Game Engines 1

Phase 1

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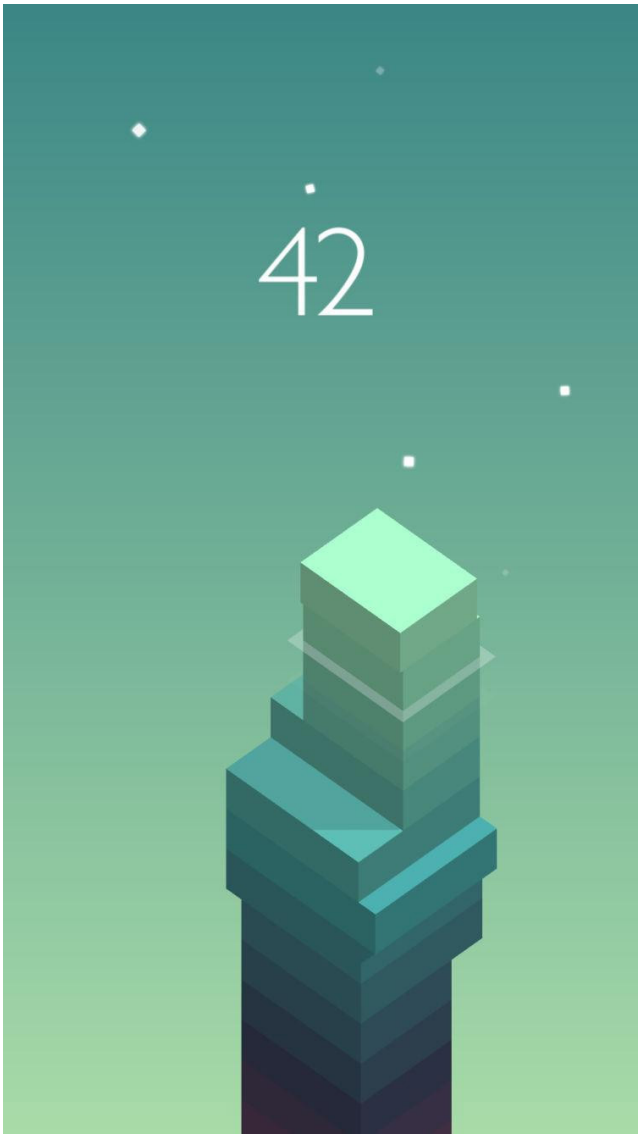
For this task, I will attempt to create a replica of Ketchapp's game, Stack.

About the game?

Stack is a single player game made by Ketchapp for Android and IOS mobile devices. The objective in the game is simple, stack as many tiles as you can precisely on top of each other, if you are not accurate, a piece of the tile will be cut off, making it harder for you to stack. For each successful tile placed you are awarded with 1 point.

The game is simple in terms of its visual aspects. When you enter the game, you are presented with a 5-button main menu which consist of, start button (Tap to start), Mute, skin (as you progress there are skins you can unlock), remove ads, and leaderboard.



What **Model** did they use?

To develop Stack, my assumption is that they used the Iterative model. This software development life cycle (SDLC) consists of a step-by-step process of development stages. Some of these phases, once completed are repeated over and over, and improving the project throughout each iteration, until they come to a final iteration.

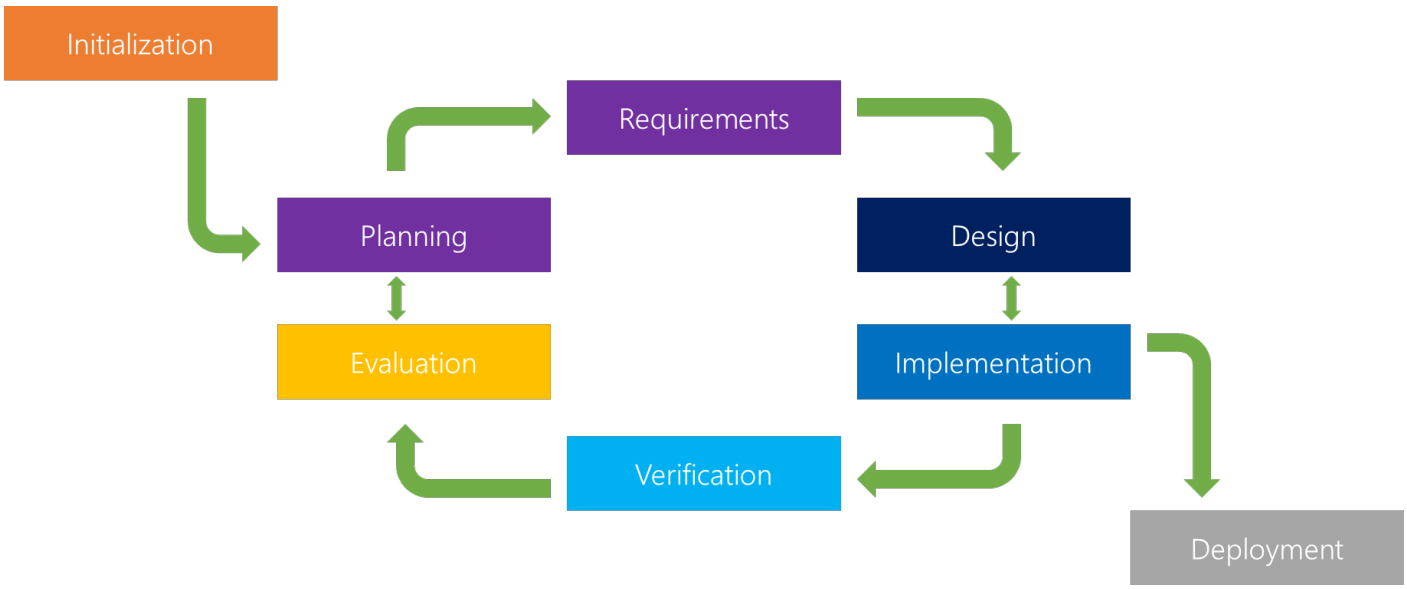
The model is split into 5 phases, which are, planning and requirements (documents, software, and hardware required for the project), analysis and design (logic, models design, technical requirements), implementation (the development begins), testing (once the build is done, it start being tested in search for any bugs or issues), and evaluation (examination of the project, such as what should change and more).

