Software Development for Mobile Devices

# Submission for Assignment A10.2C

# Introduction

There are three problems that exist in the current application:

1. Reading the file in the main thread

2. Doing the list view without view holder pattern

3. Creating bitmap in the main thread

# Performance Optimization

1. Reading the file in background thread and response to update when the loading is successful.

2. Apply Recycler View instead of List View to reduce the number of creating the row.

3. Drawing the bitmap in background thread and handle concurrency threads so that the bitmap that has been drawn does not need to redraw a gain.

# Usability Improvement

1. The process bar come up to replace the blank screen while loading the file.

2. With the support of recycler view and background thread, the view is no longer being lagged while scrolling the list.

# References

<https://stuff.mit.edu/afs/sipb/project/android/docs/training/displaying-bitmaps/process-bitmap.html>

<https://android-developers.googleblog.com/2010/07/multithreading-for-performance.html>

# Appendix