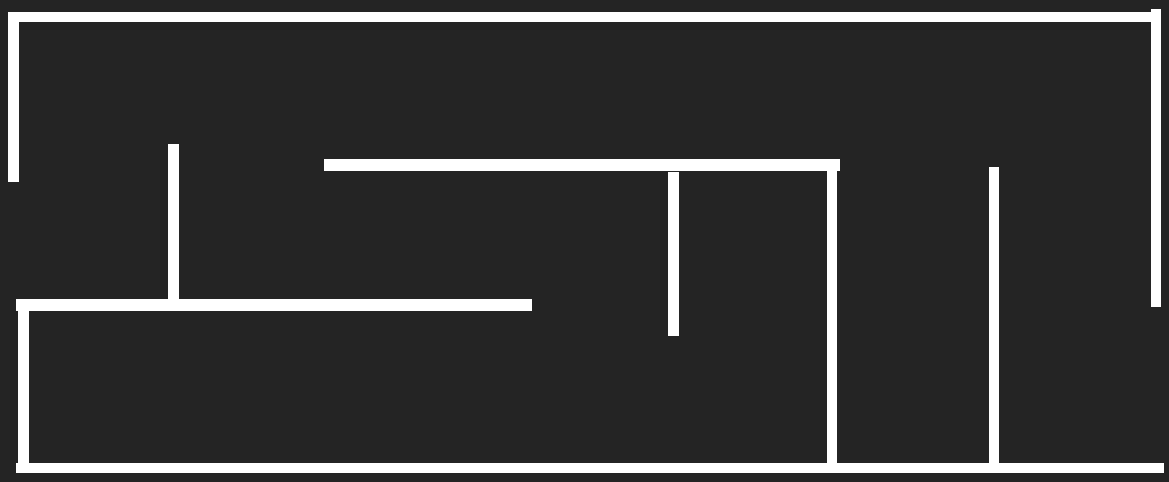

MAZE

ANCIENTS GODS LABYRINTH

WHAT

Game Proposal

WHERE

3D Game Programming

NCTU 2016

WHO

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INTRODUCTION

Our game is a maze – a special maze. A maze is a path or collection of paths, typically from an entrance to a goal. It is normally built with walls and rooms. Its size also varies. Sometimes, a maze may consist of a set of rooms linked by doors, passageways, or any other space connector (e.g. teleport device). Our maze implements all mentioned characteristics of a maze, and is special in the way that it is 3-dimensional.

The goal of this game is to find the exit from the given maze. The fact that the game is played by looking for a path to the exit, trains the players' spatial navigation skills, and helps players improving their ability to remember and analyze routes.

There are numerous possible game engines to develop this game, for instances Ogre3D, Unity3D, and Unreal Engine, etc. We chose Unity3D as our engine to develop this game, because it is easy to install and develop, and the team is has more experiences with it. Also, Unity3D allows us to export the game to multiple platforms, such as Web, Windows Runtime, iOS, Android, just to name a few. As for operating system, we chose Windows Runtime as the target platform for convenience (as the team is using Windows system).

GAME STORY

At the beginning of the creation of the world, there was a war between the two factions of gods, better known as big-bang. Jefa, the god who can see the future knows the end of the war and decided to join in Sett's faction.

Figure 1. War of the gods illustration

The war of gods finally ended with Sett's faction as the winner. After the war, the world was still covered by void. the gods decided to start creating some creatures to stay and fill this world. The other gods agreed to hand over the task of creation to Jefa.

Jefa has created so many creatures and the last Jefa created human that he created based on the entity of the gods. The other gods admire and appreciate Jefa's creation. They were amazed because some of the creature can think and speak. Since Jefa loves the human beings he created, he is concerned over their lives. Thus, Jefa decides to go down to earth and lives with humans to teach them skills such as reading, writing, sailing, taming animals, healing, and constructing vehicles for transportation.

