

# Title Page

Snapy Snake

– Perhaps also add a subtitle or high concept sentence.

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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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0.2	January 16, 2013	Emile Cormier	
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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.	<b>Game Concept</b> .....	7
1.2.	<b>Design History</b> .....	7
1.3.	<b>Feature Set</b> .....	7
1.4.	<b>Genre</b> .....	7
1.5.	<b>Target Audience</b> .....	7
1.6.	<b>Game Flow Summary</b> .....	7
1.7.	<b>Look and Feel</b> .....	7
1.8.	<b>Project Scope</b> .....	7
1.8.1.	Number of locations .....	7
1.8.2.	Number of levels .....	7
1.8.3.	Number of NPC's .....	8
1.8.4.	Number of weapons .....	8
1.8.5.	Etc .....	<b>Error! Bookmark not defined.</b>
2.	Section II - Gameplay and Mechanics .....	8
2.1.	<b>Gameplay</b> .....	8
2.1.1.	Game Progression.....	8
2.1.2.	Mission/challenge Structure .....	8
2.1.3.	Puzzle Structure .....	8
2.1.4.	Objectives – What are the objectives of the game? .....	8
2.1.5.	Play Flow – How does the game flow for the game player .....	8
2.2.	<b>Mechanics</b> .....	8
2.2.1.	Physics .....	8
2.2.2.	Movement .....	8
2.2.3.	Objects.....	8
2.2.4.	Actions .....	9
2.2.5.	Combat .....	9
2.2.6.	Economy .....	9
2.3.	<b>Screen Flow</b> .....	9
2.3.1.	Screen Flow Chart.....	9
2.3.2.	Screen Descriptions .....	9
2.4.	<b>Game Options</b> .....	9
2.5.	<b>Replaying and Saving</b> .....	9
2.6.	<b>Cheats and Easter Eggs</b> .....	10
3.	Section III – Story, Setting and Character.....	10
3.1.	<b>Story and Narrative</b> .....	10
3.1.1.	Back story .....	10
3.1.2.	Plot Elements.....	10
3.1.3.	Game Progression.....	10
3.1.4.	License Considerations .....	10
3.1.5.	Cut Scenes .....	10
3.2.	<b>Game World</b> .....	10
3.2.1.	General look and feel of world.....	10

3.2.2.	Area #1.....	10
3.2.3.	Area #2.....	10
<b>3.3.</b>	<b>Characters .....</b>	<b>11</b>
3.3.1.	Character #1 .....	11
3.3.2.	Character #2 .....	11
<b>4.</b>	<b>Section IV – Levels .....</b>	<b>11</b>
<b>4.1.</b>	<b>Level #1 .....</b>	<b>11</b>
4.1.1.	Synopsis .....	11
4.1.2.	Introductory Material (Cut scene? Mission briefing?) .....	11
4.1.3.	Objectives .....	11
4.1.4.	Physical Description.....	11
4.1.5.	Map.....	11
4.1.6.	Critical Path.....	11
4.1.7.	Encounters.....	11
4.1.8.	Level Walkthrough.....	11
4.1.9.	Closing Material .....	11
<b>4.2.</b>	<b>Level #2 .....</b>	<b>12</b>
<b>4.3.</b>	<b>Training Level .....</b>	<b>12</b>
<b>5.</b>	<b>Section V - Interface .....</b>	<b>12</b>
<b>5.1.</b>	<b>Visual System .....</b>	<b>12</b>
5.1.1.	HUD - What controls.....	12
5.1.2.	Menus.....	12
5.1.3.	Rendering System .....	12
5.1.4.	Camera.....	12
5.1.5.	Lighting Models .....	12
<b>5.2.</b>	<b>Control System .....</b>	<b>12</b>
<b>5.3.</b>	<b>Audio .....</b>	<b>12</b>
<b>5.4.</b>	<b>Music .....</b>	<b>12</b>
<b>5.5.</b>	<b>Sound Effects.....</b>	<b>12</b>
<b>5.6.</b>	<b>Help System.....</b>	<b>12</b>
<b>6.</b>	<b>Section VI - Artificial Intelligence .....</b>	<b>12</b>
<b>6.1.</b>	<b>Opponent AI .....</b>	<b>12</b>
<b>6.2.</b>	<b>Enemy AI .....</b>	<b>12</b>
<b>6.3.</b>	<b>Non-combat Characters .....</b>	<b>12</b>
<b>6.4.</b>	<b>Friendly Characters .....</b>	<b>12</b>
<b>6.5.</b>	<b>Support AI .....</b>	<b>12</b>
6.5.1.	Player and Collision Detection.....	13
6.5.2.	Pathfinding .....	13
<b>7.</b>	<b>Section VII – Technical.....</b>	<b>13</b>
<b>7.1.</b>	<b>Target Hardware and operating system .....</b>	<b>13</b>
<b>7.2.</b>	<b>Supported game controllers and peripherals .....</b>	<b>13</b>
<b>8.</b>	<b>Section VIII – Game Art .....</b>	<b>13</b>
<b>8.1.</b>	<b>Concept Art .....</b>	<b>13</b>
<b>8.2.</b>	<b>Style Guides.....</b>	<b>13</b>
<b>8.3.</b>	<b>Characters .....</b>	<b>13</b>

