

# Week 11: Build from a Blueprint: Game Design Document

## Extra Credit: Unity Game Engine

This week a new section appear in our module materials. Each module through the end of the term, I will be offering an entirely optional extra credit track of instruction in the Unity game engine, a 3D game engine used widely in commercial game development. All of the materials and optional assignments for this track are there for you if you want them. *No obligations!*

## What to Create?

This week we will begin one of what will become two parallel efforts to advance ourselves towards the development of a Phaser.js-based game for the final project in the class.

Starting next module, we will tackle some DevOps, or development operations, by setting up an automated build system in a new Cloud9 workspace that will support our well-organized coding efforts.

This week we turn to thinking about the concept and planning of the game we will make for the final. You have many choices to consider within the realm of 2D game engines like Phaser. You can also utilize one of the example games from Chapter 7 as a starting point and inspiration and extend or modify the code and assets to submit as your final project. Decisions... decisions!

No code is required this week as we engage in some practice writing our own Game Design Document for the final game project. This project can be based on one of the example games from the textbook, with your own customizations and additions. So let's talk GDDs.

## Game Design Documents

A Game Design Document – people in the industry usually call it a GDD for short — describes the overall vision for a game. People have different opinions on what should be included in a game design document, what order different topics should be presented, and what makes a great GDD. The template I've selected for our use in this first draft of a GDD you'll complete this term addresses the key topics that when combined together give a full picture of a game idea.

In the professional game industry, a GDD is used to guide the team - all of the people who work together to make a game – the artists, the programmers, the level designers, the sound designers, etc. – so that they all can understand and work towards the game designer's unique vision for the game. In addition to describing the creative vision for the game, professional game design documents often include material about how the game will be made including things like technology, budget, and marketing.

## Project Description: Overall Vision for the Game

This section should provide a short summary or description of the game. Imagine you are pitching the game to a friend while riding on an elevator.

1. How would you describe the game in one minute or less?
2. Why would someone want to play your game?
3. What will make it fun and engaging?

## Characters, Story and Progression

Who are the characters in your game? Is there a hero? A villain or challenger? The game's characters may have a backstory that sets the scene for the gameplay. There may be a quest, adversaries, or collaborators. Storyboards are often developed after or in conjunction with a GDD based on the characters and storyline.

## Theme: Genre

This section should describe the theme and related genre(s) of the game. Popular genres include action, adventure, sports, strategy, puzzle, racing, platformer, and role-playing. Is the game a mix of genres? Or have you created an entirely new genre?

## Gameplay

This section should describe in detail what playing the game is like. Most game design documents will do this by talking about some or all of the following things:

**Game Mechanics:** What is the player doing in the game? This is often best described through active verbs like running, jumping, racing, counting, puzzle solving, or exploring. Is the game single player or multiplayer? Cooperative or competitive?

**Goals:** What is the player trying to accomplish in the game (i.e. what is the 'win state')? What does he or she have to do to achieve that goal? What barriers or obstacles exist that make achieving that goal difficult? How can the player fail at achieving the goal, also known as "loss states"? What kind of feedback does the player get on progress towards the goal? How is the player rewarded when a goal is achieved?

**Components:** What kinds of things are there in the game? For example, enemies, objects in the environment, power-ups, and points, amongst others. What do they look like? What do they do? How can the player interact with them?

**Controls:** How does the player control what happens in the game? What does pushing a certain button on the controller do? Can the player move a block by touching the screen and dragging it?

**User Experience:** When the player starts to play the game, what steps do they follow? What screens will they see? How are levels in the game structured? How does the player move from one part of the game to the next?

## Aesthetics: Art Style

This section should describe the look and feel of the game. Where does the game take place: In the real world? A fantasy world? Space? Underground? In the past? In the future? Is the game a 2D world? A 3D World? What does the art look and feel like: Is it gritty and realistic, beautiful and fantastical or something else? Many GDDs include drawings or graphics to illustrate the visual concept.

## Technical Description: Platform

Is the game designed to be played on a game console? A mobile device? The web? A good game design targets a specific platform and uses the capabilities of that platform to its advantage. Doing a 3D first person action game in a web browser is hard, and you can't count on your players having access to a joystick if they're going to be playing on a smartphone.

## Demographics: Target Audience

While the assignment allows you to omit section 8 which includes the demographics of your players, you will need to envision who you expect to play this game. This often gets expressed in the Gameplay and Description. Game designers always design their games with a specific audience in mind, and this section should describe that audience. Are you designing your game for young kids, older kids, or adults? Boys, girls, or both? Is the game designed for hard-core players who like deep, highly challenging games or casual players who like to play a little bit each day?

So what's it going to be? Share your choices and thinking process in discussion this week and we can all help each other get to that perfect idea. And remember: we only have eight weeks left to complete the final game in our engine, so scope things carefully and consider your final project a prototype of what could later after the semester become more fully iterated and polished. That said, go for it!