**PROG2370 Game Programming with Data Structures**

**FINAL PROJECT: Fifty-Five**

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**Description**

Fifty-Five is a game in which a player starts with a single block and extends its length. This game was based on a game called Snake. In this game, it used characters from a children’s TV series called Number blocks.

The ultimate goal of the game is to make 55 blocks long. The game is divided into three stages. When 20 blocks are gathered, it is stage 2, and when there are 21 blocks, Naughty Two, the enemy of stage 2, appears. If player touches Naughty Two, the game will be over, so player should avoid Naughty Two to collect blocks. When there are 40 blocks, it becomes stage 3, and when there are 41 blocks, Octonaughty Cube, the enemy of stage 3, appears. Even though the player touches Octonaughty Cube, the game will not be over. However, Octonaughty Cube moves toward the blocks that the player needs to collect and when the blocks are completely covered by Octonaughty Cube, the game is over.

The game consists of a start screen containing a menu, a play screen, a help screen, an enemies screen, and an about screen, and an ending screen displayed when the player collects all 55 blocks. This game uses only keyboards and includes sound and music. The length of the block is displayed as a score on the play screen.

**Class diagram**

Diagram

Description automatically generated

**References**

**Images**

about.png: https://mobile.twitter.com/numberblocks/status/1161316240486543360/photo/1

fiftyFive.png: https://numberblocks.fandom.com/wiki/Fifty-Five

logo.png: https://www.learningblocks.tv/numberblocks/home

shockwave.png: https://www.pngitem.com/download/hTxmxJ\_shockwave-sprite-png-energy-shield-sprite-sheet-transparent/

start.png: https://pin.it/5aQh4Aj

numberblocks.png: https://numberblocks.fandom.com/wiki/

**Sounds**

add.wav: https://www.soundboard.com/sb/Mathblocks

countdown.mp3: recorded from streaming service

ending.mp3: recorded from streaming service

gameover.wav: https://www.zapsplat.com/?s=game+fall&post\_type=music&sound-effect-category-id=

select.wav: https://www.zapsplat.com/?s=click&post\_type=music&sound-effect-category-id=

title.mp3: recorded from streaming service

turn.wav: https://www.zapsplat.com/?s=swing&post\_type=music&sound-effect-category-id=