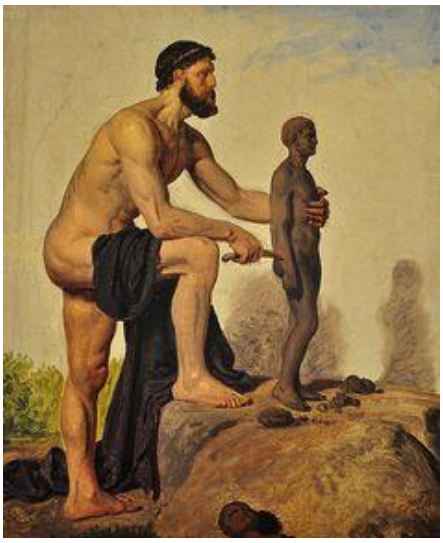


Figure 2. Jefa created human

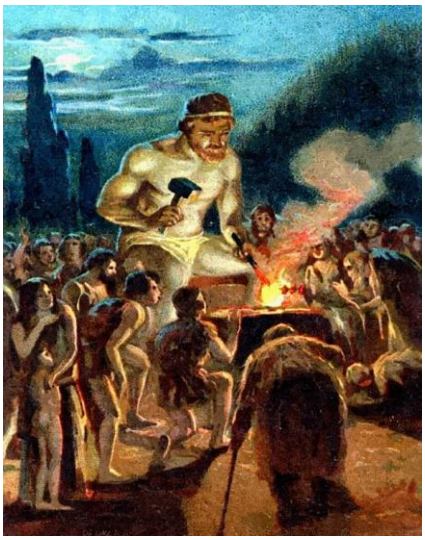


Figure 3. Jefa lived with human

Some gods are very interested in the development of human, but most of the other gods are concerned and worried that humans will become too powerful and overtake the gods. Sett forbids Jefa for helping humans, however Jefa ignores it. With the talent to see the future, Jefa is sure that human will be very developed and advanced in every way, so once again he helped the human by giving the Ancient Fire, which is the one of the element of life that only appear in the heaven of gods.

Knowing what Jefa has done, the other gods are very angry and agree to punish him. Jefa is imprisoned in the hundreds layered maze which guarded by some titans. With the gift and knowledge he has, he knew he have to collect some fragments of gem as the key to be able to unlock and get out from the maze.

SYSTEM REQUIREMENTS

- Intel Core-i3 1st Generation or above
- Windows 8.1 or Windows 10
- Keyboard and Mouse
- RAM 2GB or above
- 200 MB Free space

HOW THE GAME WILL BE PLAYED?

OBJECTIVE

You play as the imprisoned god Jefa. Your target is to find some fragments of a gem and find the way to escape from the maze by unlocking the ancient maze gate with the gem.

VIEWPORT

Our game has two viewports, first is the main viewport for first person view, and the second is the one for 3D map

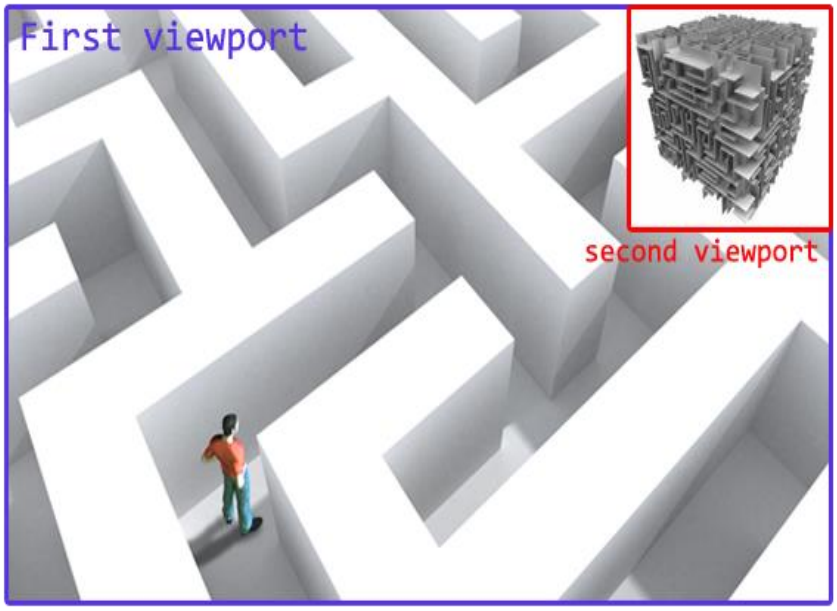


Figure 4. Viewport in the game illustration

3D MAZE MAP

The 3D maze will consist of 6 sides of maze maps connected to form a cube. The illustration can be seen below.