<b>8.4.</b>	<b>Environments .....</b>	<b>13</b>
<b>8.5.</b>	<b>Equipment .....</b>	<b>13</b>
<b>8.6.</b>	<b>Cut scenes .....</b>	<b>13</b>
<b>8.7.</b>	<b>Miscellaneous .....</b>	<b>13</b>

## 1. Section I - Game Overview

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### 1.1. Game Concept

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Instead of limiting the snake's movements to standard 2-directional (left and right), I added 4 more movement directions: Left diagonal up, right diagonal up, left diagonal down, and right diagonal down. Players tried to achieve the highest score by eating food, trying not to bite themselves, and not hitting the wall.

### 1.2. Design History

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This is a living document and will change as you develop your game. This section maintains a history of any significant changes to your game.

### 1.3. Feature Set

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- Use A/Left Arrow, W/Up Arrow, D/Right Arrow, and S/Down Arrow.
- Snake can turn in increments of smaller angles (e.g., 45°, 22.5°).
- Use polar coordinates or vector math to calculate positions.
- Square map with wall.
- special items that allow temporary benefits like auto-homing (automatically guiding the snake toward the food) or magnetic attraction.

### 1.4. Genre: Retro, Action, Strategy, Survival, Arcade

### 1.5. Target Audience: Any Age

### 1.6. Game Flow Summary

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How does the player move through the game? Both through framing interface and the game itself.

Start Screen(Press SPACE to Play) -> Gameplay -> Game End Screen -> Start Screen

### 1.7. Look and Feel

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What is the basic look and feel of the game? What is the visual style?

The game will look resto with pixel graphic.

### 1.8. Project Scope

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A summary of the scope of the game.

#### 1.8.1. Number of locations: None

#### 1.8.2. Number of levels: None

1.8.3. Number of NPC's: None

1.8.4. Number of weapons: None

1.8.5. Number of snake: 1

1.8.6. Number of food: 3

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## 2. Section II - Gameplay and Mechanics

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### 2.1. Gameplay

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2.1.1. **Game Progression:** The snake must collect food to get the point. The more food the snake gets, the faster its speed increases.

2.1.2. **Mission/challenge Structure:** Try to live and get much point as much as possible

2.1.3. **Puzzle Structure:** None

2.1.4. **Objectives – What are the objectives of the game?** Grow the snake by collecting food or special items. Survive as long as possible without colliding with walls, obstacles, or the snake's own tail.

2.1.5. **Play Flow – How does the game flow for the game player:** None

---

### 2.2. Mechanics

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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

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How does the physical universe work?

