

# 2048

The game that I will be cloning is 2048. The goal of this game is to get a block to 2048, to do this you must join the same tile which they will merge together.

## *Software Development Model Waterfall Model*

There are six steps that for following the Waterfall model which are:

1. Requirements
2. Analysis
3. Design
4. Coding
5. Testing
6. Operations

### *Requirements*

This first step is done before creating the game, to see what is needed and what is not. This stage is generally where the team gathers information and written down, where this will serve as a foundation of the development. Having this in line, will help the team to know what is needed and what is not.

### *Analysis*

This second step is where the project is analysed so that the team can see what needs to be created first, second, etc. This will be the foundation for the planning. Knowing what's left or what is needed to be done is highly recommended.

### *Design*

This stage is responsible on the design planning. In this game development I will be planning out what will be needed as for scripts, which language I would be using and what components will I be using.

### *Coding*

This stage is where the scripting starts. In unity apart from scripting only, I will be adding components on the go, therefore apart from coding I would be building the game bit by bit.

### *Testing*

This stage is where the testing is involved. Testing and Coding stages will go together because I will be going back and forth till the problem is solved. The testing will be done throughout the development, because for each component I add or change I would be testing it to see if it works. Although the testing phase in a pure waterfall model is not done till the very end not throughout the development.

### *Operations*

This is where the game is build and submitted. While live, maintenance to the game will be done when is needed. In other project situations such as a website or a software development application, maintenances is a must such as updates, hot fixes etc.

# Components and Mechanics

**Components** that I will be using are

- Canvas
- Panels
- Buttons
- Texts

As for **scripts** I'm planning to have the below and might add new scripts while developing

- Game Manager
- Input
- Score Tracker
- Tile

As for the mechanics of this game is just arrows. Tiles will move according to the arrow pressed. To code this I will be using `KeyDown.RightArrow` and so on. The Score tracker will be another feature which will hold the score of the current game and the high score track.

The Tiles will be coded by creating a script which 3 variables are created Number, TileColor and TextColor. This will be Serializable so that I could edit them in the properties panel on unity.

**Assets** that I will be using:

- White Rounded Rectangle for the tiles
- Fonts
- Grid Script which will be used to setup the grid accordingly

## **Buttons**

The buttons will be used to start a new Game while playing, and if the game ends for these two reasons:

- Winning by getting the 2048 tile.
- Losing by having no available moves.

Template that I will be using below.

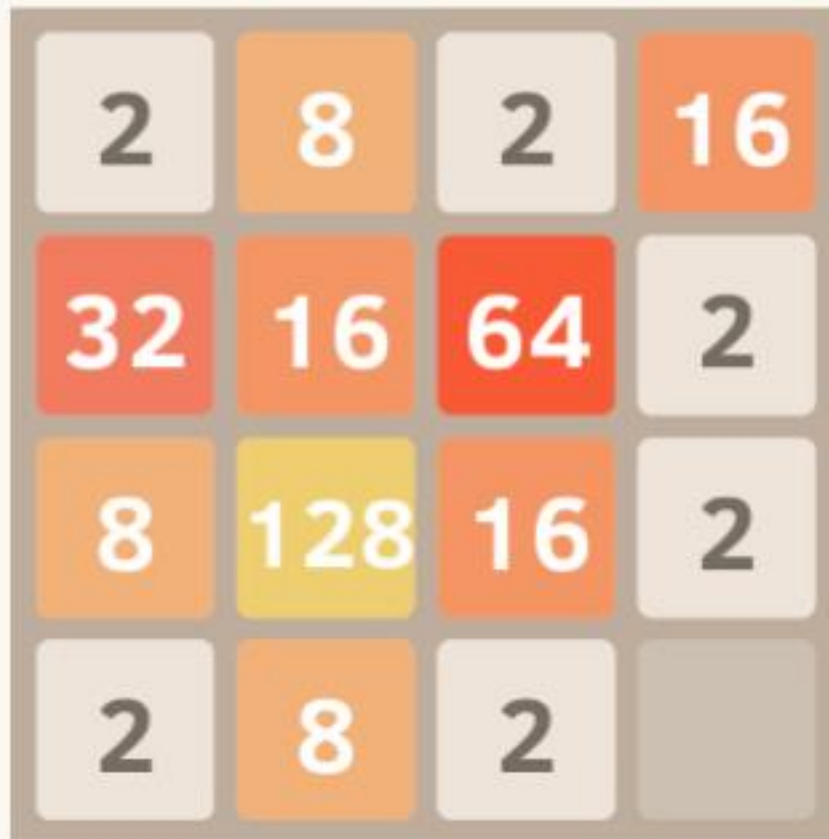
# 2048

SCORE  
1380

HIGH SCORE  
1380

Join the numbers and get to the  
2048 tile!

New Game



**HOW TO PLAY:** Use swipe to move the tiles. When two tiles with the same number touch, they **merge into one!**