

# **Project SCRAPBook**

*An Android Picture Fighting App*

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# Table of Contents

<b>Project Plan</b>	<b>4</b>
<b>Executive Summary</b>	<b>5</b>
<b>Scope Statements</b>	<b>6</b>
Project Justification	6
Project Objective	6
Project Product/Deliverables	6
Assumptions/Limitations	6
<b>Feasibility Analysis</b>	<b>7</b>
Technical Feasibility	7
Managerial Feasibility	7
Economic Feasibility	7
Financial Feasibility	7
Cultural Feasibility	7
Social Feasibility	7
Safety Feasibility	7
Political Feasibility	8
Environmental Feasibility	8
Market Feasibility	8
<b>Cost Analysis</b>	<b>9</b>
Option #1: Unpublished	9
Option #2: Publish only to the Google Play Store	9
Option #3: Publish to both the Google Play Store and Apple's App Store	9
<b>Conclusions and Recommendations</b>	<b>9</b>
<b>Appendix I</b>	<b>10</b>
Project Plan Worksheet	10

## **Appendix II**

**13**

UI Wireframe Mock-up

13

# Project Plan

**Project Name:** Project SCRAPBook

**Department:** NSCC - IT Programming INFT 3000

**Project Manager:** David Russell - Signs off on all project management documentation

## Prepared By

Document Owner(s)	Project/Organization Role
Brady Getson	Team Member
Craysyn Trottier	Team Member
Kieran London	Team Member
Adam Hemeon	Team Member
Jayden Morehouse	Team Member

## Project Closure Report Version Control

Version	Date	Author	Change Description
V0.7	01/20/2021	Kieran	Started project template
V0.8	01/27/2021	Brady	Filled out Scope Statements section Filled out Feasibility Analysis section
V0.9	02/01/2021	Brady/Craysyn	Added the Project Plan Worksheet to Appendix Added Executive Summary and Cost Analysis
V1.0	02/03/2021	Everyone	Final review

<b>Overall Project Priority:</b> <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
<b>Comments:</b>  
<b>Approved By:</b> _____ <b>Project Manager :</b> _____ <b>Date:</b> ____/____/____

## **Executive Summary**

This document was written for, and will be delivered to, David Russell for the purpose of justifying our project's feasibility. It is also a necessary component for the completion of the INFT3000 class at NSCC. This document will cover what the project hopes to achieve and the viability of completing the project within the allotted time.

# Scope Statements

## Project Justification

- This project meets the objectives for the INFT3000 Capstone course, which is a requirement for graduation from the NSCC IT Programming Diploma.
- To further our IT education by learning how to manage live projects using GitHub, how to deploy a completed Android application to the Google Play store, and how to work in a team for software development.

## Project Objective

- Provide group members with a more in depth knowledge of Android development for use in industry.
- Leave team members with a better understanding of how to properly manage live projects using Git and GitHub workflow as version control.
- Have our project published on the Google Play store as a project work sample.
- Have an operational product by the end of the semester.

## Project Product/Deliverables

- Education and Training
  - How to manage a Git Branching Workflow & GitHub repository for source control.
  - Further our Android development skills in learning how to deploy an app to Google Play Store.
  - Make use of an Agile development process with regular SCRUM meetings and sprints.
- Product
  - Develop an Android XML User Interface (starting with mock-ups)
  - An Android app that allows you to take photos or select existing photos from the phone's library.
  - An algorithm to determine the RGB composition of the photos.
  - Have these photos used in a rock paper scissors match based on their RGB composition.
  - Develop a simple computer player for the user to play the game against.
  - Show the winner with an XML animation.
  - Enable play over a local network with another player (client / host model) (stretch goal).

## Assumptions/Limitations

- We assume we will need time to complete projects and assignments for other classes.
- We assume that not all team members will be available at all team meeting times.
- We assume we are going to be able to deploy our app to the Google Play store in the allotted time.
- We recognize the time constraint of only having until the semester ends.

## Feasibility Analysis

### Technical Feasibility

- The project can easily be completed using free software such as Android Studio and GIMP.
- Our project team will use emulated Android devices to test and develop the application.

### Managerial Feasibility

- Our Capstone instructor David Russell has approved our initial proposal for the project to go ahead.

### Economic Feasibility

- This project's cost is inconsequential when compared with the need to complete it.
- This project will be provided free and open source on a public GitHub repository.
- This project provides the team with a work sample to leverage in future job interviews.

### Financial Feasibility

- Initial research shows a minimal \$25 is the projected cost, so funding can easily be arranged without external fundraising.
- Labour will be free as it is a student project.

### Cultural Feasibility

- N/A

### Social Feasibility

- N/A

### Safety Feasibility

- Our GitHub repository requires some safeguards since the code is open source.
- Players should not be able to have their personal photos shared with strangers online.
- Personal safety for the team members is not a concern due to at-home working environments.

