Documentation

Game Concept

Targets are schools/company. Obstacles are things you need in order to graduate/get hired. For example, level 1's target is elementary school. The obstacle is an image of attendance. To graduate elementary school, attendance is essential. Other levels have similar concept.

Description/Objectives

A main character will be placed in a bottom center at first. A target will be position somewhere on the top of the screen. Between the main character and the target, there will be some obstacles. A random enemy might come out and try to attack you. Your job is to shoot a ball, avoid obstacles and enemies, and hit the target.

Game Rule

You will be given 10 chances to bounce off the wall or any obstacles before hitting the target. If you do not hit the target within the 10 chances, the level will be reset and you will have another chance to play. You have unlimited chances but you may not go to next level unless you complete the current level. You can move left and right and change angles before you shoot.

Levels

There are 5 different levels.
These are the target you should try to hit with a ball.

Level 1 Elementary   Level 2 Middle School   Level 3 High School

Level 4 USC   Level 5 Google

Obstacles

There are different types of obstacles for each level. Some obstacles move while others don't. All moving objects have potential to kill you immediately. For example, if the ball collides with a Starbuck image, it will die immediately and reset the current level. (Moving bars may be included in some levels. Images of moving bar not shown below.)

Level 1: Attendance

Level 2: Pencil & Eraser

Level 3: SAT, ACT, Starbucks

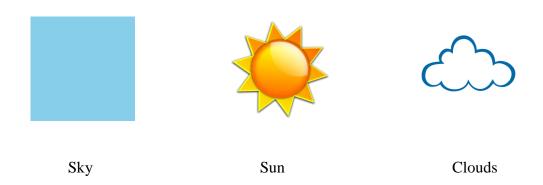**Level 4:** Red Bull, Monster, Professor Kendra

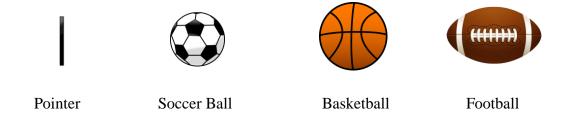

Level 5: Internship, Experience

Background

These are background images that will be used for the game.
Sky will be a main background while sun and clouds will move throughout the game.

Sky	Sun	Clouds

Main Character

You may choose 4 different types of ball: A orange ball, a soccer ball, a basketball, & a football. (Orange will be a default ball for the game). Pointer is a bar that you can move & change angles.

Pointer	Soccer Ball	Basketball	Football

Enemy

These are images of enemies that may come up throughout the game.
It is completely random, so it may not come up on some levels.
Only one enemy will come up per shooting. However, the enemy will only pop up after you shoot the ball so don't try to smart by waiting for an enemy to pass by before shooting!
Once the enemy successfully attacks you, the level is reset immediately.

Enemy 1	Enemy 2	Enemy 3

Options

There are 4 buttons on bottom right corner.

1) Character
   a. If you click this button, you can change the type of the ball. The text of this button will change in order to tell you what type of image it will be used. You cannot change the image while the ball is being shot.
2) Instruction
   a. If you click this button, a dialog will pop up that includes main objective and controls for the game.
3) New Game
   a. If you click this button, a game will be restarted from level 1. You may not click this button while the ball is being shot.
4) Quit Game
   a. If you click this button, a game will simply quit and the window will close.

Improvement from game part 02 (including the requirements for game part 03)

1) There is a dialog for instruction
2) You can start a new game
3) You can change the image of the ball (Equivalent to adding characters to the game)
4) Instead of only bouncing off when there is a collision detection, some obstacles can directly kill the main character. (Equivalent to another interaction between the player and the non-player characters)
5) Now there is a hidden "bad character" that may come up randomly. If you are hit by this character, you die immediately. It will come from top left of the screen; however, the angle and the speed will be randomized. (Equivalent to "active" non-player character)
6) The game documents and UML design had major updates.
7) Codes are cleaner by removing repetitive codes and making it into a single method.
8) Used many different transitions throughout the game

Solution (Just in case you can't get to the next level)

These solutions may or may not work depends on the enemy that randomly comes up and the time you shoot the ball.

Level 1: Left Arrow Twice and Space Bar
Level 2: Go all the way to the left, Left Arrow Once, Space Bar
Level 3: Go all the way to the left, Left Arrow Twice, Space Bar
Level 4: Go all the way to the right, Left Arrow Twice, Space Bar as the left moving bar goes up from the bottom
Level 5: Intentionally meant to be impossible but found a solution.
        Press A 16 times (Going to left), Left Arrow Once, Space Bar