

GDD

By Echidna

Planning

Organisation

I will be doing all of the artwork, programming and music/sound effects.

To make sure my game meets submission requirements I will not use any paid software, make sure that my game uses a mouse or keyboard and runs in Microsoft Windows.

I will make the visual parts of my game first, then I will do the programming and after that, the music and sound effects.

I will do them in this order because it is easier to program the game if the artwork is already in it and the music can be done at any time.

The artwork needs to be completed by the 16th of May 2023 and the programming and music by the 28th of July 2023.

I can work on the programming and music at the same time because the music can be implemented into my game whenever.

Planning

Inspiration and Points of Originality

The game 'A Little to the Left' inspired me. The wooden blocks that I used to play with gave me the idea for the game.

I plan to base my artwork off the style in 'A Little to the Left' and the blocks in my game will be subject to realistic physics (with some exceptions).

There are a couple of games that have similar gameplay mechanics but the overall game is not too similar.

People will prefer to play my game because it is very simple and once they play it once, they will want to play it again.

My game is different enough to be worth making as it has a different art style and a relaxed gameplay.

Planning

Technical Requirements

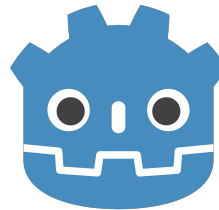
My game will run in Microsoft Windows.

I will use Godot to build my game. Godot is easy to learn but it has lots of nodes and it can be hard to know which ones to use. The nodes also mean that for some things you have to write a lot less code than in other platforms.

The player will need a computer using Windows, a keyboard or a mouse to play. They may also want to use headphones to hear the music and sound effects.

I will need access to my computer, my mouse and some wooden blocks for sound effects to make my game.

To learn new skills I will follow the tutorials on the Godot docs and Blender tutorials on youtube.



Designing

Game Overview

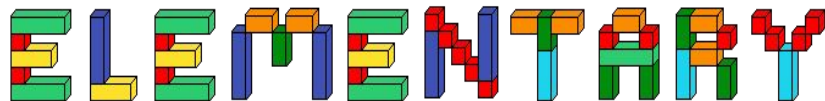
My game is called Elementary. I chose Elementary because it means the simplest form of something and my game is quite simple to play. This name will tell the player that my game has a straightforward concept and is easy to play.

In Elementary you simply stack blocks however you want. My game is intended for anybody of any age who can play it!

The challenge of getting the blocks to stay stacked up or the way you want is what makes my game interesting.

My game only has objects, which are the building blocks you stack up.

Elementary takes place in no particular location. It is on Earth though, so there is gravity and the laws of physics.



Designing

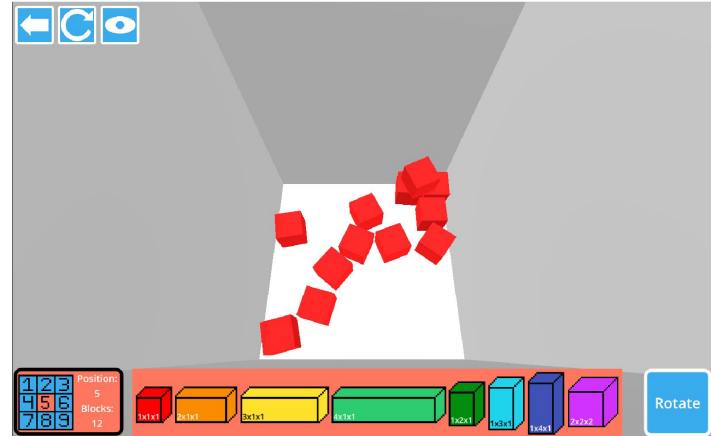
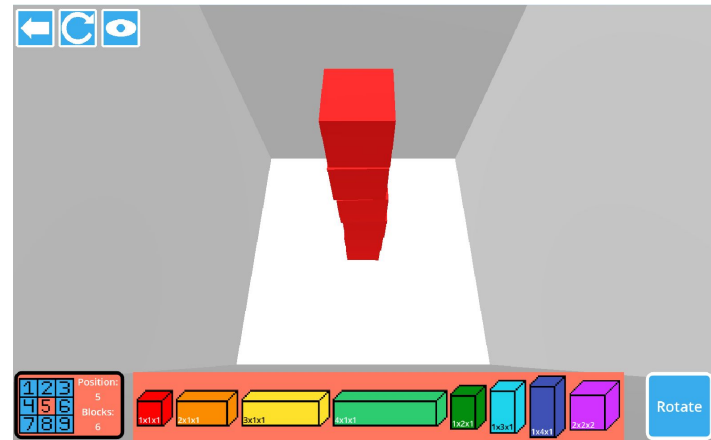
Theme

This year's theme is
Construction/Deconstruction.

Construction is part of my game because you
have to build the blocks up.

Deconstruction happens when your tower gets
too tall or unstable and falls down.

Deconstruction also happens when the player
presses the restart button.



An example of construction
and deconstruction in-game

Designing

Gameplay/Mechanics

The aim of Elementary is to stack blocks. There is no way to win or lose the game. It is a game you play for the enjoyment.

