

Game Design Document

How I train my Pug?
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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(Use word's "update table of contents" to generate / regenerate a table of contents.)

Table of Contents

1.	Section I - Game Overview	7
1.1.	Game Concept	7
1.2.	Design History	7
1.3.	Feature Set	7
1.4.	Genre	7
1.5.	Target Audience	7
1.6.	Game Flow Summary	7
1.7.	Look and Feel	7
1.8.	Project Scope	8
1.8.1.	Number of locations	8
1.8.2.	Number of levels	8
1.8.3.	Number of NPC's	8
1.8.4.	Number of obstacles	8
1.8.5.	Etc	8
2.	Section II - Gameplay and Mechanics	8
2.1.	Gameplay	8
2.1.1.	Game Progression.....	8
2.1.2.	Mission/challenge Structure	8
2.1.3.	Puzzle Structure	9
2.1.4.	Objectives – What are the objectives of the game?	9
2.1.5.	Play Flow – How does the game flow for the game player	9
2.2.	Mechanics	9
2.2.1.	Physics	9
2.2.2.	Movement	9
2.2.3.	Objects.....	10
2.2.4.	Actions	10
2.2.5.	Combat	10
2.2.6.	Economy	10
2.3.	Screen Flow	10
2.3.1.	Screen Flow Chart.....	10
2.3.2.	Screen Descriptions	11
2.4.	Game Options	11
2.5.	Replaying and Saving	11
2.6.	Cheats and Easter Eggs	11
3.	Section III – Story, Setting and Character.....	11
3.1.	Story and Narrative	11
3.1.1.	Back story	11
3.1.2.	Plot Elements.....	11
3.1.3.	Game Progression.....	11
3.1.4.	License Considerations	11
3.1.5.	Cut Scenes	11
3.2.	Game World	12
3.2.1.	General look and feel of world.....	12

3.2.2.	Area #1 – Sunny Beach	12
3.2.3.	Area #2 - Park	12
3.3.	Characters	12
3.3.1.	Character #1	12
4.	Section IV – Levels	13
4.1.	Level #1 - Beach	13
4.1.1.	Synopsis	13
4.1.2.	Introductory Material (Cut scene? Mission briefing?)	13
4.1.3.	Objectives	13
4.1.4.	Physical Description.....	13
4.1.5.	Map.....	13
4.1.6.	Critical Path.....	13
4.1.7.	Encounters.....	13
4.1.8.	Level Walkthrough.....	13
4.1.9.	Closing Material.....	14
4.2.	Level #2 – Park.....	14
4.2.1.	Synopsis	14
4.2.2.	Introductory Material (Cut scene? Mission briefing?)	14
4.2.3.	Objectives	14
4.2.4.	Physical Description.....	14
4.2.5.	Map.....	14
4.2.6.	Critical Path.....	14
4.2.7.	Encounters.....	14
4.2.8.	Level Walkthrough.....	14
4.2.9.	Closing Material.....	14
4.3.	Training Level	14
5.	Section V - Interface	14
5.1.	Visual System	14
5.1.1.	HUD - What controls.....	14
5.1.2.	Menus.....	15
5.1.3.	Rendering System	15
5.1.4.	Camera.....	15
5.1.5.	Lighting Models	15
5.2.	Control System	15
5.3.	Audio	15
5.4.	Music	15
5.5.	Sound Effects.....	15
5.6.	Help System.....	15
6.	Section VI - Artificial Intelligence	15
6.1.	Opponent AI	15
6.2.	Enemy AI	15
6.3.	Non-combat Characters	15
6.4.	Friendly Characters	15
6.5.	Support AI	15
6.5.1.	Player and Collision Detection.....	15
6.5.2.	Pathfinding	15

7.	Section VII – Technical.....	16
7.1.	Target Hardware and operating system	16
7.2.	Supported game controllers and peripherals	16
8.	Section VIII – Game Art	16
8.1.	Concept Art	16
8.2.	Style Guides.....	16
8.3.	Characters	16
8.4.	Environments	16
8.5.	Equipment.....	16
8.6.	Cut scenes	16
8.7.	Miscellaneous.....	16

1. Section I - Game Overview

1.1. Game Concept

A fun and fast-paced top-down racing game featuring pugs as competitors. Players select between 1-player or 2-player modes and compete in time-based races across two unique maps. Players must avoid obstacles, collect power-ups, and use limited abilities to gain the fastest time and win the race.

