THE LONG NIGHT
Final Project Proposal

Description

Our game is inspired by games such Plants vs. Zombies and the Last Stand, whereby the main character of the game is confronted with an advancing mob of enemies that the character needs to vanquish before they reach him. Our goal is to have the game be Game of Thrones-themed where the main character is Jon Snow (one of the main characters in the series) and the enemy herd is a group of White Walkers (Zombie characters from the series). The main character would be equipped with a set number of projectiles that he could use to target and kill the enemies (e.g. an arrow and a bow, an axe he could throw, etc.). The goal of the game is to kill off the White Walkers before one of them reaches The Wall or one of them collides with Jon Snow.

Features and Implementation

The game will essentially consist of these classes:

1. A character class
2. A main character (Jon Snow) class, which inherits from the character superclass
3. An enemy character (the White Walkers) class, which also inherits from the character superclass
4. A projectile (e.g. arrow/throwing axe)
5. An overall game class

EDIT [DECEMBER 10th]:
In addition to these, we added new features and enhanced existing ones:
1) Multiple Levels with the last being against the Night King; every subsequent level gets more difficult (Walker army increases and their speed does too).
2) An intro scene with the ability to view a leaderboard and instructions.
3) The ability to quit and pause the game.
4) A greater range of movement for Jon. (UP, DOWN, RIGHT, LEFT).
5) Walkers follow Jon instead of advance in a straight linear fashion.
6) The Night King class improves on Jon's arrow shooting, with NK's spear shooting at Jon's specific location.
7) Ability to obtain bonus items (extra lives (like Jon's resurrection in Season 6), extra point, or extra arrows) from killing a walker (A walker may or may not have a bonus item when killed). Type is random.
8) Ability of the user to control sound preferences.
9) Ability of the user to dynamically input their name.
10) File I/O with score saving, retrieving, sorting, and displaying.

The main character will be instantiated once throughout the entire game, at a fixed place on the left side of the screen. The player will have the ability to move the character up and down the screen using the vertical arrow keys to target different enemy objects. The space-bar button will make the character shoot an object. At the beginning of the game, the main character will have a set quantity of ammunition that he will need to make use of to kill all the enemy objects. To win, the main character needs to kill all the enemy objects before he runs out of ammunition. If the main character comes into contact with an enemy, he dies and the game is over.

A projectile object will be released every time the player presses the space-bar. The projectile will move horizontally across the screen, with the initial point being where the character was standing when the spacebar key was pressed. The projectile will keep on moving straight until it encounters an enemy character, attacking it, at which point the enemy disappears from the scene and the health of the enemy army bar shortens. If it does not hit any enemy character, the object will simply keep moving straight until it leaves the screen.

The enemy character class will be instantiated at random y-coordinates at the right side of the screen. There will be multiple enemies generated at the beginning of the game. The enemies will move horizontally across the screen, towards the left end. If they are hit by a projectile, they die and disappear

off the screen. If an enemy does not get hit, the enemy will keep moving straight. If an enemy reaches the Wall, the player loses and the game is over.

The game will have background music and a sound will be played every time an arrow is released and when a character (enemy or main) dies. Clicking on the screen after the game is over will restart the game.

Preliminary Mock Design
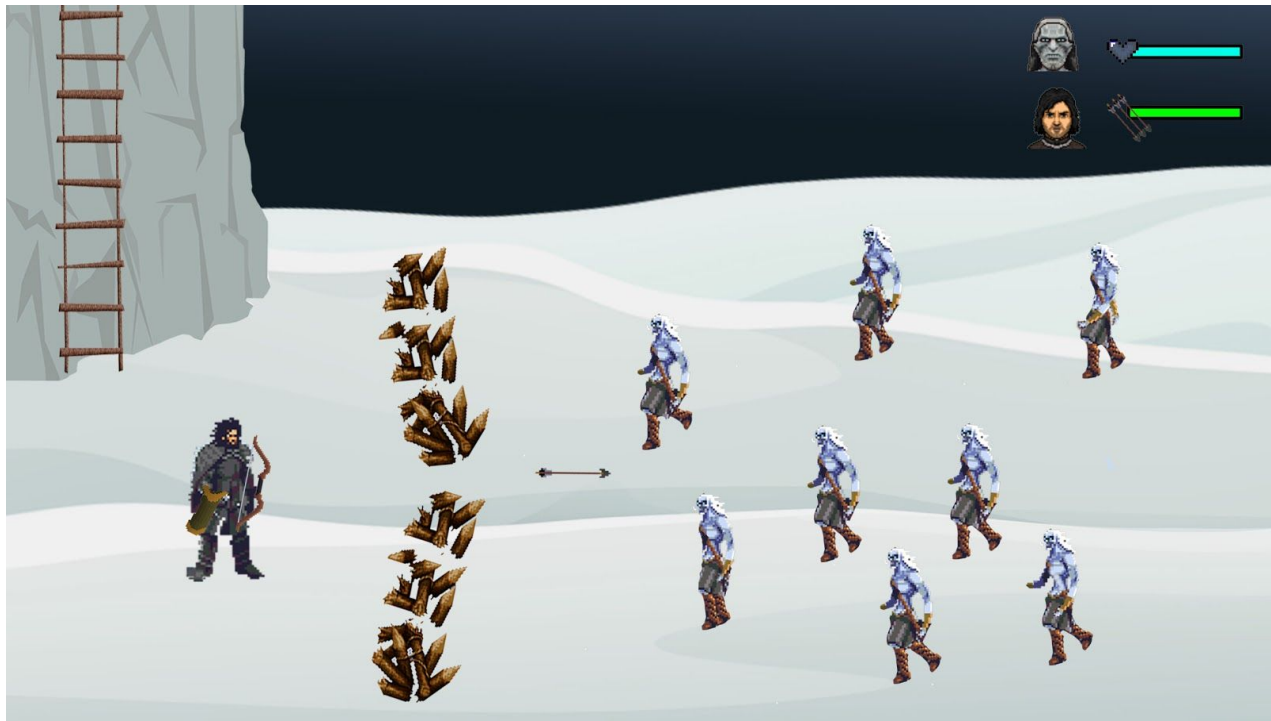
Inspiration

Task List

Task	Led by	Task	Led by
Work on the character classes (character superclass and subclasses)	Sarah/Arshiya	Find and handle the graphics (sprites and backgrounds)	Sarah
Work on the main game class	Arshiya/Sarah	Find and handle sounds	Arshiya
Work on the projectile object class	Arshiya	Design the game scene	Sarah