CPEN 475 - Project 1_PAWS

Deliverables:

Please clean your Android Studio project and then zip the containing directory. Please include both you and your partners name in the name of the zip. For example Keith_and_Lynn.zip.

Target SDKs

I will compile and test it on a Nexus 5 running some version of Android between API 14 and API 24.

Provided stuff:

An apk to demo the program. An apk is like an executable zip file. Open it in your email on your device and you should be able to install it. I've tested it on API 21 and API 19 only.
4 images and a bunch of icons. The image at the end of this document shows where they go.

Description

You are to generate a local photo display application. Once started the user will be presented with a GUI similar to the following;

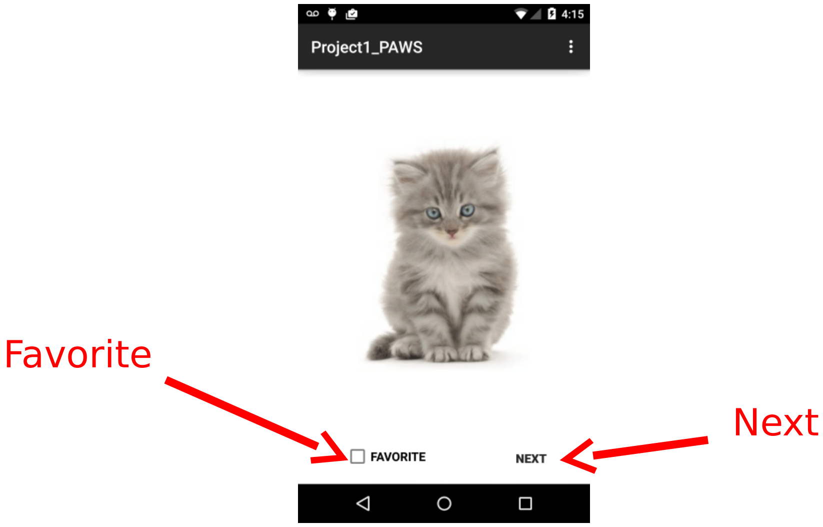


Figure 1

The application will have 4 images associated with it (pet0.jpg, pet1.jpg, pet2.jpg, and hearts.png. You are welcome to add more or use your own. The user cycles through the images by clicking the NEXT button on the lower right. Once all 3 have been displayed the application will reuse the first image.

The user can also mark a favorite animal by clicking the Favorite checkbox on the lower left above. The UI changes to the following in this case (feel free to choose your own background if you can't handle the exuberant joy shown below):

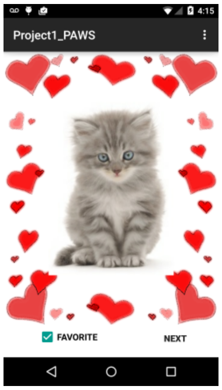


Figure 2

The users choice is saved. Every time the favorite is selected the background should change accordingly.

Project Structure Help

See the image at the end of this document for an idea of what your project structure should look like.

Where do the images Go?

In a more realistic application images are pulled from the web, we will get there with the next iteration of this project. For this version we will just put them in the res\drawable folder and access them via ID like so:

```
//i is just a number from 0 to 2, do not put a suffix on petimage, android will do it for you
String petImg = "pet" + Integer.toString(i);
Int ID = getResources().getIdentifier(petImg, "drawable", getPackageName())
```

Where do the icons Go?

There are 4 is_launcher.png icons. One for each of the 4 drawable folders corresponding to 4 different screen sizes res/drawable*

How can I make transparent Icons?

If you want your own icons follow the advice at the end of this doc.

What about strings?

Please pull them from string resource file . This is the best way to do it, and in the real world, the only way. The advantage is that all strings are located in one place, which greatly simplifies proofreading and language translation.

```
myString = getString(R.string.dont_walk);
```

What layouts do I use?

The layout will likely be the hardest part of this project. I used a combination of linear and relative layouts.

How do I change the background of an ImageView or a layout using Java?

```
//ID is defined in the highlighted section above
myView.setImageResource(ID);
```

Do I have to handle rotations?

