Beginning

Core
Graphics

Part 5: PaintCode

Core Graphics
Hands-On Challenges

Challenge: PaintCode

For this challenge you're going to draw an icon in PaintCode 2. If you don't own it, you can get a trial of PaintCode 2 from http://www.paintcodeapp.com/.
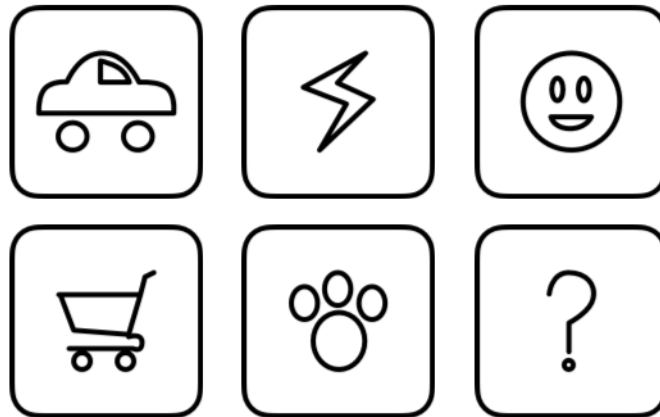

You'll draw the Miscellaneous icon shaped like a question mark.

Open up the **PennyWise-005ChallengeStarter** PaintCode file. You can have multiple canvasses in a single file, so you'll add the Miscellaneous canvas to this file.
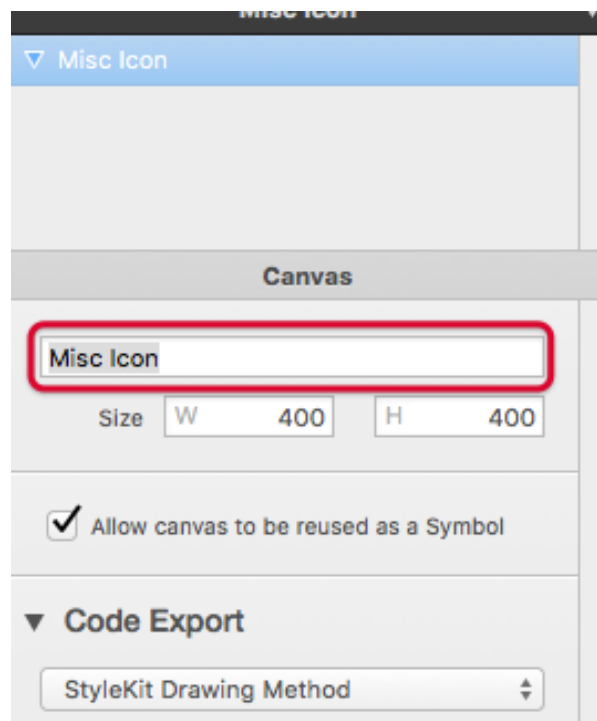
Select the **Auto Icon** canvas.
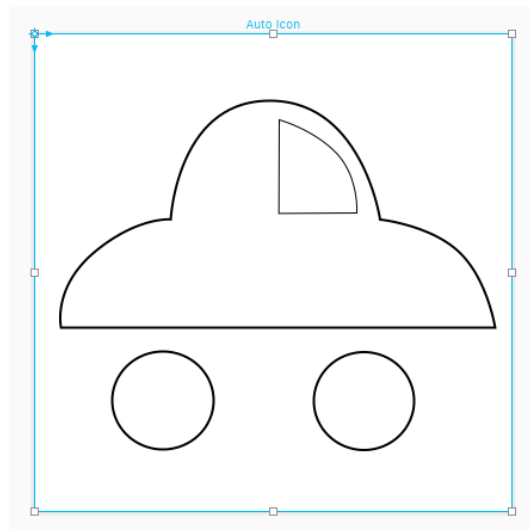
Choose **Canvas Menu / New** and choose the first option on the Canvas menu **(400 x 400) Auto Icon**. Because you have the auto canvas selected, it will be the same size.
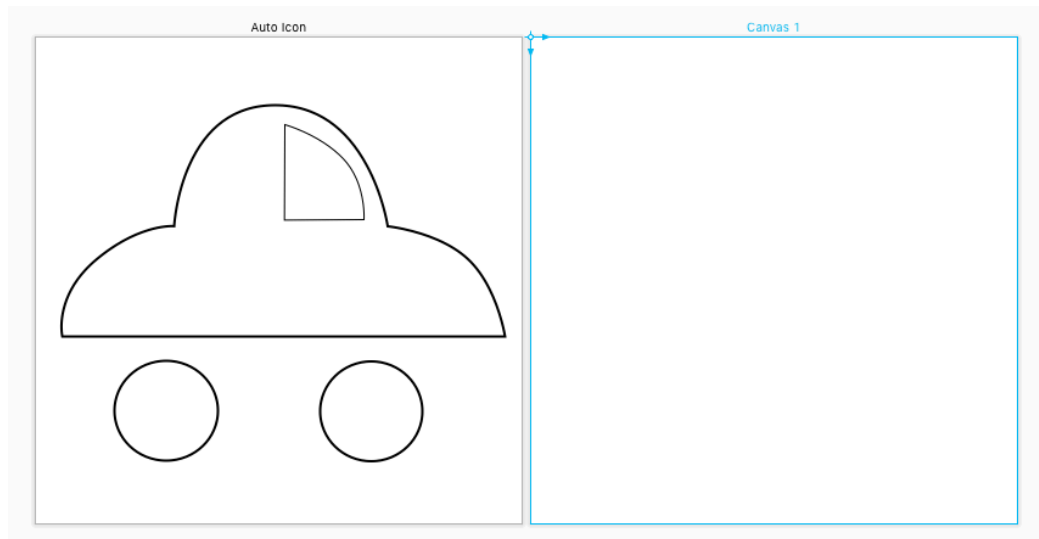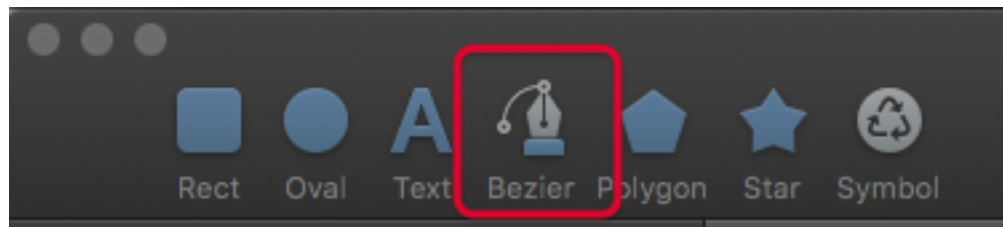