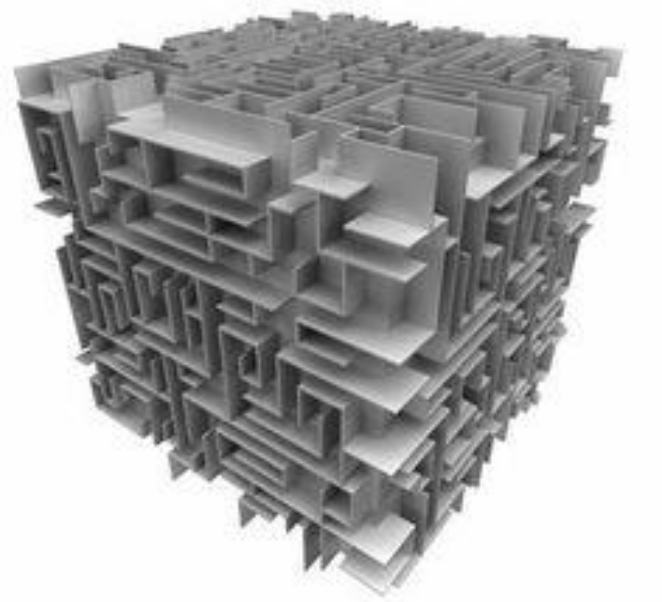


Figure 5. 3D Cube Maze Illustration

In each edge of the maze map, there will be some teleport points to connect current maze map with another maze map in the different side. To avoid confusion in deciding which side to be teleported, there will be no teleport point at the corners of the cube maze

ACTIONS

CHARACTER MOVEMENT CONTROL

Key "W" - Move the player to go up

Key "S" - Move the player to go down

Key "A" - Move the player to go left

Key "D" - Move the player to go right

PICK-UP

The user can pick up the gem and carry it as a key to unlock the ancient gate

MAP ROTATION CONTROL

You will have rotation control on 3D cube map in the second viewport.

GAME AI

To make the game more interesting, we have some AI monsters that will patrol in some random directions and chase you if you appear in their sight.

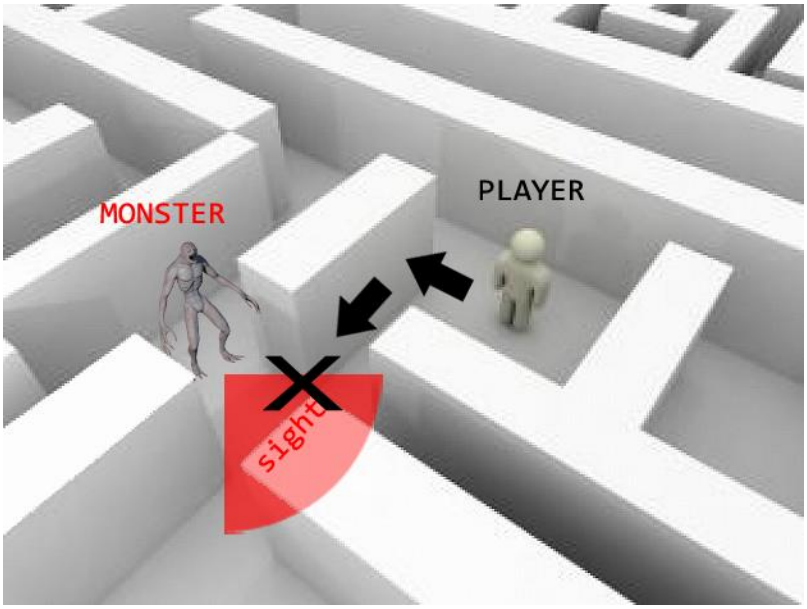


Figure 6. AI Illustration

LEVEL DESIGN

The player will have fixed starting point and fixed 3D maze map in the first level. In the next level the map will be generated randomly, and player will get random start point. Monsters will only be introduced from level 2 onwards, and the number of monsters will increase as the game gets harder.

ADVANCED FUNCTIONALITY

To make this game more interesting, we are going to build these functionalities which are the extension of the main game:

PARTIALLY HIDDEN MAP

We make the game more challenging by showing only the maze map partially, and hide the rest by covering the viewport with fog.

TIMER

Each level will have different time limit for finishing the maze.

MILESTONES

SEPTEMBER 2016

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
	Learning 3D game programming basics based on OGRE					
18	19	20	21	22	23	24
	Learning 3D game programming basics based on OGRE					
25	26	27	28	29	30	1
	Team forming					

OCTOBER 2016

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
25	26	27	28	29	30	1
2	3	4	5	6	7	8
	Individual game idea brainstorming					
9	10	11	12	13	14	15
	Game idea sharing and final idea development					
16	17	18	19	20	21	22
	Game proposal planning and writing					
23	24	25	26	27	28	29
	Game idea review and in-class presentation					
30	31	1	2	3	4	5
	Game engine and version control (GitHub) set up					

