Lottie Handbook For Developers

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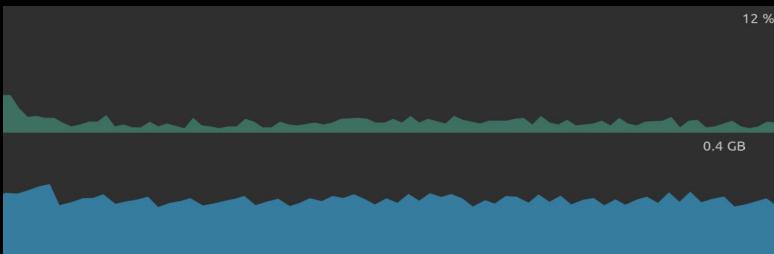
- **Performance Analysis (Android)**

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- **Put Assets Into Xcode (iOS)**

Android : Simple Performance Analysis
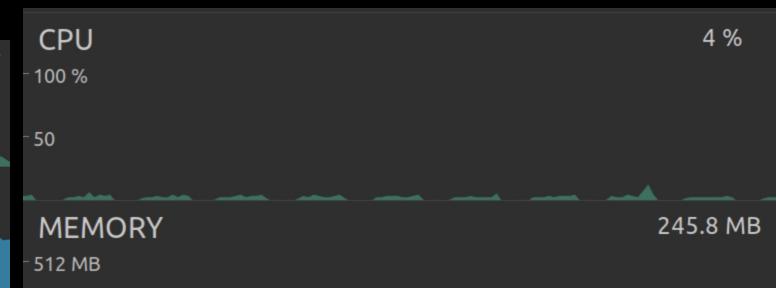
Lottie has better performance and resolution then GIF.

These 2 images shows the same animation in AE but exported as different format

We can see GIF uses much more CPU and RAM then Lottie.

GIF

Lottie

Android (lottie 3.4.4)
Step 1 - File Check

1. It can be a JSON file like `lottie_animation.json`

2. Or a ZIP file like `lottie_animation.zip`

We can validate the file by submitting it to
https://lottiefiles.com/

```
lottie_animation.zip
  +  images (optional dir)
      +  image_01.png
  +  lottie_filename (dir)
      +  lottie_filename.json
```

Android (lottie 3.4.4)
Step 2 - Importing

As assets :
- Put the file under /grindr-3.0-android/core/src/main/assets

And use it like

```
<com.airbnb.lottie.LottieAnimationView
    style="@style/Debug"
    android:layout_width="32dp"
    android:layout_height="32dp"
    app:lottie_autoPlay="true"
    app:lottie_fileName="storepage_xtra_explore_android.json"
    app:lottie_loop="true"/>
```

As resources :
- Put the file under /grindr-3.0-android/core/src/main/res/raw

And use it like

```
<com.airbnb.lottie.LottieAnimationView
    android:id="@+id/audio_call_loading_view"
    android:layout_width="wrap_content"
    android:layout_height="50dp"
    android:layout_marginTop="8dp"
    app:lottie_autoPlay="true"
    app:lottie_loop="true"
    app:lottie_rawRes="@raw/audio_call_loading_points" />
```

Android (lottie 3.4.4)
Step 2 - Importing (Programmatically)

As assets :
- Put the file under /grindr-3.0-android/core/src/main/assets

And use it like

```
LottieAnimationView(context).apply {
    setAnimation(itemType.lottieAsset)
    repeatCount = ValueAnimator.INFINITE
    playAnimation()
    setPadding(......)
    layoutParams = LayoutParams(MATCH_PARENT, logoHeight).apply {
        setMargins(......
    }
}
```

Android (lottie 3.4.4)
Exception Handling

```
java.lang.IllegalStateException: Unable to parse composition
        at com.airbnb.lottie.LottieAnimationView$2.onResult(LottieAnimationView.java:75)
        at com.airbnb.lottie.LottieAnimationView$2.onResult(LottieAnimationView.java:73)
        at com.airbnb.lottie.LottieTask.notifyFailureListeners(LottieTask.java:158)
        at com.airbnb.lottie.LottieTask.access$200(LottieTask.java:27)
         ...
     Caused by: java.lang.ArrayIndexOutOfBoundsException: length=4; index=4
        at com.airbnb.lottie.parser.LayerParser.parse(LayerParser.java:135)
        at com.airbnb.lottie.parser.LottieCompositionMoshiParser.parseLayers(LottieCompositionMoshiParser.java:121)
        at com.airbnb.lottie.parser.LottieCompositionMoshiParser.parse(LottieCompositionMoshiParser.java:87)
        at com.airbnb.lottie.LottieCompositionFactory.fromJsonReaderSyncInternal(LottieCompositionFactory.java:262)
        at com.airbnb.lottie.LottieCompositionFactory.fromJsonReaderSync(LottieCompositionFactory.java:255)
```

Reason : https://github.com/airbnb/lottie-android/issues/1633
AndrlidLottie does not support luma inverted matte for now.