In the Inspector, change the canvas name to **Misc Icon**.

Now you'll draw the top of the question mark.

Choose the Bezier Tool

First click the start point of the question mark **(1)**, drag a curved point at the top of the question mark **(2)**, drag another curved point at the right of the question mark **(3)** and click two points **(4)** and **(5)** to make the final stroke. Press the escape key when finished. This one won't be a closed shape.
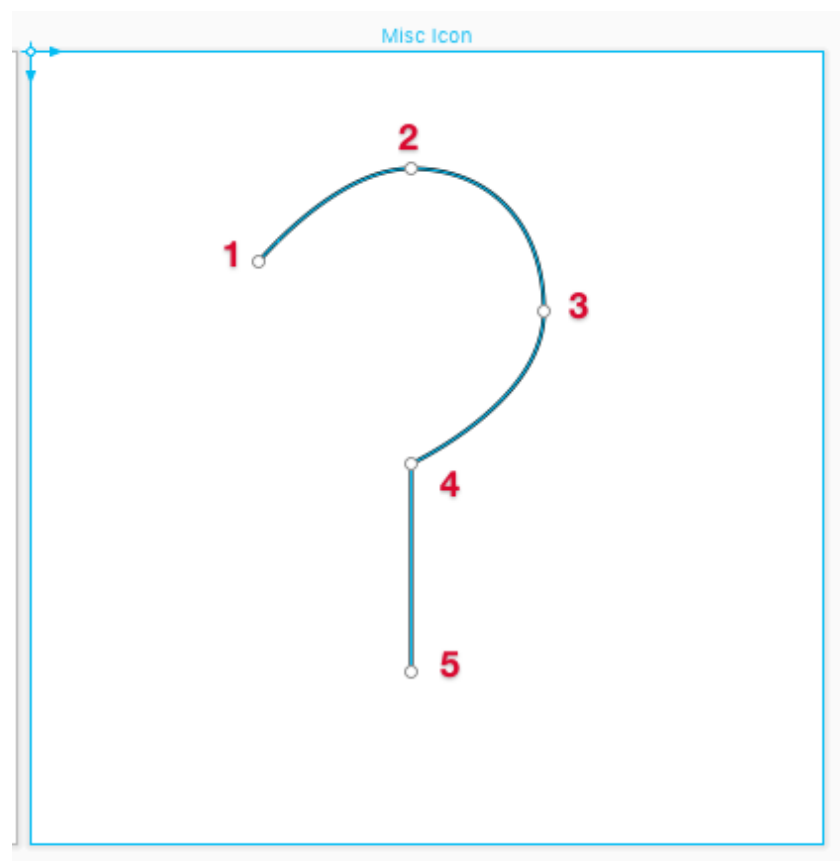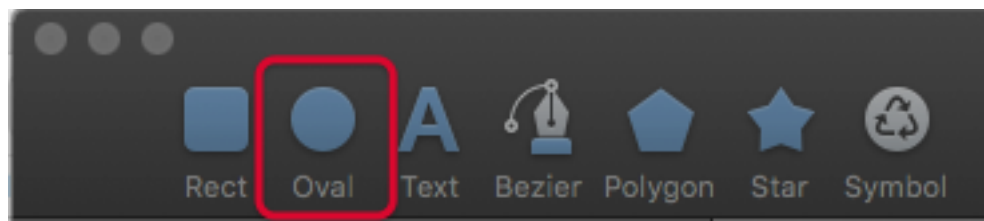
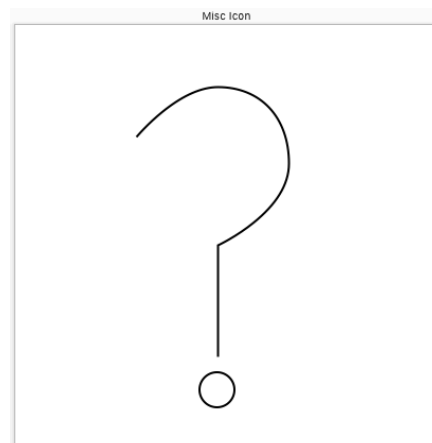Double click the question mark to tidy up the points