No, but if you do I'll give you 5% extra credit. Couldn't hurt to bank that now in case you need it later you know.

How can I make transparent Icons?

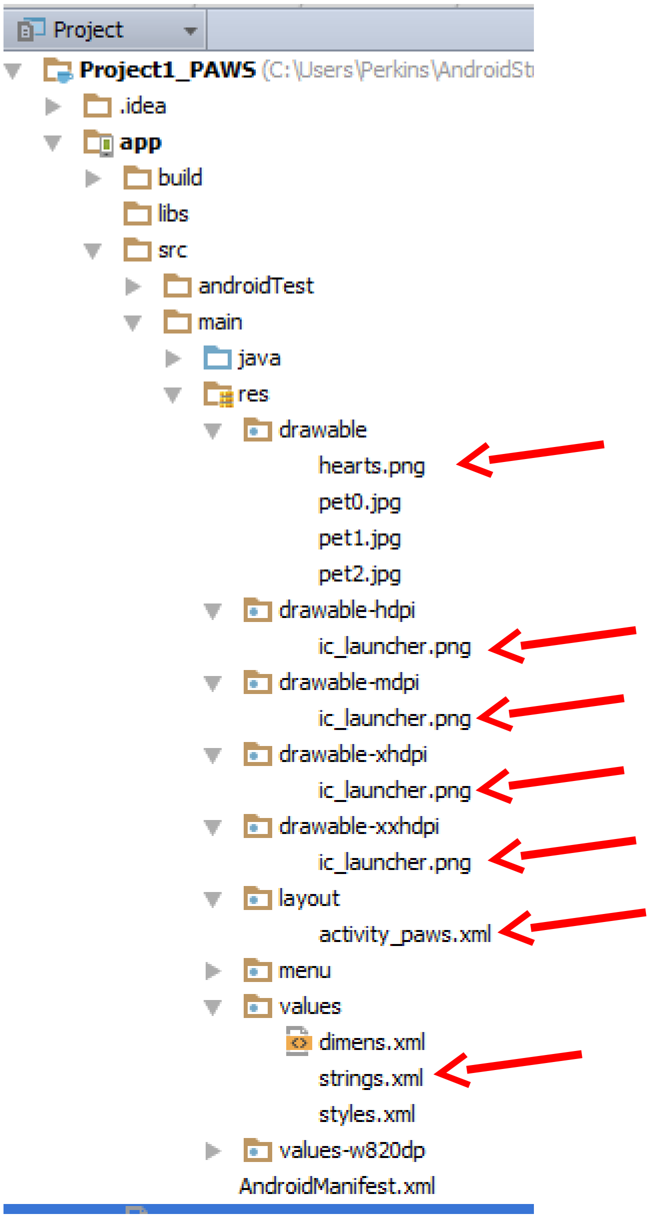
I use an image editing program like gimp but it's a bit user hostile.

Gimp -> Colors -> Color to Alpha   Then choose a particular color to be the transparent one.

Save it as a PNG file, be sure to select the 'Save color values from transparent pixels' option in the Save as PNG dialog box.

When you get a default icon ready to go, use the following website to scale it appropriately

http://romannurik.github.io/AndroidAssetStudio/index.html



```
Project
▼ Project1_PAWS (C:\Users\Perkins\AndroidSt
  ▶ .idea
  ▼ app
    ▶ build
      libs
    ▼ src
      ▶ androidTest
      ▼ main
        ▶ java
        ▼ res
          ▼ drawable
              hearts.png
              pet0.jpg
              pet1.jpg
              pet2.jpg
          ▼ drawable-hdpi
              ic_launcher.png
          ▼ drawable-mdpi
              ic_launcher.png
          ▼ drawable-xhdpi
              ic_launcher.png
          ▼ drawable-xxhdpi
              ic_launcher.png
          ▼ layout
              activity_paws.xml
          ▶ menu
          ▼ values
              dimens.xml
              strings.xml
              styles.xml
          ▶ values-w820dp
          AndroidManifest.xml
```