

Looking to improve your gaming skills

Project Description:

Kite Away is a game intended to help people improve with both mouse accuracy and skill shot accuracy. Users / Players will be able to practice their mechanics and improve their mechanics / skill. Another possible purpose of this game is to help people with wrist or hand issues work their wrist or hand to become accustomed to different mouse sensitivities.

My goal when I graduate is to get a job in software development and/or game development. In this project I will be using the Unity game engine to build a game / practice tool. I will be using my knowledge of the C# programming language to program a character who interacts with their environment, other characters. I will also try to build an AI so that the enemy will chase their intended enemy. If at all possible, or perhaps as an add-on, build a multiplayer function in the future.

Methods:

To create the game I will be using the Unity game engine to create an environment for the player to practice their mechanical skills. I will be doing this by watching youtube videos on design, reviewing previous game design class notes and doing tutorials for creating an environment in Unity.

To create the character, enemy, game and the game's environment mechanics I will be using C# in a code editor / IDE to program and prototype the playable character(s) for the game. I will be creating these mechanics and the game's logic by blue printing the rules for these mechanics on paper. Then I will use a program to see the logic visually in flowgorithm. Finally I will be using Visual Studio to program into the game engine the games logic and rules.

KITE AWAY

Work Breakdown Structure:

01. Planning and outlining
 - A. Outline Game Documentation
 - B. Game Objective
 - C. Choose Target Audience
 - D. Choose Game Mechanics
 - E. Pseudo Code Game Mechanics
 - F. Level Designs
02. Programming
 - A. Pseudo-Code
 - B. Implement Pseudo-Code
 - C. Test
 - D. Add Environmental Interactions
 - E. Test
 - F. Add Sprites
 - G. Test
03. Design
 - A. Level Design
 - B. Pick Character Designs
04. Finishing Touches
 - A. Aesthetic Touch Ups

Pseudo Code

```
function Draw(Drawable d, float)
    int x, y, z, r, g, b
    float radius
    int width, height
    int color

function Draw(Drawable d, float)
    int x, y, z, r, g, b
    float radius
    int width, height
    int color

void main Loop
```

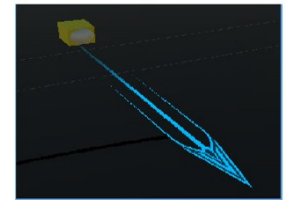
Development

```
public float ChangeInZDuringShift
(Vector3 characterLocation, Vector3 shiftDestination) {
    float rangeOfShiftZ = characterLocation.z - shiftDestination.z;
    if(characterLocation.z > shiftDestination.z)
        return Mathf.Abs(rangeOfShiftZ) < maxShiftRange ? maxShiftRange * -1;
    else
        return Mathf.Abs(rangeOfShiftZ) < maxShiftRange ? Mathf.Abs(rangeOfShiftZ) : maxShiftRange;
}
```

Conclusion

While working on Kite Away I found myself constantly challenged, but the best part about working on a project you enjoy is facing those challenges. During the many challenges I faced while building Kite Away I found it easy to take on the challenges by breaking down the challenges. To make this tool as function and as close to the inspiration I did my best to recreate its systems. I researched and adapted their various systems from the way damage is calculated to the way the character levels and gains experience and resources. There are still many improvements that can be made to this project but adding more game modes will make the experience and functionality of this tool better.

Initial Product



Final Product