Remove any fill and make the stroke 2 points wide.
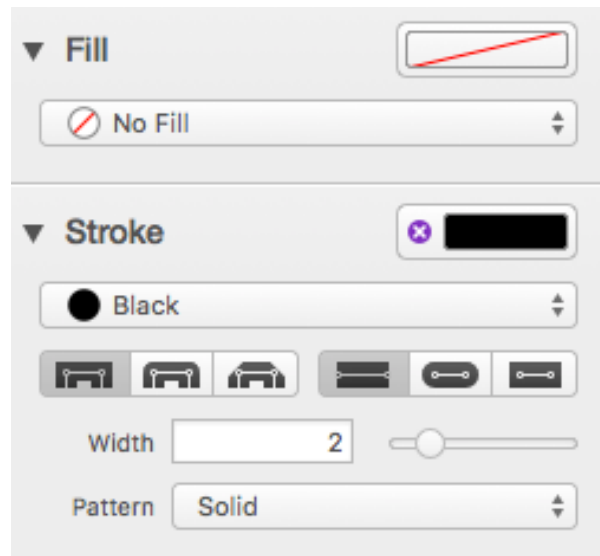
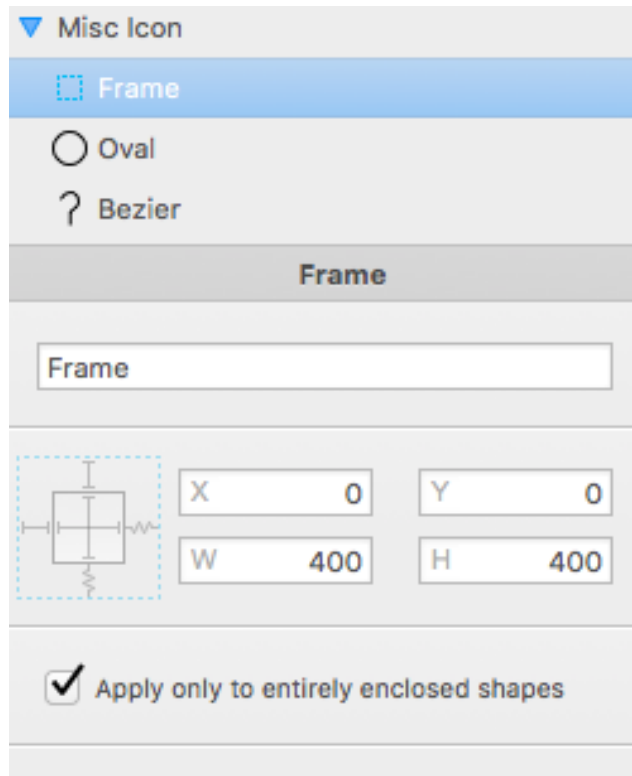To draw the dot under the question mark, choose the oval tool.

Click and drag a circle under the question mark. Hold the Shift key down while dragging to constrain it to be circular. Remove any fill and make the stroke 2 points wide.

When you're happy with your question mark, click the frame tool to make the size relative. Click and drag from the top left of the canvas to the bottom right.