The game ends if the player restarts. There is only one level but the challenge of stacking the blocks gets harder the taller your tower is.

Elementary is a 3D game and the player is in third person looking at the blocks as the 'character'.

Players interact with the game by choosing where they would like the blocks to go and then clicking the block buttons to make them fall.

The player presses the numbers 1-9 to choose the position the blocks fall from. The arrow keys are used to rotate and change the view. The left mouse button is used to click on all the in-game buttons.

I have included an instructions page that tells the player what all the buttons do and how to get the blocks to fall.

This is Elementary,
a game about blocks.

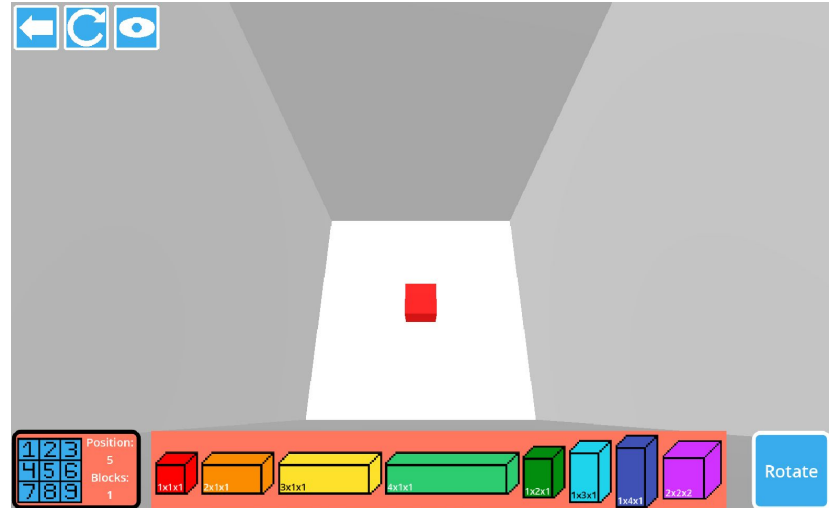
The aim of the game is to play with the blocks.
You can do this in any way you please.

There are eight different blocks:
One cube, three long rectangular prisms, three tall
rectangular prisms and a bigger cube.



HOW TO PLAY

The instructions page



In-game with a red block

Designing

Visual and Audio Design

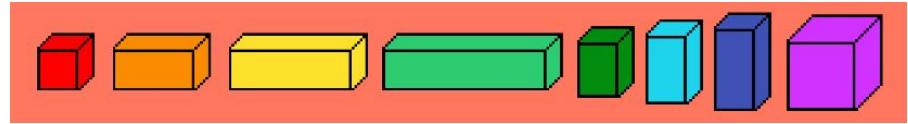
The art and user interface of my game is in a simplistic and minimalist art style.

The visual design of Elementary is not linked to construction and destruction at all. I decided to have the functionality of the game linked to the theme and not the art or audio.

The art in Elementary is bright, and the blocks are in rainbow colours.

There are only sound effects for the blocks colliding with each other and for restarting.

I have used no platform assets in my game.



The block buttons



The back, restart and view buttons

Designing

Visual and Audio Design

I started my visual style by choosing the sizes and shapes for the blocks. Then I chose colours for all of the blocks, plus two theme colours. I made sure when I was creating the block images to only use the colours I had chosen and black, to outline them. When I was making the user interface, I only used the two theme colours and white.

I recorded my sound effects in GarageBand using some wooden blocks and other items I found around our house.

To get to the finished product, I first drew what I wanted all the art to look like. Then I created the 3D blocks in Blender. I had to change some of the colours as they were too dark in either Blender or Godot. Next I made the block buttons and UI buttons on a website called Piskel. About halfway through making Elementary, the UI buttons colour got changed and I made the block buttons look 3D instead of 2D. Lastly, I made the title page letters after some trial and error about how to make them look stacked and 3D at the same time.

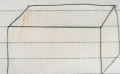
2023

Elementary

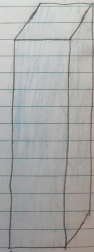
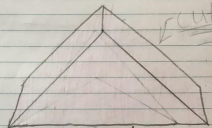
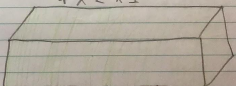
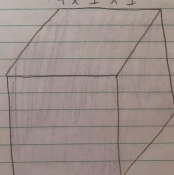
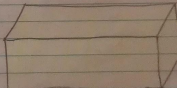
A block building game.

