Crafty Final Project

# 

# Project name: “Project Finale” (working title)

BLUF

1. The Game is a town building strategy game of resource management that turns into a tower defense game where the player will build towers to defend against enemy waves.
2. The screen will be rectangular, with menu items along the sides. Interaction is done in scene one only through the menu buttons. Scene two will have player strategically place towers on grid-like nodes. Both scenes are top down.
3. Player will manage game through menus in scene one. Player is on the left, enemies emerge from the right.
4. Some spritesheets I’ve found so far that I really like and can use(This is not all inclusive, as I will probably have to make my own objects like the nodes etc.)

My Favorite: <https://opengameart.org/content/2d-rpg-lpc-compatible-tilessprites> (this is a collection of compatible top-down sprites. I also want to use this bird: <https://opengameart.org/content/tower-defense-prototyping-assets-4-monsters-some-tiles-a-background-image>

1. Winning in game part 1 is easy. Just survive ever increasing raids while you build a town/fortress. Surviving is just comparing numbers, and if the player manages his resources well, winning means getting past the last raid. Gold earned from game part one and defense parameters are the measurement of score for part one. Score only matters in game part two, which is not winnable. The idea is that the player works to build something, only to have it inevitably obliterated. Score in part two is obtained by killing enemies, and getting score multipliers for not receiving damage in a particular round.

# Overview

## Theme / Setting / Genre

- Resource Management/Town Builder -Scene 1

- Tower defense -Scene 2

## Core Gameplay Mechanics Brief

- Town Building(resource gathering, defenses)

- Resource management(wood, ore, food) -Scene 1

- TD with infinite increase in difficulty till player death -Scene 2

## Targeted platforms

- Web browser

## Monetization model (Brief/Document)

- None (school project)

## Project Scope

- Two Scenes – 1 to build town in town builder, 2 to destroy town in winless Tower Defense.

- No cost(will not spend money on pre-made assets)

- Time Scale: Scene 1- May 28th(Monday)

Scene 2- Jun 11th(Sunday)

- Project Teams:

- Core Team:

- Benjamin Vinicky

- Will do everything.

- Will work for cookies.

- Attributes: Good looking, family man

- Licenses / Hardware / Other Costs:

- Total Costs: $0.00 + Gas/Cookie money estimated @ $100.00 for quarter

## Influences (Brief)

### - Influence #1

- A Dark Room

- This was a text-based town management game that uses menus to navigate through various components of the game. Ultimately, the player would build a base from which he explored a gridded map, bringing along supplies from his town.

### - Influence #2

- Kingdoms

- 2D kingdom building focused on survival, expansion and fending off/sieging enemies. The major difference here is that failure was inevitable.

## The elevator Pitch

A game to waste your time building a massive town, only to have it destroyed! Fun, right?

## Project Description (Brief):

Overview:

The game is divided into two sections. The first will be a town builder/resource management game, using minimal sprite representation and sticking mostly to in-game menus. The second will open up a gridded canvas, where, depending on parameters from the first section, the player strategically set up defenses against waves of monsters. Think of something similar to that of building a lego castle, and then defending it from your evil little brother, who will eventually find a way to get around you and destroy it.

Scene 1:

The scene will start with an overhead resource bar, detailing the amount of the five resources available: Wood, Food, Stone, iron, and gold. An overhead eagle view gives players a visual representation of town growth, and will be a fixed view. On the left, there will be listed the population consistency, detailing how many of the population is assigned to each role. Roles are farmer, woodcutter, miner, and soldier. Each role simply produces resources at a specific rate, and soldiers increase the town defense parameter.

What’s really important here are the main controlling parameters, defense, and gold, and population, which are passed into the second scene. Scene one is finished when either the town reaches a certain population, or the last invasion is finished and the town is still standing. The player loses if population falls to zero.

Scene 2:

Scene two builds on the controlling parameters from Scene 1, with higher defense and population giving the players base more health, and gold translating to the main resource of Scene 2. The canvas will hold the player’s base in the top-left corner, and the enemy spawn point will be in the lower right hand corner. Due to time constraints, only one path will be used from the enemy spawn point to the players base. Every 45 seconds an enemy wave will spawn, allowing the player to plan for the next wave. No wave-timer skip button is planned for at this time. The grid will be divided into nodes, which will allow for player to buy a turret, and upgrade them with gold. The turrets shoot enemies within range. There is no win here. Waves get more and more difficult, with an increasing strength parameter which is a multiplier to enemy health. Increasing at strength\*1.2 compounded per wave. Each enemy killed gives gold.