In the Inspector, check **Apply only to entirely closed shapes** and change the frame position to **X: 0**, **Y: 0**, **W: 400** and **H: 400**.
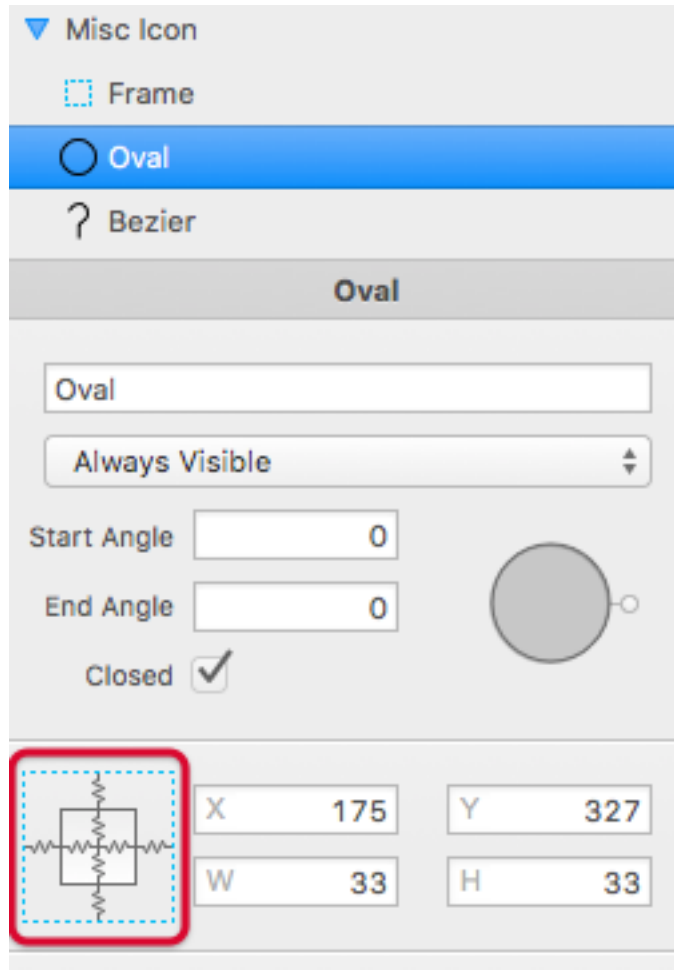
To constrain the scale of the elements to the size of the view it's presented in, you need to change the resizing constraints. In the Inspector, select first **Oval** and then **Bezier** and