1.2. Design History

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

1.3. Feature Set

- Single or multiplayer 2 players competing in turns.
- 2 unique tracks with Beach and Park.
- Power-ups and Hazards: Items like bones (speed boost) and obstacles like mud, sand, and destructible objects (barrels, beach balls).
- Abilities: Fart (accelerate), Bark (destroy obstacles, limited 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

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

1.6. Game Flow Summary

Players start by selecting the game mode (1P or 2P), pick a map, and race their pug. The objective is to finish the track as quickly as possible, avoiding hazards and collecting power-ups. In 2P mode, players take turns, and their times are compared at the end, or you play on the same track as your opponent at the same time.

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

2 unique tracks based on different biomes still to be decided (park, beach).

1.8.1. Number of locations

2

1.8.2. Number of levels

2

1.8.3. Number of NPC's

Will not have NPCs on the game

1.8.4. Number of obstacles

2 different types of obstacles (barrels and beach balls)

1.8.5. Etc.

Randomized item generation to ensure replayability.

2. Section II - Gameplay and Mechanics

2.1. Gameplay

2.1.1. Game Progression

Players train their pug on the selected 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.

-

2.1.3. Puzzle Structure

Training maps to improve your game

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.

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

- Realistic pug animations with simulated movement slowdown from sand and mud.
- Knockback effect when hitting obstacles.

2.2.2. Movement

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

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

2.2.3. Objects

2.2.3.1. *Picking Up Objects*

Bones: Increases speed temporarily.

2.2.3.2. *Moving/Avoiding Objects*

Barrels, beach balls, sand/mud: Slows the pug down 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.

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

-

2.2.6. Economy

-

2.3. Screen Flow

2.3.1. Screen Flow Chart

The screen will be the whole background with the map on level 1 or level 2 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

At the moment, still not decided if will be 2 players at the same screen.

2.3.2.1. *Main Menu Screen*

Selecting 1p or 2p and selecting the map (level 1 or level 2)

2.3.2.2. *Options Screen*

2.3.2.3. *Etc.*

2.4. Game Options

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

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

2.6. Cheats and Easter Eggs

-

3. Section III – Story, Setting and Character

3.1. Story and Narrative

Specific details like scripts and cut scenes may not be in this document but be in the Story Bible.

The game follows an ambitious pug trainer on a journey to compete in the prestigious "Pug Grand Prix." Along the way, players encounter rivals and experience race difficulties events that bring humor and charm to the narrative.

3.1.1. *Back story*

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

3.1.2. *Plot Elements*

- Players choose a pug and 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

2 game worlds/maps (Sunny beach and park)

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

3.2.2. Area #1 – Sunny Beach

3.2.2.1. General Description

A beach environment with a track to follow, providing the same content in both maps, but with different designs

A sandy track featuring beach-themed hazards like beach balls and sand patches

3.2.2.2. Physical Characteristics

3.2.2.3. Levels that use area

3.2.2.4. Connections to other areas

3.2.3. Area #2 - 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 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

3.3.1.4. Special Abilities

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

4. Section IV – Levels

4.1. Level #1 - Beach

4.1.1. Synopsis

A beach environment that have sand around and a track for the pug to cross with obstacles

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

4.1.3. Objectives

Avoid sand and beach balls.
Collect bones to boost speed.

4.1.4. Physical Description

4.1.5. Map

The map will be the beach environment

4.1.6. Critical Path

4.1.7. Encounters

4.1.8. Level Walkthrough

4.1.9. Closing Material

4.2. Level #2 – Park

4.2.1. Synopsis

A park environment that have sand around and a track for the pug to cross with obstacles

4.2.2. Introductory Material (Cut scene? Mission briefing?)

4.2.3. Objectives

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

4.2.4. Physical Description

4.2.5. Map

The map will be the park environment

4.2.6. Critical Path

4.2.7. Encounters

4.2.8. Level Walkthrough

Run through the map, inside the track

4.2.9. Closing Material

4.3. Training Level

5. Section V - Interface

5.1. Visual System

5.1.1. HUD - What controls

HUD:

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

5.1.2. Menus

Intuitive navigation, selecting between 1p or 2p and the mapping selection

- Main menu: Game mode selection.
- Track selection screen.

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 menu section

5.5. Sound Effects

Audios for slow down, barks, farts/acceleration

5.6. Help System

6. Section VI - Artificial Intelligence

6.1. Opponent AI

The barrels will be moving up-down to make difficulties for the pugs to cross, probably it will have with the beach balls too, or both will be stucked.

6.2. Enemy AI

6.3. Non-combat Characters

6.4. Friendly Characters

6.5. Support AI

6.5.1. Player and Collision Detection

6.5.2. Pathfinding

7. Section VII – Technical

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

Pug in a beige color

8.4. Environments

Map visuals as beach and park

8.5. Equipment

8.6. Cut scenes

8.7. Miscellaneous

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