# Super Cube Stacker

## Core concept

Stacking Squares to build a tower. The Catch is that you need to hold down for enough time for each square. Each will be a different amount of time slowly getting faster. If you hold down to long the cube will break.

## Design pillars

Stack the Cubes

Hold Down to place

Don’t break the Cubes

Earn points

## Main features and mechanics

Cube stacking.

The cube stacking mechanic involves a cube appearing at each “round” it will move from side to side until the player taps once. It will need to be timed correctly to stack correctly on the pile.

### Placing Cubes

the next step is to hold down until an indicator appears. too long will break the cube, too short will place weakened state which has a chance of breaking after something is stacked onto it.

There will be a clear indication when to release such as the device vibrating slightly and changing colour at the precise point where the requirements are met.

### Points

Points are earned every time a cube is added to the stack. Points can be earned for adding a cube to the stack. Bonus points may be earned if the cube is held down for the correct amount of time.

|  |  |
| --- | --- |
| **Scenario** | **Points** |
| Stacked Cube | +1 |
| Perfect Placement | +2 |
| Broken | -1 |

### Strikes.

The Player has a limited number of attempts before the game will be over. Every time a cube “breaks” it will earn 1 strike. There is up to 3 strikes before a game over

### Powerups

There are 3 Powerups available in the game that provide different advantages to gameplay. Each of them has some kind of limitation to balance them within the gameplay

A screenshot of a phone

Description automatically generated

At the end of the game the player is given the chance to spin a prize wheel to have a chance at earning extra power ups.

A screen shot of a game

Description automatically generated

## Target platform and audience

Android Mobile Developed in Unity

## Interface and controls

|  |  |  |
| --- | --- | --- |
| **Action** | **Control** | **Description** |
| Stop Cube | Tap the screen | The screen just needs to be tapped once, and the cube will stop in the location if it is available |
| Place Cube | Hold Screen and Release | The user needs to hold the screen down until the indicator appears and release. This will either set the cube in the stack or break it. |

## Basic story

No story, just a simple arcade game

## Visual style

2D Design, simple cartoony graphics with some kind of background.

Initial design sketches.

Initial design of the menu interface, My idea would be to have the menu in the same scene as the gameplay and so tapping the screen would instantly start the game and the cube already present would start moving side to side. The Large score at the top is the current High score indicated by a symbol represented here by a crown. The other icons (settings and info) can be used so the player can get info about the game or control sound settings

A spiral notebook with writing on it

Description automatically generated

Ideas of broken block graphics, initally I planned the block to shatter when it breaks but I ended up scrapping this idea in favor of just hding it straight away. However I will still keep part of this idea by adding cracks In the design of weakened blocks so the lower percentages look much different from higher ones. Rather than the difference **only** being the transparency

A notebook with writing on it

Description automatically generated

These are the initial designs for the powerup icons, I just wanted a simple icon that could be identified on smaller mobile devices, The basic icons have remained very similar but I have decided to change the penalty of the auto place , so it will provide no point rather than 1 as specified here.

A notebook with writing on it

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A blue band aid on a blue circle

Description automatically generated A close up of a button

Description automatically generated A yellow circle with a square in it

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The following are details about the different states that the blocks can be in and how they work within the game, this is mostly explainatory and doesn’t show the final visual designs for each state

A black and white sign with arrows

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## Audio style

There will be several different audio in the game

Bacgkround music: found here – plays In a loop in the background

Success sound : found here – plays when a block is placed successfully

Perfect sound: found here- plays when the block was placed but with a perfect 100%

Broken sound: found here – plays when the block was broken

The sounds can be modified in the settings page. As shown here. The player can mute both types of audio aswell as the disable the device vibration in the game. The player is also able to set the specific volume that the sounds will play at.

## Known issues and bugs

Sometimes the powerup buttons don’t respond properly and it can take a couple presses to actually activate it.

Sometimes when the Tower falls over there is an issue with the camera moving strangely.

The rewind power up is no longer functioning

## Future improvements

In the future of this game, I would like to add additional power-ups to increase randomness in gameplay and perhaps add some kind of reward system or challenge system to motivate players to try and get a specific score or avoid using a specific powerup to be rewarded with something else.

Google Play

[Block Stack - Apps on Google Play](https://play.google.com/store/apps/details?id=com.ChaseBennettHill.BlockStacker)

Presentation

[Chase Bennett-Hill Mobile Presentation 1.mp4](https://otagopoly-my.sharepoint.com/:v:/g/personal/bennc9_student_op_ac_nz/Ec4jfXnMqDNDhBCimLBLz6UB02ow-N-3iLVTXrg8jDzloQ?e=QBBvGk)