change the constraints of each element to resizable. (Make sure the constraints are all wiggly lines)
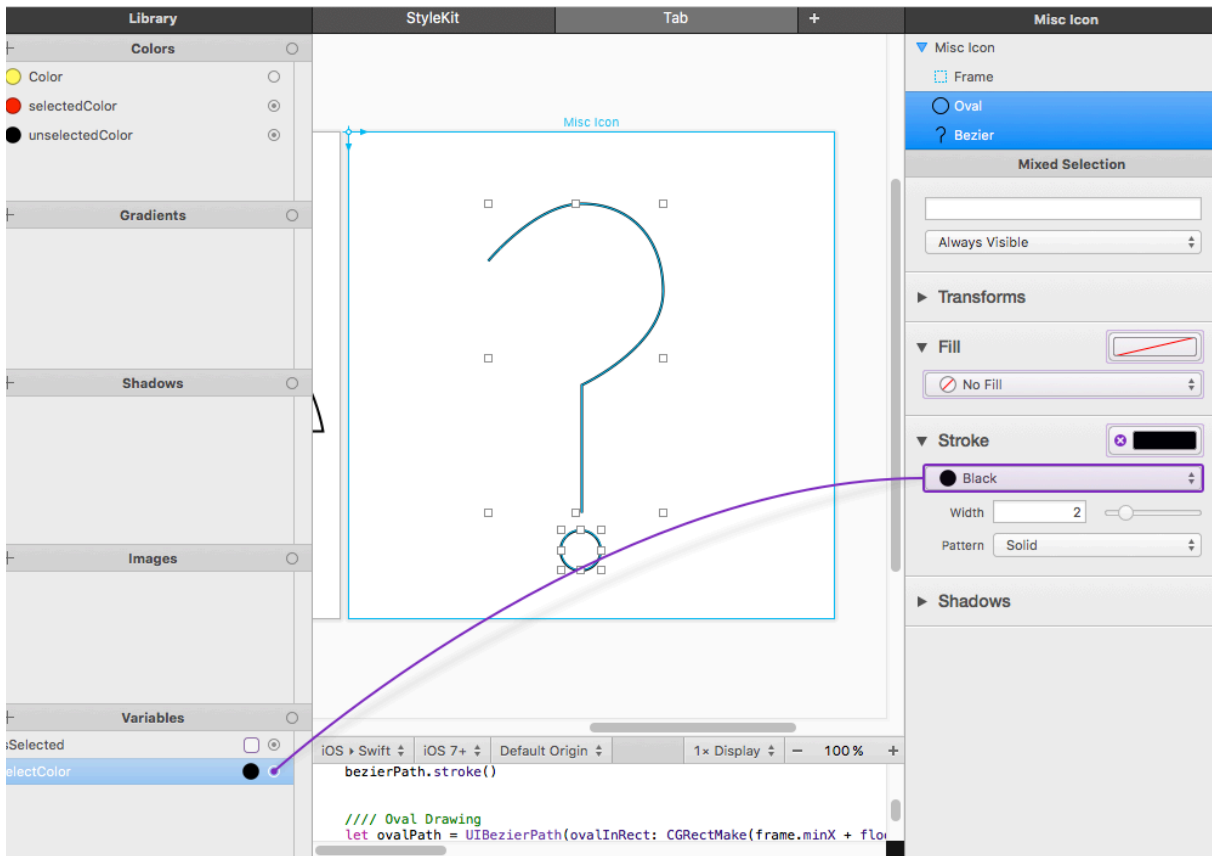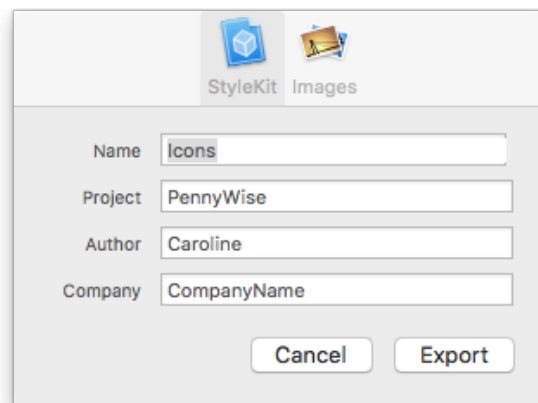
Hold the Shift key down and select the two question mark elements **Oval** and **Bezier**, and drag from the circle next to the expression **selectColor** to the **Stroke** color in the Inspector.

