# Capstone Project Planning Document

**Game Title**

Willo

**Estimated Total Time to Develop**

70 hours

# Willo Requirements Specification

Willo is a classic side-scrolling platformer. Its objective is to reach the right edge of the game. The player can move left and right, and jump. If the player reaches the left edge of the game, they can't move left any more. If he reaches the right edge, he wins the game. Obviously, if the player isn't supported by a platform, they fall to their death (and lose a life)! There are enemies which collide with the player resulting in the player losing a life on each collision. The player has 3 lives to lose before they lose the game. Some enemies cannot be killed, while the player can jump on others to kill them.

There are several different power-ups contained in chests:

1. Life Pack. Increases the player's life by one
2. Invincibility. Makes the player invincible for a set period of time
3. Speed-up. Makes the player run faster for a set period of time

The game ends when the player loses all three lives. At that point, the game pauses and displays a game over message. The player can choose either to restart the game or return to the main menu.

The world is randomly generated and the game lets the player select a difficulty level (Easy, Medium, or Hard), then starts a game with the given difficulty. At harder difficulties, the world contains more enemies and obstacles.

The game has the following menus:

1. Main Menu: Lets player turn off sound effects or pick play, help, or quit
2. Difficulty Menu: Lets player pick Easy, Medium, or Hard for the game
3. Help Menu: A single page that displays brief game instructions
4. Pause Menu: A menu displayed if a player pauses a game in progress. Provides options to resume the game or quit to the main menu

The game stores important game configuration information in a file it reads in at runtime. This approach supports tuning patches later as necessary.

During gameplay, sound effects are used to indicate when the player picks a power-up. Gameplay sound effects also indicate when the player loses a life, or loses or wins the game. The only menu sound effect is a click when a menu button is clicked.