



## **Gold Belt Ninja Guide**

### **Activity 01: Overview and Planning Phase**



# OVERVIEW

## INTRODUCTION

Congratulations on reaching Gold Belt in the Godot program! You have worked so hard to reach this point and you should feel incredibly proud of all that you've accomplished so far!


In Gold Belt, you will have the opportunity to create your very own project in Godot, completely from scratch. Using all the skills and knowledge you've gained from the previous belts, you will create an exciting, creative, and collaborative project from the ground up; a game that reflects YOU!

Creating your own open-ended project can feel a little intimidating without having specific instructions to follow. The design is now up to you. The Gold Belt Ninja guide will walk you through the process to build your custom project. The planning activities will help to organize your ideas and break them down into smaller tasks that can be tackled one at a time. Through each phase, your project will slowly come to life until it is ready to be shared with the community!

**What will you create for your Gold Belt project?**

# PHASE DESCRIPTIONS

The Gold Belt process should take between **6-9 months to complete**, following the **6 phases** listed below.

Gold Belt Project Phases	
 <b>PLANNING</b>	<p><b>Planning Phase:</b> Brainstorm ideas to include in the project!</p> <ul style="list-style-type: none"><li>• Brainstorm <b>ideas</b> for the project.</li><li>• Describe the game's <b>theme</b> and <b>genre</b>.</li><li>• Detail how the game is <b>played, won, and lost</b>.</li><li>• Record <b>Dev Diary #1</b></li></ul>
 <b>PROTOTYPING</b>	<p><b>Prototyping:</b> Create a simplified, first draft of the project!</p> <ul style="list-style-type: none"><li>• Create a new Godot project.</li><li>• Add basic shapes to create a <b>prototype</b> of the project.</li><li>• Plan out the project's game mechanics using <b>pseudocode</b>.</li><li>• Plan and program the <b>game mechanics</b> in the project.</li><li>• Have a fellow Ninja and a Code Sensei <b>playtest</b> your prototype!</li><li>• Revise the project based on playtest <b>feedback</b> received.</li><li>• Record <b>Dev Diary #2</b></li></ul>



## ALPHA

**Alpha:** Begin to program and build the bulk of the project!

- Add onto your prototype or create a new Godot project.
- Build out the bulk of the project: theme, levels, assets, and game mechanics.
- Play project from beginning to end **without bugs**.
- Have a fellow Ninja and a Code Sensei **playtest** your project!
- Revise your project based on playtest **feedback** received.
- Record **Dev Diary #3**



## BETA

**Beta:** Playtest the project and make final refinements!

- Make final refinements to your project, such as **sound effects, navigation screens, and game mechanic tweaks**.
- Play the project from beginning to end to ensure it functions as expected **without** any bugs.
- Have at least 2 other Ninjas and Code Senseis **playtest** your project!
- Revise your project based on playtest feedback received.
- Record **Dev Diary #4**



## RELEASE CANDIDATE

**Release Candidate:** Submit the project to get feedback and final approval from the Code Ninjas Education Team!

- Create a web-based version of your project to be reviewed by the Code Ninjas Education Team.
- Work with a Code Sensei to collect the required information and submit your project through the **Release Candidate Form**.
- Review feedback from the Code Ninjas Education Team's Gold Belt Committee and **make revisions** to your project.
- Have a Ninja and a Code Sensei **playtest** your project to confirm that revisions have been made.
- **Resubmit** your project to the Code Ninjas Education Team for additional feedback and/or final approval.
- Record **Dev Diary #5**



## GOING GOLD

**Going Gold:** Share and present your final project!

- Work with a Code Sensei to provide all of the information needed for publishing your project on the [Code Ninjas Gold Belt Ninjas site](#).

Celebrate all your hard work and achievements throughout the Gold Belt process!

# FINAL PROJECT EXPECTATIONS

During the Release Candidate phase, the Education Team's Gold Belt committee will review your Gold Belt project and assess it based on these 4 categories:

## 1) Overall Gameplay

- **Difficulty:** How difficult is the project to complete? Is it too hard or too easy? Are the controls intuitive and well thought out?
- **Variety:** Is the project re-playable? Is the experience different on new playthroughs? Do levels vary in challenge and scale?
- **Level Design:** Are the goals for each level clear and communicated effectively with the player? Are there large sections of the level that are empty or too busy? Do levels connect, creating a cohesive experience?

## 2) User Interface & User Experience (UI/UX)

- **Menu UI:** Does the project have title and credits screens? Do the credits properly give attribution to the original creators of the game assets? Are there optional menus such as pause screen, level select, or settings?
- **In-Game UI:** Does the project display the needed information for the player during gameplay? Is the information clear and relevant to the player's tasks?
- **Style and Readability:** Are all menus readable? Have the menus been customized by using a unique font, background, or color?

## 3) Art & Animation

- **Sprites & Models:** Do the sprites and models in the game look professional and well-designed? Do they form a cohesive project theme?
- **Animations:** Are there animations present for important actions? Do animations flow together nicely? Are animations well designed and thematically appropriate?
- **Music and Sound:** Is there background music for all scenes? Are there sound effects for important actions like jumping, shooting, taking damage, etc.? Does the music loop after it reaches the end?

#### 4) Code

- **Organization:** Does the project code contain any unused or outdated methods? Are there scripts that aren't needed anymore? Are scripts and variables named appropriately to describe their contents?
- **Conditionals:** Does the project code use conditions appropriately? Are there sections with deeply nested code?
- **Methods:** Is code broken down into readable methods? Are there sections of code that are repeated multiple times without using a method? Are methods appropriately accessible?
- **Object Oriented Principles:** Are responsibilities divided well between scripts? Are there any advanced concepts such as abstraction & inheritance being used?