Try to get as high as you can
OR
get to a certain height

New Aim: just stack the blocks


$$1 \times 1 \times 1$$

$$2 \times 1 \times 1$$

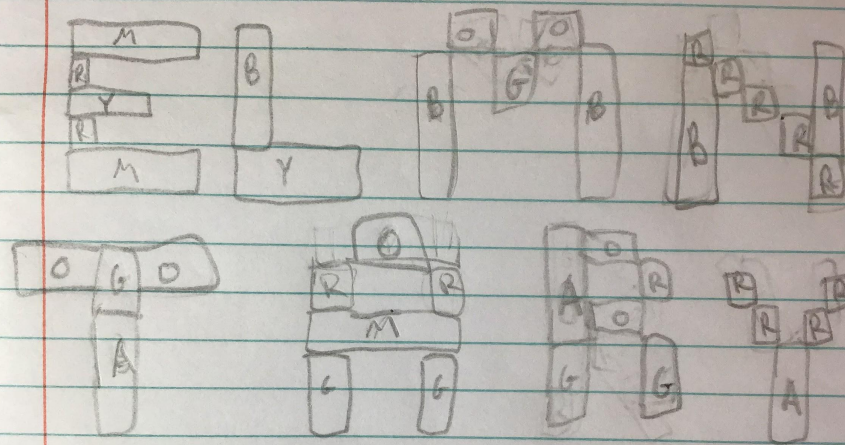
$$1 \times 2 \times 1$$

$$1 \times 3 \times 1$$

$$1 \times 4 \times 1$$

$$4 \times 2 \times 1$$

$$4 \times 1 \times 1$$
 $2 \times 2 \times 2$  $3 \times 1 \times 1$

Do they have friction?
Wood grain or plain

15 x 15 work space

My drawings of the blocks



B Y G M R O A P
5 2 6 3 14 7 3 0

The drawings of what blocks make up each letter

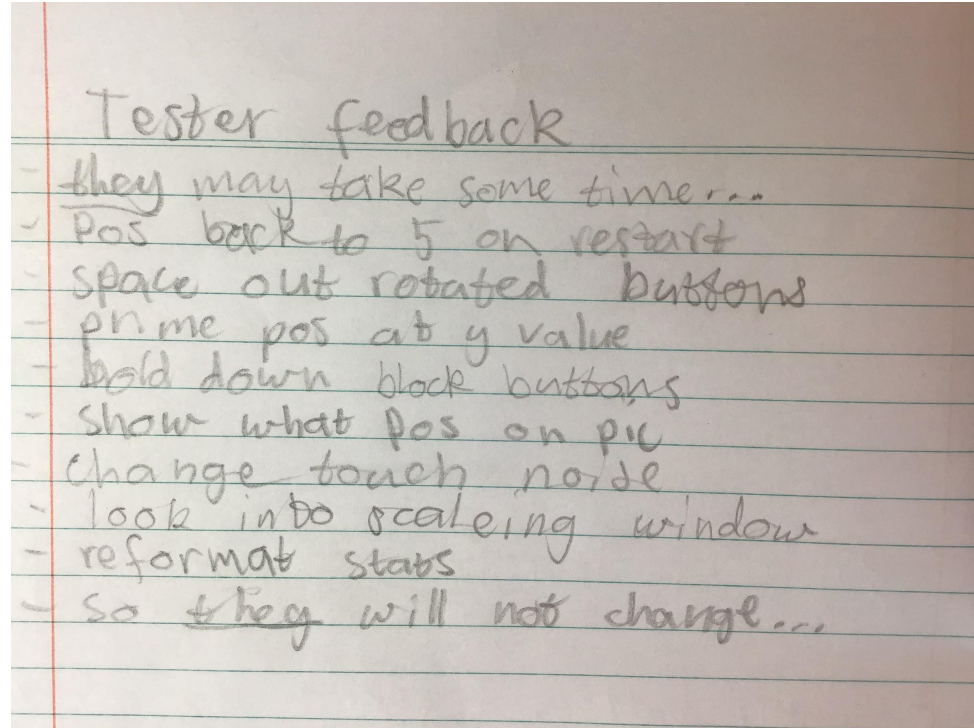
Reflecting

Testing, Fixing and Project Execution

Five people tested my game. The testers needed to focus on how well they understood the instructions. Other than that, I told the testers to just play so I could see the different ways different people played or interacted with a game that is very simple.

The testers found some grammar errors, re-formatting issues and other “quality of life” features that needed adding.

The main problem that needed fixing was the sound the blocks make when they bump into each other. To fix this, I recorded a new sound and changed the pitch and added effects until it sounded how I wanted it to.



The main feedback from the testers

Reflecting

Testing, Fixing and Project Execution

I did finish my game. Originally Elementary was going to be winnable where the player had to get to a certain height or get a highscore. About halfway through making Elementary, I realised that the game would be better if it had no win or lose and was just a game that you play for the enjoyment. After that I made a list of “polish” features that I wanted to add and all of them got added, except for a few that weren’t needed anymore. I also planned to include a triangle block but it didn’t work.

For next time I need to learn more about sounds and how to use sound to make the game better.

The colour scheme and the logic of the game work really well. The way I could use the blocks to make the title screen also work well.

Next time I would like to work with a team to make the game development process more fun.

Polishes

- Redo buttons and tray
- Make menu, redo and view buttons
- 9 places to drop blocks
- Make area taller
- Make instructions
- Make art/animations for instructions
- Spend more time on music/sound effects
- Make cover
- Make rotation with $\leftarrow \rightarrow$
- Menu - ~~re~~ back to instructions, change properties (?) and challenges (?)
- Display block count
- Explode/fly up for blocks when redo + pop!
- Dimensions on buttons
- Display y-value of camera
- Display hover labels for view and restart

The list of polishes