NOVEMBER 2016

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
30	31	1	2	3	4	5
		Weekly goal: scene setup, movement control, map, maze cube rotation				
6	7	8	9	10	11	12
	Weekly goal: timer, destination point, movement to another face of the cube					
13	14	15	16	17	18	19
	Weekly goal: random map generator, fog effect, value-add objects					
20	21	22	23	24	25	26
	Weekly goal: scoring system, multiple levels, splash screen, menu screen, score screen					
27	28	29	30	1	2	3
	Buffer time for debugging					

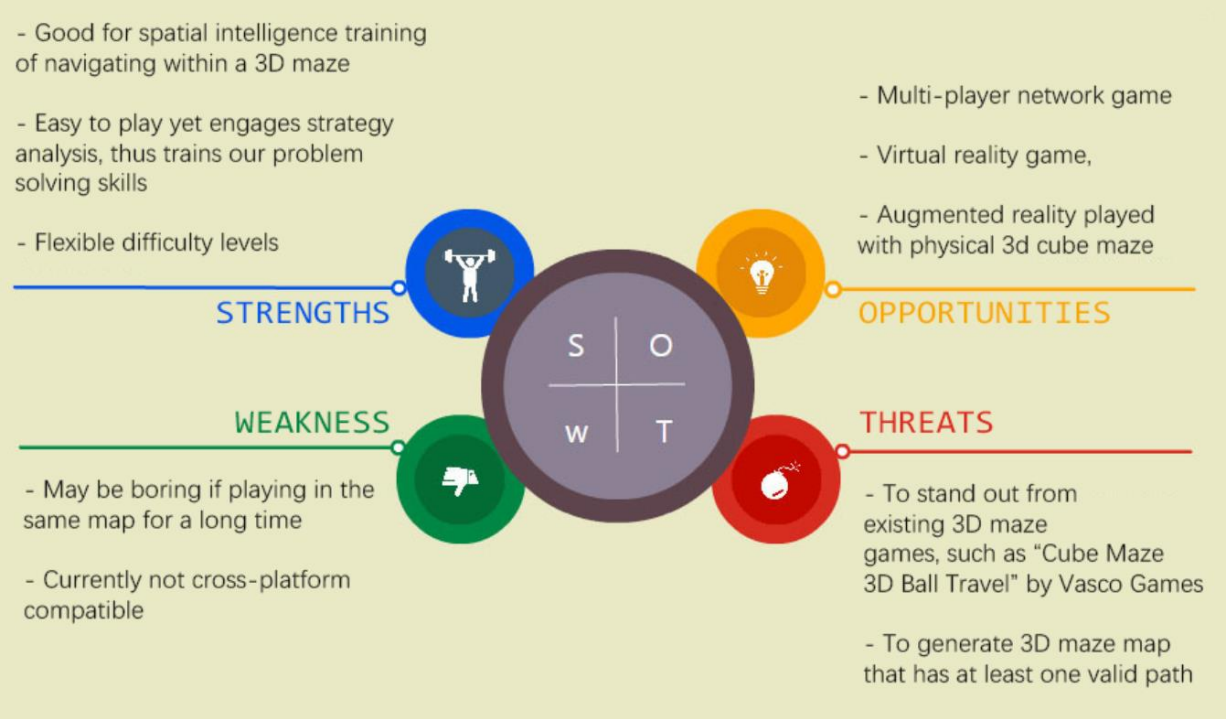
DECEMBER 2016

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
27	28	29	30	1	2	3
				Buffer time for debugging		
4	5	6	7	8	9	10
	Weekly goal: testing and adding monsters					
11	12	13	14	15	16	17
	Weekly goal: UI and graphics improvements					
18	19	20	21	22	23	24
	Buffer time for testing and additional functionalities based on feedback					
25	26	27	28	29	30	31
	User-testing, report writing, presentation preparation					

WORKLOAD DISTRIBUTION

		Fanuel	Setiawan	Zhexia
Project Management	Book meeting venue			
	Set agenda and coordinate meeting flow			
	Report writing and presentation preparation			
Ideation	Game play			
	Storyline			
	Game level			
Programming	Game Core			
	Map			
	Mesh			
	Overlay			
	Scene design			
	Monster AI			
	Sound			
	Add-on tools & special effect			
	Testing			

SWOT ANALYSIS



REFERENCE

Figure 1:
http://static.tumblr.com/a39ee31518b8f147b95dfcf4c3726312/5dhflck/Ue4mlkkam/tumblr_static_the-gods-and-titans-fought-in-a-ten-year-war-called-the-titanomachy-in-both-myth-and-movie.jpg

Figure 2:

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Figure 3:

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Figure 5:

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Figure 6 :

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