mask its contents according to its bounds.
3. At the bottom of `layoutSubviews()`, set the image view's corner radius appropriately so it is circular (you can assume the width and height will always be equal).

**Note:** Do you know why you should set the image view's corner radius in `layoutSubviews()` and not `setup()`?



The reason is because `layoutSubviews()` is called when the bounds of your view changes, giving you a chance to re-calculate any layout dependent on size.

At the beginning of `layoutSubviews()`, you call `super.layoutSubviews()`, which makes Auto Layout re-calculate the frames of each subview of your view based on its constraints. One of these views is the image view.

Since the correct corner radius to use depends on the image view's height, this way you'll always update it to the correct value each time the image view's size changes.

On the other hand, if you only set the corner radius once in `setup()`, you could potentially have an incorrect corner radius if the view's bounds changes to an unexpected size.