#### 2.2.2. Movement

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2.2.2.1. **General Movement:** Left and Right

2.2.2.2. **Other Movement:** Left diagonal up, right diagonal up, left diagonal down, and right diagonal down.

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#### 2.2.3. Objects

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2.2.3.1. **Picking Up Objects:** Food

2.2.3.2. **Moving Objects:** None

---



#### 2.2.4. Actions

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2.2.4.1. *Switches and Buttons:* None

2.2.4.2. *Picking Up, Carrying and Dropping:* None

2.2.4.3. *Talking:* None

2.2.4.4. *Reading:* None

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#### 2.2.5. Combat

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If there is combat or even conflict, how is this specifically modeled?

None

#### 2.2.6. Economy

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What is the economy of the game? How does it work?

### 2.3. Screen Flow

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#### 2.3.1. Screen Flow Chart

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A graphical description of how each screen is related to every other

Start Screen -> Gameplay Screen -> Game Over Screen

#### 2.3.2. Screen Descriptions

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What is the purpose of each screen?

2.3.2.1. *Main Menu Screen:* Show the map and an instruction

2.3.2.2. *Options Screen:* None

2.3.2.3. *Gameplay Screen:* Gameplay

2.3.2.4. *Game Over Screen:* Show the game is over and how to play again

2.3.2.5. *Etc.*

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### 2.4. Game Options

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What are the options and how do they affect game play and mechanics?

None

### 2.5. Replaying and Saving:

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- Replaying Options: from the Pause Menu and After Game Over
- Saving: None

## 2.6. Cheats and Easter Eggs: None

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

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### 3.1. Story and Narrative

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

3.1.1. Back story: None

3.1.2. Plot Elements: None

3.1.3. Game Progression: None

3.1.4. License Considerations: None

3.1.5. Cut Scenes: None

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3.1.5.1. *Cut scene #1*

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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

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3.2.1. General look and feel of world

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- The game looks retro and nostalgic

3.2.2. Area #1: None

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3.2.2.1. *General Description*

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: None

---

etc.

### 3.3. Characters: None

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#### 3.3.1. Character #1

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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*

---

3.3.1.4. *Special Abilities*

3.3.1.5. *Relevance to game story*

3.3.1.6. *Relationship to other characters*

3.3.1.7. *Statistics*

---

#### 3.3.2. Character #2

---

etc.

## 4. Section IV – Levels: None

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### 4.1. Level #1

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4.1.1. Synopsis

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

4.1.3. Objectives

4.1.4. Physical Description

4.1.5. Map

4.1.6. Critical Path

4.1.7. Encounters

4.1.8. Level Walkthrough

4.1.9. Closing Material

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#### 4.2. Level #2

---

etc.

#### 4.3. 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: None

5.1.2. Menus: Press SPACE to play

5.1.3. Rendering System

5.1.4. Camera

5.1.5. Lighting Models

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#### 5.2. Control System

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How does the game player control the game? What are the specific commands?

#### 5.3. Audio:

5.4. Music: There are theme songs for menu and gameplay

5.5. Sound Effects: When the Snake collect food and when the snake dies.

#### 5.6. Help System

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### 6. Section VI - Artificial Intelligence: None

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#### 6.1. Opponent AI

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The active opponent that plays against the game player and therefore requires strategic decision making (example, Civilization or Chess, how is it to be designed?

#### 6.2. Enemy AI

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Villains and Monsters

#### 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

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- Requires Visual Studio with C++ 17 and later.

### 7.2. Supported game controllers and peripherals: None

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## 8. Section VIII – Game Art

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Only show concept art here (rough sketches)

### 8.1. Concept Art: Pixel

### 8.2. Style Guides: None

### 8.3. Characters: Snake and Food

### 8.4. Environments: None

### 8.5. Equipment: None

### 8.6. Cut scenes: None

### 8.7. Miscellaneous: None

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