

ECE243 Final Project Report

DE1 DUNGEON

by David Tran and Evangeline Guo



Attribution Table

Name	Contribution Percentage	Contribution
David Tran	50 %	<ul style="list-style-type: none">- Wrote initial game setup- Setup general structure of code- Setup PS/2 control inputs- Coded player movement- Added enemy AI movement to track player- Setup graphics e.g. sprites, animations, background, title screens- Drew custom graphical assets

		using photo editing software - Testing and Debugging - Optimized code for performance
Evangeline Guo	50 %	- Coded barrel explosion and draw barrels - Added hex display - Coded projectile hit detection - Coded player hit detection - Calculate the health bar and plot the health bar - Draw end screen - Fix the boundary

There are two methods of running the code that was submitted.

1. Intel FPGA Monitor Program

- Turn on DE1-SoC
- Create new project for DE1-SoC to run C code
- Add the c files and download system
- Compile and Run
- Press play button and switch to the monitor input to the DE1-SoC VGA port
- Connect PS/2 keyboard

2. CPUlator

- Open the .c file
- Press Compile
- Press Continue
- Press Enter through the PS/2 keyboard to start the game and press “W” for moving up, “A” for moving left, “S” for moving down and “D” for moving right.
- View the game through the VGA Pixel buffer, the direction you moved through LEDs and the points you got through Seven-segment displays.

Game Description

DE1 Dungeon is a 2D top down action/survival game. The player controls a fearless knight that uses his golden dagger to defend himself. The player can control the knight with WASD for movement and I for throwing the dagger. Ghost will appear on the map and chase the player around. In order to defend against the ghost, daggers can be thrown at enemy ghosts and explosion barrels. When a dagger hits a barrel it will explode, damaging the player and all ghosts. Once the player's health bar is completely red then it is game over. The goal of the game is to kill ghosts and survive as long as you can.

Game Backstory

Our adventurer has explored into a mysterious dungeon nicknamed the DE1 Dungeon in the pursuit of treasure and fortune. Little does he know that he is not alone. Wandering in the depths of this dungeon are ghosts that eat the souls of the living! He must fight for his survival with his trusty golden dagger.