## Political Feasibility

- N/A

## Environmental Feasibility

- N/A

## Market Feasibility

- A few people could like this, probably only a novelty that will only get a few games before moving on but perfect for showing to someone in an interview.
- The appeal of the app doesn't necessarily lie in the rock-paper-scissors aspect but in reliving old photos and seeing your photos battle with others.
- If the demand for this project outgrows supply, the project exists in open-source and can be extended by another company or project team.



## Cost Analysis

### Option #1: Unpublished

- Only publishing our app's source code to GitHub for anyone to pull down and run on their Android device. No monetary cost, because the app would not be published to any kind of app store. Least exposure and ease of use, since users would need to build the app themselves with the code.

### Option #2: Publish only to the Google Play Store

- 25\$ for publishing the app to the Google Play app store. More exposure for the app than in Option #1, since it would be available to download as a working app straight from the store.

### Option #3: Publish to both the Google Play Store and Apple's App Store

- 25\$ upfront for the Google Play store and 100\$ per year to publish to Apple's app store. Financially this option is not feasible, since the project is self-funded and publishing to only the Google Play store serves our purposes fine.
- Would require further developer time to make the Android app ready and compatible with Apple devices.

## Conclusions and Recommendations

Our project team is recommending Option #2 for the best value of cost benefit and exposure for the app, as well as ease of use for end users.

If time constraints impede the project's completion, Option #1 would be the fallback.

# Appendix I

## Project Plan Worksheet

1. **What is the project?** The project is an open source rock-paper-scissors style Android game where a user will select photos from their gallery, and then the app will determine if the photo is 'red', 'green', or 'blue'. The computer will then select a photo from a premade library, then the two photos will 'duel'.
2. **Why should the project be done?** The project should be done as a requirement for this course.
3. **Was there any system previous to this one?** No.
4. **Are there any COTS (Commercial Off-The-Shelf) systems available that are similar to the newly proposed system?** No.
5. **What technologies will be incorporated into the project and where?** Android Studio will be used to build the app, github will be used for version control, gimp will be used for UI designing, and discord will be used for team communication and planning.
6. **Is there any research that must be done before the development can begin?** Yes; research for licensing for our open source project, how to use version control while working in teams (branches and merging), and the steps involved in how to get an app published on the Google Play store.
7. **Is there any testing that must be done before the development can begin?** Each team member will have to make sure they can properly clone and make pulls and commits from the repository.
8. **Who will be involved and what will they do?** The team is composed of Brady Getson, Craysyn Trottier, Jayden Moorehouse, Adam Hemeon, and Kieran London. Craysyn is going to be working as the scrum master and Adam will be the one responsible for managing the repository and merge requests, as well as every member being responsible for coding and working on the project.
9. **What resources are needed?** \$25 for a google play developer account, and each team member must have their own workspaces and hardware needed for development.
10. **What assumptions must be made?** We have to assume that not all members of our team will be available at all meeting times, that we will have other work to complete for other classes which will take time, and that we will not encounter issues deploying our app to the Google Play store.
11. **Will any training be required for the IT staff implementing the solution(s) or management?** At least one member of the team will need to learn from scratch how to manage a GitHub repository including branching and merging.
12. **What are the economic, social, environmental, and political impacts of the need?** NA.

**13. Are there any limitations that must be accounted for? (People working, overtime, space, etc)** Each member is enrolled in 5 other courses, so time commitments may vary from week to week.

**14. Do you foresee any problems that might occur during the initial phases of the project?** No.

**15. What are the outcomes of the project?** A fully functioning app to be published on the Google Play store.

**16. What are the phases/milestones of the project? (list and describe them)**

- Initial planning: This is where members layout plans for:
  - i.* What the project is.
  - ii.* What we want the project to be.
  - iii.* How to achieve these plans.
  - iv.* Members roles.
- Development phase: This is where the project will be built. During this phase, all UI design and coding will take place, as well as testing throughout to maintain stability. The main focus of this phase is getting a functional prototype working.
- Refactor phase: Once a functioning prototype is built, refactoring will be done to give the project more polish and bug fixes to more resemble a complete application.
- Deployment phase: Once a finished product is ready, take the steps to publish it on the Google Play Store.

**17. Estimate how long the phases will take.**

- Initial planning: 1 month from start of semester.
- Development phase: 2.5 months.
- Refactor phase: 3 weeks.
- Deployment phase: 1 week.

**18. How will you know when the project is completed?** We will know the project is done when we have a working application that is published on the Google Play Store or the semester ends.

**19. Will the need still exist by the time the project is completed?** There will still be a need for the project since we will finish it before the end of our semester.

- 20. What are the alternate means of satisfying the need?** Coming up with a different project and completing it with the team would also allow us to pass the course.
- 21. Is any training required for users as a result of this project?** The app will be very straightforward to use and will feature a user-friendly interface.
- 22. Are there any time sensitivity, blackout periods or down-time issues that may affect the testing/installation of any proposed solutions?** School work is expected to lead to less development at various points throughout the semester.
- 23. What testing needs to be performed and when would this happen?** Testing will take place along the development and refactor phases to ensure the application is stable.

## Appendix II

### UI Wireframe Mock-up

