Sample Game and Gameplay

In this chapter we will discuss gameplay including the main categories that affect the quality of gameplay, which are game difficulty and game balance. Elements that make up game difficulty include such things as the characteristics of the enemies, the player, the weapons, and the projectiles used in the weapons. Game balance refers to finding the right combination of the above elements in order to create a fun game that the player will continue to come back to and play over and over again.

Finally, we cover an actual gameplay example where we create a small working game that involves an enemy Bot following the player around the level and firing a weapon at the player.

Gameplay Overview

In this section we will cover game difficulty and game balance, both of which are essential in producing gameplay that is both fun and challenging. We cover the different elements of gameplay that contribute to a game’s difficulty level. We then discuss how balancing these different elements is also important to creating a fun game that the player will enjoy playing over and over again.

Game Difficulty

Game difficulty is an important part of creating good gameplay and making a game fun and entertaining. A game that is too difficult for the average user will frustrate him. A game that is too easy will lack any meaningful challenge and also make him lose interest in the game. The objective is to make a game easy enough for the average player but hard enough to keep him challenged.
Elements of gameplay that affect game difficulty are:

- **Enemies**: The number of enemies, the capabilities of the enemies (including their armor, weapons, health, and healing abilities), and other special abilities such as magic abilities are elements to consider concerning game difficulty.

- **The Player**: The fundamental characteristics of the player such as number of lives, health, healing ability, armor, weapons, and other special abilities are factors that are related to game difficulty.

- **Power Ups**: The nature, number, and location of power ups available inside the game world that would enhance the abilities of objects and characters, such as health bonus, weapon damage powerups, and extra lives, are also factors that would affect game difficulty.

- **Level Design**: The way the level is designed also affects the game difficulty level in terms of where the enemies are placed and the amount and types of cover available to the player and enemies. For example, do the player’s enemies shoot at him from high ground in a fortified area? If so how much cover from hostile fire is there in the game arena?

- **Game Play Rules**: The rules of the game including how victory is achieved would also determine how difficult the game is. For example, if the objective of the game is to just survive for a certain amount of time, then hiding out in an easily defensible area with lots of cover from enemy fire would be desirable. However, once the player is able to find such an area in the game level, then the game would become very easy and perhaps not as fun and challenging.

## Game Balance

Game Balance is also an important element in good gameplay and in creating a fun game. Game balance refers to finding the best combinations of the different levels of difficulty in each of the elements of gameplay listed in the Game Difficulty section previously.

For example, let’s take the situation from the previous section where the goal of the game is to survive for a set time and the player has found a location in the game where he is well protected from enemy fire and can just sit and wait for the game to end. A way to change this game so that it is more balanced might be to:

- Change the Game Play Rules so that the objective would be to not only survive a set amount of time but to achieve other objectives such as destroying a certain target or killing a certain number of enemies.

- Change the Level Design so that any areas that are completely protected or mostly protected from enemy fire and attack are removed.