

COMP 290 Final Project

Final Project Overview

Congratulations, we are getting close to the end of the semester! In lieu of a final exam, the final deliverable for COMP 290 will be a final project. For this project, you will develop an action plan for creating an **extracurricular software engineering side project** of your choice! By the end of the project, you will learn about how to develop software project ideas, research new technologies, read documentation, and develop a timeline to make meaningful progress on such ideas. You will also have developed a full plan to work on a real-world project that showcases the software engineering skills you will develop during your time as a Computer Science major here at UNC, which you can put on your GitHub profile, resume and personal portfolio. While working on this final project, you will also make tangible progress to *learning the programming language and / or tools of your choice* that will help you progress towards your goals.

The grade for this project will consist of numerous sections with different weights, as defined below. Each section will have incremental deadlines, which will be specified on the course website. The final project will make up 30% of your final course grade. There will also be a final presentation showcasing your ideas, which will take place **IN-PERSON** in concordance with the UNC Final Exam schedule on **Friday, December 6th at 8:00AM in FB009**.

Project Proposal (30%)

The first deliverable for the final project is the **project proposal**. This proposal will help you get started conceptualizing the project you wish to work on. The proposal should include:

1. **Project Outline (20%)**: In the project outline, you will specify details about the type of application that you will develop. Your project outline should answer the following questions:

- *What type of project will you work on? Will it be a web app, mobile app, or something else? What will your project do?*
(Answer with a minimum of 200 words)

I want to work on a project in which I code an app. I would like it to be a type of game or something that can help people complete some sort of task. I would prefer this app to be an iOS app, or iOS and Android. However, I primarily want this app to be focused for iPhone, and Mac, because that is what I use and I would prefer to be able to use this app. As of right now, I've decided to work on an app that is a game, and I would like this game to be based on or similar to beam clashes and struggles from Dragon Ball Z. This project or app will take tapping input from the screen, and the more frequent the taps are, the more blasts will

occur and/or the stronger the beam will be once it hits the target. An alternative to this would be timing taps, where there is a bar on the screen and you have to time the input/tap at a certain time to get a higher power level. There could be a possibility of online play, but I currently want this to be an app that does not require internet after downloading so that I can use it when traveling or in a weird location with bad signal.

- *Why did you choose to work on this project? What motivates you to choose this topic? (Answer with a minimum of 100 words)*

I chose to work on this project because one of my main reasons for taking computer science as a major is to be able to make apps and turn whatever creative ideas I have into reality, but in a digital sense. My motivation for choosing this topic is that I can potentially use the end product after I turn in the project. If I like the app, maybe I could publish it to the app store. It is very simple, but you never know. Also, learning how to actually make an app seems very hard (especially since I don't have that much coding experience so I'd be forced to learn how to code for apps, which probably requires some hard, difficult, high level programming language).

- *Who is the target audience of this app? Be specific about the demographic (age / occupation), the type of devices they might use (computer, Apple phone, smartwatch, etc). (Answer with a minimum of 200 words)*

The target audience would be people who download games on there phone in order to kill time. I think that the best demographics for this app would be people who are 12-22 because this is the age of people who get bored with class and school and will use apps to kill time as they wait for class to end. It will also be a good fidget tool when nervous with all the focusing and attention needed for timing blast and the quick tapping movements needed. The intended device for this is an iphone (and potentially androids, but just iphone for now). I don't plan on the people using this app to necessarily have an occupation besides being in school. Another demographic for this app are the people who like animé, specifically Dragon Ball Z. Even though this isn't some huge Dragon Ball Z game, I would like it to feature some of their characters to use for beam blasts. Popular characters such as Goku, Vegeta, and even a Broly with unique green blasts can be used. It is also popular, to appeal to the public that I can have characters battle other characters and have the game unbalanced to where stronger characters either do more damage and have more life, or they just appear in higher difficulty games.

- *What problem does your project hope to tackle? How will your final product help to solve this problem? How will the target audience you specified above benefit from your app?*

(Answer with a minimum of 200 words)

The problem of boredom is the main focus that my project hopes to tackle. This app can be used to take a break from large homework assignments during chunking, or it can be used as a fidget app during long lectures and teacher speeches. The audience that I specified, which are people ages 12-22 can benefit from this app by having something that is quick, fun, and convenient to open and use. Since I plan on the app being usable without the internet after downloading, users can use this app whenever, wherever and just relax with familiar and fun characters. The other potential target audience of people who are fans of the animé Dragon Ball Z will also enjoy and benefit from this app because they will have another cool and fun app to use that does not depend on gotcha tactics or require money, since this is purely for the people and for entertainment. With the potential characters that will added to the game and the easy mechanics, people can use it to semi recreate clashes from the animé, make funny what ifs and other things to help them and also the age demographic pass the time and have all the fun that they want to have while they goof off.

- *Identify the programming language(s) you will need to learn in order to work on this project. Provide a link to the official documentation for this programming language. Also, please provide 3 free, easy-to-access resources that you can use to learn this programming language.*

I will likely need to learn how to code in swift to make an app

<https://developer.apple.com/documentation/swift>

<https://developer.apple.com/swift-playgrounds/>

<https://www.hackingwithswift.com/>

<https://www.codecademy.com/learn/learn-swift>

<https://www.udemy.com/topic/swift/>

- *Identify the tools, frameworks, etc. you might need to learn in order to work on this project. Please provide a link to each.*

From what I've seen, I'll need an ipad and a computer to help learn how to code in swift

2. **Wireframe Sketch (10% + 5% potential bonus):** Include a sketch of how you might imagine your final project to look like. This can either be a pencil sketch or a wireframe created with a more sophisticated software such as [Figma](#). Using Figma is not required, but we highly recommend it if you have time! **Students who submit a nice Figma sketch will receive extra credit on this portion of the assignment!** If you are using Figma, there are many official design resources that can help you begin to design your project, especially if you are planning on developing a mobile application. Here are a few resources:

- **Apple Design Guidelines Official Figma Template:** Link [here](https://www.figma.com/design/YTr7MtTxH71s5F5S4DGZtd/iOS-18-and-iPadOS-18-(Community)?node-id=221-56229&m=dev&t=WEAYQrDQsRX961GW-1). Use this template if you plan to design an iOS application! *Explore all of Apple's design resources* [here](#).

[https://www.figma.com/design/YTr7MtTxH71s5F5S4DGZtd/iOS-18-and-iPadOS-18-\(Community\)?node-id=221-56229&m=dev&t=WEAYQrDQsRX961GW-1](https://www.figma.com/design/YTr7MtTxH71s5F5S4DGZtd/iOS-18-and-iPadOS-18-(Community)?node-id=221-56229&m=dev&t=WEAYQrDQsRX961GW-1)