# What sets this project apart?

- Pretty sure no one else has thought of this in class. I hope…

## 

## Core Gameplay Mechanics (Detailed)

### - Scene 1:

- Base Building

Player starts with campfire and one population. Player will

Gather resources to buy/upgrade structures.

- How it works:

Player clicks on button to increase one of two resources until

they have enough for a first house. Every house holds a capacity of two people (to start), and every five seconds 10% of the remaining capacity(up to max capacity) comes to the player’s town. The Minimum population increase is 1. The player can assign their population to one of four roles. Each role is can gather one of their respective resources every 5 seconds. These resources allow for upgrades, which simply change the controlling variables. Food is subtracted from resources according to one-tenth of the total population every 10-20 seconds. (will tweak numbers to see what works best)

- Upgrading:

Player can spend resources to upgrade structures. Upgraded structures have increased parameters. Upgrading is essential to winning the game

- How it works:

There are five structures/upgrades: Base, Housing, Agriculture, construction and Defense. Base upgrades increase all production just slightly, and unlocks other upgrade paths. All paths start at 0. Base 0 allows for building of houses. Base 1 Allows for upgrading all other paths to 1.

Base 1 and construction 1 allow for woodworkers(a population that gets wood. Base 2, and construction 2, allow for stone. Base 3 and construction 3 allow for iron. Base 4 and construction 4 allow for Steel, which is needed for all upgrades to 5+. Costs increase at this point by 1.6\* cumulatively.

- Sieging:

Player is attacked by computer periodically using a random range and strength.

- How it works:

Strength is compared to defense, if Strength is higher, player loses defense upgrades and population. Population is always lost in proportion to difference in parameters. If population is set to zero, player loses the game.

<<<!!! E D I T !!!>>>

-You’re probably scratching your head thinking… “This is way too much stuff”. You’d be right. It’s unlikely I’ll be able to do all this before the deadline. What makes this project easier than most projects is that its far less concerned with animations, sprites, and the complexities of most action/adventure games. It will be mostly a system of management. Most of the gameplay is taken care of by the coding side. That said, it’s a lot of mechanics. I will probably just get this down to managing three resources. Population, food, and metal. Sieging is easy enough, and should be relatively easy to implement. Housing can be bought with food, for the sake of simplicity. Upgrades can be limited to base, and population. This much simplicity would make the game less fun and rewarding, but I’ll be able to increase the mechanics to the above section.

### - Scene 2:

- Tower Defense:

Player will use gold to buy and upgrade towers to prevent oncoming waves of enemies from reaching player’s base.

- How it works:

Player will start with a base, with HP corresponding to the

the end of Scene 1’s population and defense. Gold will also carry over to Scene 2 with a minimum allowance. Gold is then used to purchase towers on nodes along the path to destroy enemies. Waves increase in strength, and occur every 45 seconds. Each enemy killed is worth points and gold. Points are used at the end of the game to show how well(or bad) a player did.

- Nodes:

Nodes are squares that map the canvas into a grid. A path empty of nodes, flows from the players base, to the enemy spawn point.

- How it works:

Player clicks on a node to highlight the node, changing the nodes color. There are three colors: white- unselected, no hover, blue- mouse hover, and green- selected. Once a node is selected, the player can click on a tower icon to purchase that tower on that node.

- Towers:

Towers come in three varieties: arrow, cannon, slow.

- How it works:

Arrow Towers have the longest range, target single units and are the cheapest. Cannon towers have little range, and target a radius, and are a little slower. Slow towers slow enemy movement speed.

# Story and Gameplay

## Story

Once upon a time there was a student who had to make a crafty game for a final project…

So he made a campfire with a man sitting idly by. He said to the man, “I’m basically your god, and I’m telling you to build a fortress because I’m going to send some very mean monsters to come kill you. You should click on that button there to gather wood”. And so the man did. Little did he know that he would be destroyed by those monsters in the end, all so that a teacher could give a student an A+. Not an A, or an A- or even less, but an A+.

# Assets Needed

## - 2D

- Textures

- green grass texture

- stone (castle) texture

- dirt path texture

- opengameart.org castle texture pack(YAY!)

- Sprites

-3 tower sprites

-3 monster sprites / animated

-opengameart.org towerdefense pack(YAY!)

## - Sound

- Sound List (Ambient)

- Background

- Scene 1 background music

- Level 2 background music

- FX

- upgrade sound

- siege announcement

- monster exploding sound

- win

- lose

- arrow fire

- cannon fire etc.