## REAL WORLD EXAMPLES

Professional video games go through the game development life cycle as well! Look at some of the examples of games below in their development phases.

Planning Phase: [GTA Game Design Document](#)

Prototyping Phase: [Overwatch \(2013\)](#)

Alpha Phase: [Overwatch \(2013-2014\)](#)

Beta Phase: [Overwatch \(2014-2015\)](#)

Check out projects that Gold Belt Ninjas have already created on the Code Ninjas Gold Belt site (<https://blog.codeninjas.com/black-belt-ninjas/>).



## PLANNING PHASE

Welcome to the Planning Phase! This is your chance to dream big and explore all the possibilities for your custom game. The goal right now is to generate many creative options so that you can narrow them down and shape a game that's unique to you.

## MAIN IDEA

What **kind** of game will you create for your Gold Belt project? Consider the type, setting, and style of game. For example, will your game be a science fiction spaceship racing game, or maybe a turn based western game?

In the **Ninja Planning Documents**, brainstorm **four** different general ideas for your Gold Belt project. Try on different genres, setting, and game styles to think of potential paths for your project to take.



### Pro Tip:

It can be tempting to throw all your great ideas into one project; however, this may lead to an overly complex game, or one that's confusing for players. Splitting ideas up will make this project more achievable.



### Ninja Planning Documents

Complete the **Planning - Main Idea** portion of your Gold Belt Ninja Planning Document to think through initial ideas for your project.



### Pause for **Sensei Stop #1!**

Once you have four ideas, talk with a Code Sensei about what you like about each. Identify **ONE** idea that you will move forward with before continuing.

**Reminder:** This project will be time-consuming, so make sure you'll be working on something you enjoy!

# GENRE, THEME, AND SETTING

Now that you've had an opportunity to think about the big picture concept for your project, start to narrow down the details.

What type of **genre** will your Gold Belt project be? **Genre** refers to the main mechanic, or the way the game is played.

- **Racing:** played by driving fast
- **Strategy:** played by making critical decisions
- **Platformer:** played by navigating the environment and avoiding hazards
- **Adventure:** played by exploring and meeting characters

What **theme** or **setting** will you use in your Gold Belt project? Review the list below of some popular game themes and settings:

Example Themes	Example Settings
<ul style="list-style-type: none"><li>• Fantasy Adventure</li><li>• Futuristic world</li><li>• Mystery &amp; Puzzle Solving</li><li>• Superhero</li><li>• Survival &amp; Crafting</li><li>• Space Adventure</li></ul>	<ul style="list-style-type: none"><li>• Futuristic city</li><li>• Underwater</li><li>• Outer space</li><li>• Food-themed world</li><li>• Magic school</li><li>• Medieval castle</li></ul>



## Ninja Planning Documents

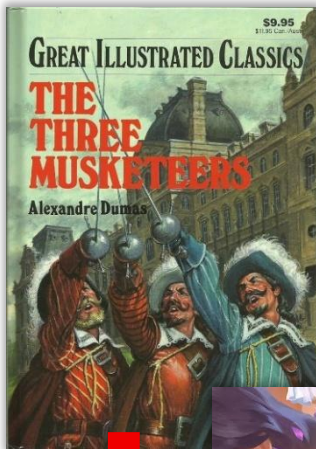
Complete the **Planning - Genre, Theme, and Setting** portion of your Gold Belt Ninja Planning Document to define your project's details.

# PROJECT INSPIRATION

When you design something new, you're likely to be influenced by other forms of art that you already enjoy. Consider the following:

- What other games do you like to play? What features do you like?
- What movies or TV shows do you want your project to feel like?
- What real life event might your project be based on?

Here are a few examples of games that drew inspiration from other things that came before them:



Left - The Three Musketeers (Alexandre Dumas)

Left - Page from Gotham Knights #1 (DC Comics)

Right - En Garde! (Fireplace Games)

Right - Screenshot from LEGO Batman: The Video Game (Traveller's Tales)



## Ninja Planning Documents

Complete the **Planning - Inspiration** portion of your Gold Belt Ninja Planning Document to describe what other pieces of media you're using for inspiration.

# GAMEPLAY

It's important to have a general sense of what your project will look and feel like. However, the part that truly makes your game fun and keeps players coming back is its **mechanics**. These are the interactions that shape how players experience your game and how they succeed or fail.

Game mechanics are built from several key elements:

- The **space(s)** where the game takes place
- **Time**, such as countdowns, time limits, or even time-freezing abilities
- **Objects** the player can use, collect, or interact with
- **Actions** the player can perform
- **Rules** that determine what the player can and can't do
- **Skills** the players will use or develop as they try to win

Once you decide on your mechanics, it becomes easier to define your game's objectives—how the player wins. Do they need to solve a tricky puzzle? Defeat enemies without taking damage? Reach a destination before time runs out?



## Ninja Planning Documents

Complete the **Planning - Gameplay** portion of your Gold Belt Ninja Planning Document to detail the main mechanics of your project.



## Pause for **Sensei Stop #2!**

**Show** your Code Sensei your completed Planning Document sections.

**Discuss** with a Code Sensei your game idea. Identify the theme, inspiration, and key gameplay elements.

**Afterwards**, record Dev Diary #1 and complete the Planning Phase Checklist.