

# Game Design Document

Pug Grand Prix  
Pug Race

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Copyright Information

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The Game Design Document (GDD) is the blueprint from which a computer or video game is to be built. As such, every single detail necessary to build the game must be addressed in the document (or support documents). If it's not in the document, then it probably won't be in the game.

Below you will find an outline for a generic Game Design Document. The problem is that no generic GDD will be able to address all the various genres for which a game may be created. For example, consider the games PacMan, SimCity and Doom. All three games required detailed design documents, but if you think about it, those documents would be entirely different! As such, when using the outline below you will find sections that will be totally meaningless to your game. But also, there will be sections that your GDD requires to describe the game. Just because it's not in my outline, it doesn't mean that it doesn't belong.

The GDD is a reference document. Members of the development team will constantly be using the document to find specific information for their specific needs. Consider the size such a document may grow to in order to document every piece of the game. We don't want the GDD to cause information overload and then become a prop under somebody's wobbly desk. As such it is important that you organize and format the document to make it easy to use. Also note that some of these sections might not appear in the GDD itself but instead would appear in supplemental documents such as an Art Bible or Test Plan. This helps make the overall document more manageable and readable.

One last comment, a game design document is meant to be a living document. Just as when the artist changes the design of his painting every time he takes his brush to the canvas, a computer or video game evolves as code and art are created. The GDD then is the communication tool from which all the members of the team can follow that evolution.

**Document Revision history:**

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## 1. Section I - Game Overview

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### 1.1. Game Concept

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A fun top-down racing game featuring pugs as competitors. Players will be playing in 2p mode, and compete in time-based races across the Park map. Players must avoid obstacles, collect power-ups, and use limited abilities to gain the fastest time and win the race.

### 1.2. Design History

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This document will evolve with the game's development, tracking major changes and updates.

### 1.3. Feature Set

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- Multiplayer 2 players competing in turns.
- Park track, with themed environment.
- Power-ups and Hazards: Items like bones (speed boost) and obstacles like destructible objects (barrels).
- Abilities: Fart (accelerate), Bark (destroy obstacles, limited 2 uses).
- Randomized Items: Items and obstacles dynamically spawn on the tracks.

### 1.4. Genre

---

Top-down racing game with casual simulation elements.

### 1.5. Target Audience

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Ages 8+; pet lovers, casual gamers, and racing enthusiasts.

### 1.6. Game Flow Summary

---

Players start by entering in an instruction screen, showing all the controllers and explaining the game, after that they press SPACE bar and race their pug. The objective is to finish the track as quickly as possible, avoiding hazards and collecting power-ups. Players take turns, and their times are compared at the end.

### 1.7. Look and Feel

---

The game features pixel-art style visuals and playful animations, such as the pug farting to accelerate or barking to destroy obstacles.

### 1.8. Project Scope

---

An unique track based on the Park themed, with Ferris Wheel, fountains and green grass.

#### 1.8.1. Number of locations

---

1

#### 1.8.2. Number of levels

---

1

#### 1.8.3. Number of NPC's

---

Will not have NPCs on the game

#### 1.8.4. Number of obstacles

---

1 type of obstacle (barrels)

#### 1.8.5. Etc.

---

Randomized item generation to ensure replayability.

## 2. Section II - Gameplay and Mechanics

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### 2.1. Gameplay

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#### 2.1.1. Game Progression

---

Players run with their pug on the Park track, then race to achieve the best time. Progression is based on improving times and mastering the mechanics.

#### 2.1.2. Mission/challenge Structure

---

Players must complete the race as quickly as possible while avoiding hazards and using power-ups effectively, the time will be decreasing every time, and reaching checkpoints will make the time goes higher.



-

### 2.1.3. Puzzle Structure

---

Replayability to make perfect time

### 2.1.4. Objectives – What are the objectives of the game?

---

- Complete the race in the shortest time.
- Avoid obstacles to maintain speed.
- Use power-ups and abilities strategically to gain an advantage.

Win races and become the top-ranked pug trainer.

### 2.1.5. Play Flow – How does the game flow for the game player

---

Players control their pug using keyboard inputs to move, bark, and accelerate. Each race lasts a fixed distance, and the player's time is recorded at the finish line. Randomly placed power-ups and hazards keep gameplay dynamic, and reaching checkpoints makes you earn time, as the time is decreasing, if it reaches 0 is game over.

## 2.2. Mechanics

---

What are the rules to the game, both implicit and explicit. This is the model of the universe that the game works under. Think of it as a simulation of a world, how do all the pieces interact? This actually can be a very large section.

### 2.2.1. Physics

---

- Explosions on barrels
- Knockback effect when hitting obstacles.

### 2.2.2. Movement

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#### 2.2.2.1. General Movement

---

Pugs move using AWSD or arrow keys.

Speed varies based on terrain and collected power-ups.

#### 2.2.2.2. Other Movement

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- Limited-use bark ability to destroy obstacles.
- Fart after collecting bones boost for short speed bursts.

### 2.2.3. Objects

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#### 2.2.3.1. *Picking Up Objects*

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Bones: Increases speed temporarily.

#### 2.2.3.2. *Moving/Avoiding Objects*

---

Barrels: Blocks the pug when hit or passed over.

### 2.2.4. Actions

---

#### 2.2.4.1. *Switches and Buttons*

#### 2.2.4.2. *Picking Up, Carrying and Dropping*

---

- **Fart:** Speed boost, requires grabbing a bone to accelerate.
- **Bark:** Destroys obstacles; limited to two uses per race.

Barking to break obstacles, dodging obstacles, and interacting with power-ups. You can pass through paws draw on the track to get checkpoints time.