Tick the variable **isSelected** on and off to check that your question mark changes color to red when selected.

Choose **File Menu / Export** and name the file **Icons** and project **PennyWise:**

Click **Export** and locate your app's code folder, and replace the current **Icons.swift** file with this file.

If you want to make changes back in PaintCode, now that the files are linked, you can just choose **File Menu / Export Again**.

Back in Xcode, in **CategoryCell.swift**, in `drawRect(_:)`, add this to the switch statement:

```
case "Misc":
  Icons.drawMiscIcon(frame:rect.insetBy(dx: 5, dy: 5),
                     isSelected: selected)
```

Run the app, tap on a category, and admire your icon.
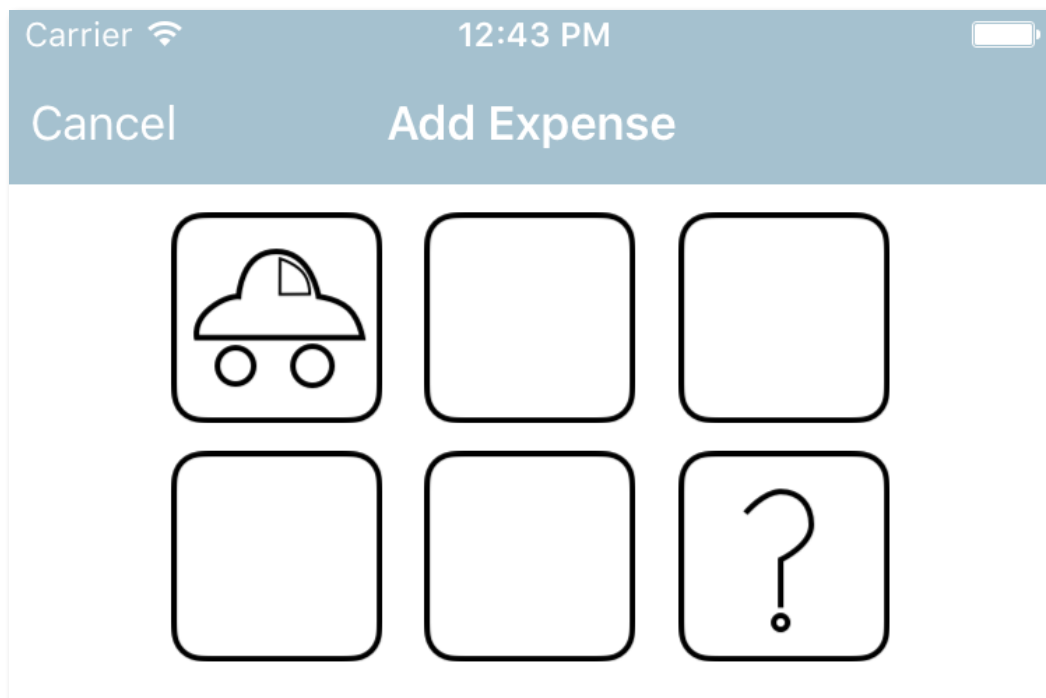
To gain practice with PaintCode, feel free to draw all the icons in PaintCode and add them to CategoryCell just as you did above.