Some advantages to using this model are:

It allows the team to find flaws in the early stages of production of the project.
A high-quality design can be created before development starts.
Due to the many iterations, defects can be detected in early stages.

Some disadvantages to using this model are:

Requires more management and resources, due to the many iterations it goes through.
Not suitable for small projects (it is best used when the project is big).

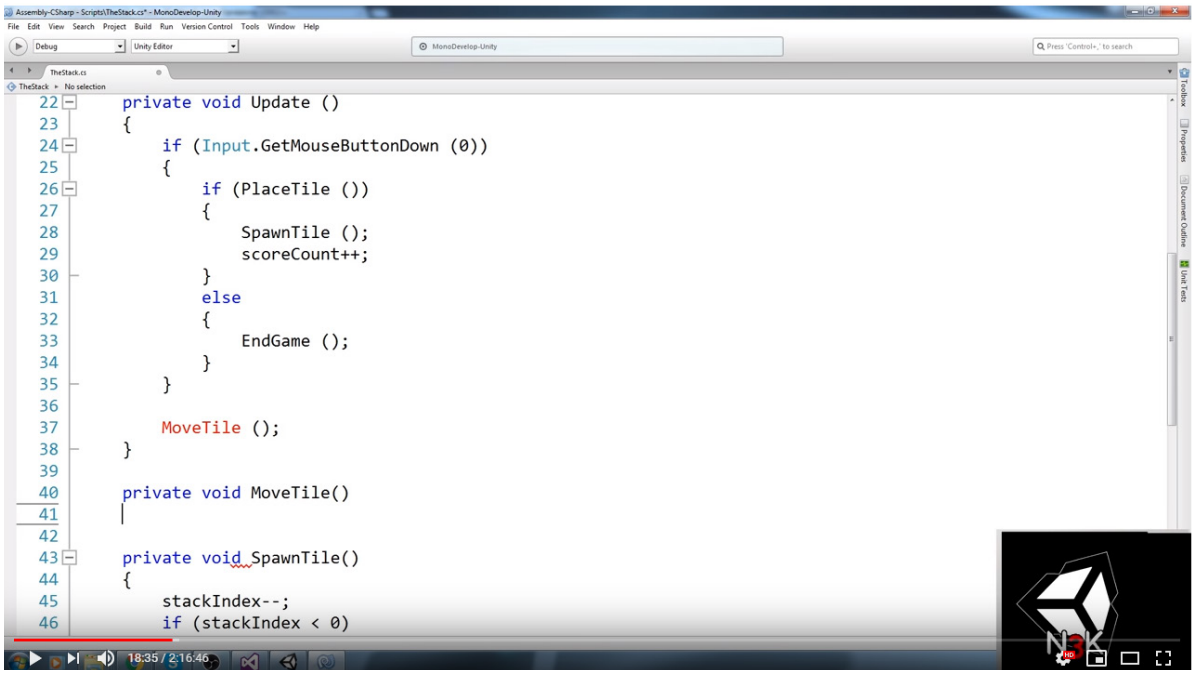


Work on Stack.

To develop this game, I followed a tutorial on Youtube by N3K EN, that goes through the process of developing a replica of Ketchapp's game 'Stack'. It is a 2hr 16min long tutorial that goes through the development of the main mechanics of the game.

One negative of this tutorial, is that it does not go through the explanation of implementing the great visual aspects the game has, such as its interesting use of gradients that is one of the games main attractions.

Although, the full game is much more polished than the end product of this tutorial, it is good enough to explain the development of the main mechanics of the game.



CRC Models

Move Tile	
1 tile comes from X-axis 1 tile comes from Y-axis Tile speed	Update

Place Tile	
With click tile is placed With each placed tile camera moves up Rubble Combo (Start at 3) Error Margin (0.1f)	Create Rubble Update

Create Rubble	
Cut tile piece falls down	

Update	
With click tile is placed With each placed tile camera moves up With each successfully placed score increase +1	Create Rubble

End Game	
Display game over menu Show final score	Update

Spawn Tile	
Amount of tiles spawned (1) Size of tile spawned	Update

Start	
Amount of tiles spawned (1)	

References

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