Solution :
Can't resolve it with codes. Kindly ask designer to use a layer instead of matte.
(不支援遮罩，要覆蓋得用圖層）

Android (lottie 3.4.4)
Exception Handling
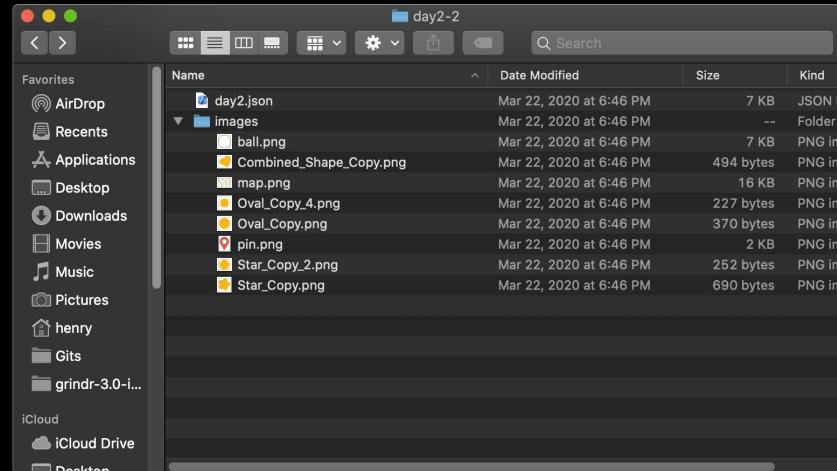
```
java.lang.IllegalStateException: Unable to parse composition
    at com.airbnb.lottie.LottieAnimationView$1.onResult(LottieAnimationView.java:76)
    at com.airbnb.lottie.LottieAnimationView$1.onResult(LottieAnimationView.java:69)
    at com.airbnb.lottie.LottieAnimationView$3.onResult(LottieAnimationView.java:93)
    at com.airbnb.lottie.LottieAnimationView$3.onResult(LottieAnimationView.java:86)
    at com.airbnb.lottie.LottieTask.notifyFailureListeners(LottieTask.java:158)
    at com.airbnb.lottie.LottieTask.access$200(LottieTask.java:27)
...
Caused by: java.lang.IllegalStateException: There is no image for data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAA…
```

Solution :

Try to submit the file to lottie online preview. If it's valid, use the `json` file directly instead of the `zip` file.

iOS Step 1 - Check the file structure

1. For every Lottie asset, you will have a json file and a images folder(optional).

2. If you don't see the images folder, skip to Step 3.
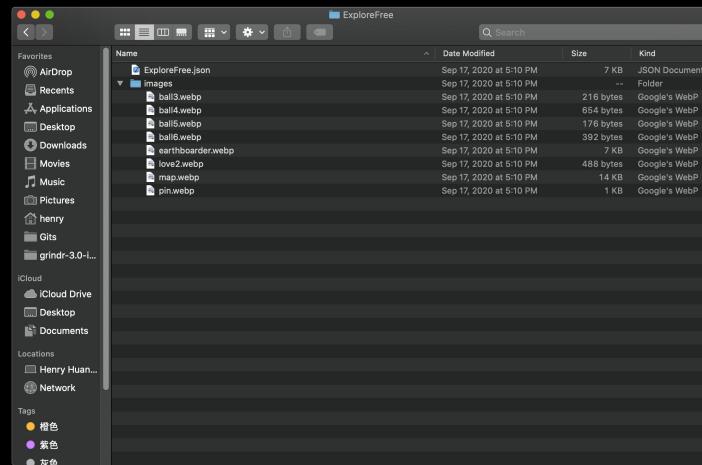
iOS Step 2 - Convert images to WebP Format

1. **Convert all the images in images folder into WebP with**

    https://webp-converter.com
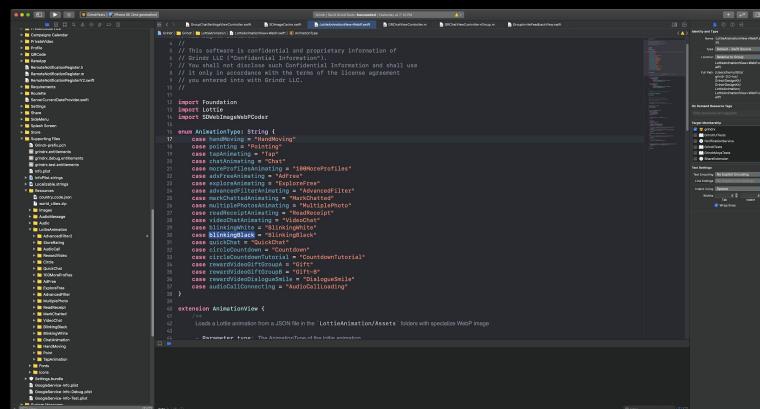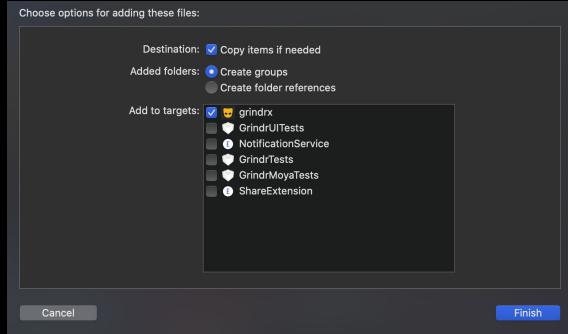
    (Choose quality to 100 in the options setting)

2. **Replace old image files under image folder with new**

    converted WebP images.

iOS Step 3 - Put assets into Xcode

1. **Put entire asset folder into Xcode under Supporting Files/Resources/LottieAnimation.**
   (Make sure to select add to targets to Grindr)

2. **In *LottieAnimationView+WeP.swift*, add new case in *AnimationType enum*, the string name should be same as json file name.**

3. **Use *AnimationView(type: .XXX)* to initiate your animation view.**

Well done! 🎉

Developer