SUMMARY

In this lab you will create a method to posterize an image.

IN-LAB

POSTERIZE

The posterize effect involves reducing the number of colors that an image has. For our effect, we will reduce each component value from 256 values (0-255) to 4 values. To do this, we will identify four equal-sized ranges and set any component value in a range to its midpoint. For example, we might set any component value in the range $0 \leq \text{Red} < 64$ to the midpoint, or 31. If we do the same for each component (R, G, B) we have posterized the pixel.

How many possible colors do our digital images typically have? How many possible colors do they have after the posterize effect?

Create a method called `posterize` that applies the posterize effect to the picture object.

```java
public void posterize()
```

EXAMPLE

```java
String filename = "../media-source/pipersquirrel.jpg";
Picture pic = new Picture(filename);
pic.posterize();
pic.show();
```

<table>
<thead>
<tr>
<th>Original</th>
<th>posterize()</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Original Image]</td>
<td>![Posterized Image]</td>
</tr>
</tbody>
</table>
GET CREDIT

Don’t forget to show a coach what you’ve done before you leave so you get credit for attending and participating in the lab.

POST-LAB

Create another method called posterize2 that uses only two color ranges. Compare the results of both methods.