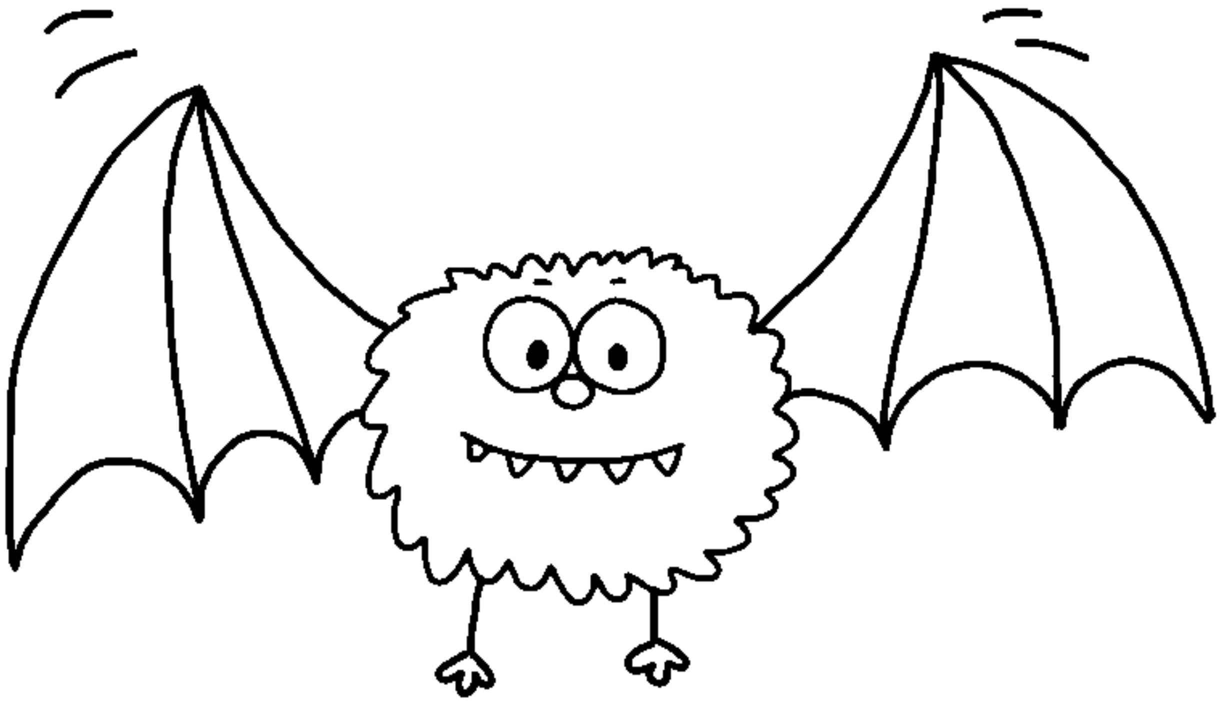

This document serves as a quick intro to my “Coloring Book Algorithm” package for Unity. To see it in action check my Coloring Book app available for:

* Android https://play.google.com/store/apps/details?id=pl.ayground.coloringbook
* iOS https://itunes.apple.com/us/app/coloring-book-free-app/id1052076567?mt=8

There is also a sample Scene to check the basics available as part of the package.

And now - get ready to code.

Coloring is easy as 1..2..3

STEP ONE: Define the DrawableTextureContainer which is where the coloring happens (and the image is stored as a bitmap [two dimensional table of pixels]

```
private DrawableTextureContainer imageContainer;
```

STEP TWO: Initialise it with a Texture2D:

```
Texture2D tex = Samples [imageNumber];
imageContainer = new DrawableTextureContainer (tex, false, false);
```

STEP THREE: Call PaintBucketTool method of an initialised imageContainer

```
imageContainer.PaintBucketTool (x, y, paintColor);
```

There is also a quite probable STEP FOUR if you want to present the result on the screen :)

```
// image is a RawImage instance placed on the screen
image.texture = imageContainer.getTexture ();
```

Thats all folks.
Repeat STEP THREE followed by STEP FOUR as required to colour any Texture2D.

Please remember that getTexture will take some time so use it only when needed (i.e. not in every frame, only when the texture really changed)

FAQ:

1) What is the mysterious false, false up there in STEP ONE? DrawableTextureContainer works best on black and white images. You can ask its constructor to convert an image upon load to a B&W one by using the first boolean parameter (called convertToPureBW). This will work fine for an image that was created on a computer and antialiasing caused a lot of shades of grey being used. There is also an option to import a photo with a simple OCR filter called Bradley Local Thresholding - check attached sample photo on how it will improve the imported file.
2) How to store source images to avoid large binary files? I advise using PNG stored as .bytes files - see https://docs.unity3d.com/Manual/class-TextAsset.html for more info. PNGs with two colours will compress a lot - you can achieve 100s of pages in a <50MB binary easily.
3) How to check which area was clicked? There are various ways to get this done. My preferred one is to use RectTransformUtility.ScreenPointToLocalPointInRectangle().