#### 2.2.4.3. *Talking*

---

There will be no talking on the game

#### 2.2.4.4. *Reading*

---

There will be no reading on the game

### 2.2.5. Combat

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-

### 2.2.6. Economy

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-

## 2.3. Screen Flow

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### 2.3.1. Screen Flow Chart

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The screen will be the whole background with the map on level 1 (Park) and will start a 3 countdown to start the race and the timer will start, move the pug as fast as you can to go throughout the whole map at the shortest time possible.

### 2.3.2. Screen Descriptions

---

2p will be playing in turns competing for the best time track.

#### 2.3.2.1. Main Menu Screen

---

Will not have a menu screen, as the game will start in an instructions splash screen and jumps after that to the game

#### 2.3.2.2. Options Screen

#### 2.3.2.3. Etc.

---

## 2.4. Game Options

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You can move your pug at up, down, left and right to avoid obstacles, go faster after getting items on the floor.

## 2.5. Replaying and Saving

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The saving will be restricted to the time that the race will be completed

## 2.6. Cheats and Easter Eggs

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-

## 3. Section III – Story, Setting and Character

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### 3.1. Story and Narrative

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In the town of Puggington, the annual "Pug Grand Prix" has become legendary  
Train your pug to navigate obstacles and race for the fastest time!  
Compete on Puggington Park for the best time!

#### 3.1.1. Back story

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The game is related to a training pug running on a track as a race challenge against time.

#### 3.1.2. Plot Elements

---

- Players enter races in a lighthearted competition.
- Overcoming obstacles and using creative tactics defines the race's excitement.

### 3.1.3. Game Progression

### 3.1.4. License Considerations

### 3.1.5. Cut Scenes

---

#### 3.1.5.1. Cut scene #1

---

No cut scenes on game

##### 3.1.5.1.1. Actors

##### 3.1.5.1.2. Description

##### 3.1.5.1.3. Storyboard

##### 3.1.5.1.4. Script

---

#### 3.1.5.2. Cut scene #2

---

etc.

## 3.2. Game World

---

### 3.2.1. General look and feel of world

---

1 game world/map (Park)

Bright, cheerful environments with dynamic elements (e.g., moving beach balls and shifting beach balls).

### 3.2.2. Area #1 - Park

---

A park environment with a track to follow with the different design specifications.  
A lush, green park track with mud patches and barrels as obstacles.

## 3.3. Characters

---

### 3.3.1. Character #1

---

Main character will be a pug that can runs and do some things like bark, accelerate, slows down, etc.

#### 3.3.1.1. Back story

#### 3.3.1.2. Personality

#### 3.3.1.3. Look

---

##### 3.3.1.3.1. Physical characteristics

#### *3.3.1.3.2. Animations*

---

Barks, Fart, accelerate, slow down, explosions

#### *3.3.1.4. Special Abilities*

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The special ability is barking

#### *3.3.1.5. Relevance to game story*

#### *3.3.1.6. Relationship to other characters*

#### *3.3.1.7. Statistics*

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### 4. Section IV – Levels

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#### 4.1. Level #1 – Park

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##### 4.1.1. Synopsis

---

A park environment that have grass around, ferris wheel, some fountains and a track for the pug to cross with obstacles

##### 4.1.2. Introductory Material (Cut scene? Mission briefing?)

##### 4.1.3. Objectives

---

- Use the bark ability to destroy barrels.
- Avoid grass to maintain speed.

##### 4.1.4. Physical Description

##### 4.1.5. Map

---

The map will be the park environment

##### 4.1.6. Critical Path

##### 4.1.7. Encounters

##### 4.1.8. Level Walkthrough

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Run through the map, inside the track

##### 4.1.9. Closing Material

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## 4.2. Training Level

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## 5. Section V - Interface

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### 5.1. Visual System

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#### 5.1.1. HUD - What controls

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**HUD:**

- Lap timer.
- Ability counts.
- Power-up indicators.

#### 5.1.2. Menus

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Intuitive navigation

- Splash Screen with instructions and pressing a button you go to the race

#### 5.1.3. Rendering System

#### 5.1.4. Camera

---

Will be showing the whole track

#### 5.1.5. Lighting Models

---

### 5.2. Control System

---

Keyboard inputs for movement and abilities

### 5.3. Audio

---

Background music

### 5.4. Music

---

Playable music during the instructions/splash screen section

### 5.5. Sound Effects

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Audios for barks, farts/acceleration, explosions and checkpoints

### 5.6. Help System

---

## 6. Section VI - Artificial Intelligence

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### 6.1. Opponent AI

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The barrels will be spawned on the track randomly.

## 6.2. Enemy AI

## 6.3. Non-combat Characters

## 6.4. Friendly Characters

## 6.5. Support AI

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### 6.5.1. Player and Collision Detection

### 6.5.2. Pathfinding

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## 7. Section VII – Technical

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### 7.1. Target Hardware and operating system

---

PC only

### 7.2. Supported game controllers and peripherals

---

Keyboard and mouse

## 8. Section VIII – Game Art

---

Only show concept art here (rough sketches)

### 8.1. Concept Art

---

Pug as the main character, visual tracks

### 8.2. Style Guides

---

Funny animations of a pug trying to cross the track as fast as possible, and his interaction with obstacles and power-ups

### 8.3. Characters

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Pug in a beige color

### 8.4. Environments

---

Map visuals as the park

### 8.5. Equipment

### 8.6. Cut scenes

### 8.7. Miscellaneous

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Icons for the power-ups and visual representations of the slowing down and barrels