

Tung Duong

CS 461 - 01

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## **Game Progress Report**

*(Updates on the proposal)*

### **1. The title of the game**

- League of Guardians

### **2. Team members: Tung Duong**

### **3. The high concept of the game, which is a brief description of the game. This should not exceed a few sentences.**

- Base of League of Legends (LOL) game, I will create a game with similar LOL's map, champions but completely different playing style such as Defense game (combine with autochess if I have time and able to do).

### **4. Genre**

- Defense (and/or autochess)

### **5. Gameplay: A summary of what the player does, player's objectives, etc.**

- Use money from killing enemies to buy and upgrade champions, minions, fortresses, etc. to defend against enemy attacks.

### **6. Features: List of basic features and major selling points. E.g. what makes it different from other games?**

- Buy champions, towers, turrets, minions, etc to defend enemies.
- Place them in reasonable places to defend from different paths.
- Upgrade champions and fortresses based on the money earned from killing enemies.
- And the special thing is that all of these things (champions, maps, etc.) are still familiar to LOL players (the game with the largest gaming community today).

### **7. Setting: Description of the game world and why it is interesting.**

- First, I build this game based on LOL (the game with the most players today) so it will be able to attract many gamers.
- Second, many gamers want to find the feeling of trying other game genres but still keeping the style of playing, champions, maps, etc. of LOL.
- Final, on LOL's forum, many gamers have proposed the problem as to why LOL only has a mode where players fight each other but not a mode where players help each other to fight. So, this

will be the game they wanted to try out together to defend the center of their fortress from enemies.

### 8. *Story (If there is one): Synopsis*

- Based on LOL's universe.

### 9. *Audience: For whom the game is developed*

- For everyone, especially those who have played MOBA games such as DOTA or LOL.

### 10. *Hardware platform: E.g. PC/console/mobile, memory, processor, graphics card requirements*

Minimum & Recommended Requirements	PC SYSTEM		MAC SYSTEM	
	MIN SPECS	REC SPECS	MIN SPECS	REC SPECS
<b>CPU</b>	Intel: Core i3-530 AMD: A6-3650 ARM: Not supported	Intel: Core i5-3300 AMD: Ryzen 3 1200 ARM: Not supported	Intel: Core i5-750 ARM: Not supported	Intel: Core i5-3300 ARM: Not supported
<b>CPU Features</b>	SSE2	SSE4	SSE2	SSE3
<b>GPU</b>	NVidia: GeForce 9600GT AMD: HD 6570 Intel: Intel HD 4600 Integrated Graphics	NVidia: GeForce 560 AMD: Radeon HD 6950 Intel: Intel UHD 630 Integrated Graphics	AMD: HD 6570 Intel: Intel HD 4600 Integrated Graphics	AMD: Radeon HD 6950 Intel: Intel UHD 630 Integrated Graphics
<b>GPU Features</b>	DX10-Level Hardware	DX11-Level Hardware		
<b>VRAM</b>	1GB	2GB	1GB	2GB
<b>Free Storage Space</b>	16GB HDD	16GB SSD	12GB HDD	16GB SSD
<b>OS Versions</b>	Win 7, 8, 10	Win 10	MacOS 10.12	MacOS 10.16
<b>OS Architecture</b>	X86 32-bit, x64	x64	x64	x64
<b>RAM</b>	2GB	4GB	2GB	4GB
<b>Recommended GFX Setting</b>	Low	High	Low	High
<b>Recommended Resolution</b>	1024x768	1920x1080	1024x768	1920x1080

### 11. *Summary*

- Since LOL is a game that is so famous for its champions and storyline, I will use that to attract players. Moreover, many gamers are wanting to try playing LOL with other genres while still keeping the original character, plot and interface. So, I think if my game is invested in proper visuals (UI), it will have the potential to attract many players as well as gamers. However, I will only focus to playing style of the game (defense game) and less focus to the UI in this project.

12. Game Progress

<b>CS 461 - League of Guardians – Tung Duong</b> <i>(Proposal Updating, Development Status, Schedule with Remaining Milestones)</i>		
<b>Updates on the proposal</b>	<i>Design updates</i>	<ul style="list-style-type: none"> <li>• Genre: focus to defense game (no extent to auto chess anymore).</li> <li>• Story: no add story for now, will add later if have time.</li> <li>• Champions: will be import from the models I collect online (will note this as resource) and some objects I created by Blender.</li> </ul>
	<i>The rules changed</i>	<ul style="list-style-type: none"> <li>• While the player can get money from kill enemies, the money is also increased over time.</li> </ul>
	<i>The features changed</i>	<ul style="list-style-type: none"> <li>• The upgrade options for champion, towel will be canceled for now.</li> <li>• Show the time for each wave of minions if need it.</li> <li>• Player can control the camera, zoom in, zoom out, moving up, down, left, right but only inside the map, of course.</li> </ul>
<i>Design problems</i>	<ul style="list-style-type: none"> <li>• I downloaded some objects (models) on internet but when I import it to Unity, it missing some parts and disappearing some textures. I have to import it to Blender and fix it by my own.</li> <li>• I have to create many object and move it to the coressponding position in the map for the collision purpose, this took me a while.</li> <li>• The ratio of my game is 16:9 but the map of this game is square ratio. Then I need to create many object to cover the background when player zoom out of the stage but still in the map.</li> </ul>	
<i>Implementation problems</i>	<ul style="list-style-type: none"> <li>• When I zoom in and zoom out the camera, some of the objects are disappear or have the Z-fighting (collision between 2 objects that same position when rendering). I need re-hierarchy for these object as well as modify some set up of the camera.</li> <li>• The speed for near and far of the camera to the map is different, then I have to write a script to take some global variables to detect the position of the camera, then I can change speed of the camera corresponding with its position.</li> <li>• The minions only walk in three paths only (top, middle, bottom) and do not go to the jungle, then I need to write some script or simple AI to force these minions go to correct ways.</li> </ul>	
<i>Team member is working on what part</i>	<ul style="list-style-type: none"> <li>• Tung Duong work for whole parts in this project.</li> </ul>	
Features	Have been completed	Remain to be completed
<i>Game idea</i>	<ul style="list-style-type: none"> <li>• Defense game as described in the project proposal.</li> </ul>	<ul style="list-style-type: none"> <li>• Nothing for now. If I have time will try to do with the auto chess.</li> </ul>
<i>Game elements</i>	<ul style="list-style-type: none"> <li>• Almost complete the map plus corresponding collider objects for the terrain and objects on it.</li> </ul>	<ul style="list-style-type: none"> <li>• Towers (already collected and need fix something before importing)</li> <li>• Champions</li> <li>• Minions</li> </ul>

<i>Mechanics</i>	<ul style="list-style-type: none"> <li>It will be easy to play and fun since I'm creating this game based on basic defense game but related to LOL game.</li> </ul>	<ul style="list-style-type: none"> <li>Try to have save mode if I have time to do with the data for this game.</li> </ul>
<i>Physics</i>	<ul style="list-style-type: none"> <li>Collisions for terrain, objects, etc. in the map.</li> <li>The gravity, moving speed of minion, champions (walking, running).</li> </ul>	<ul style="list-style-type: none"> <li>Collisions for champions, minions, etc.</li> <li>Damage of tower, bullet or skill from champions etc.</li> </ul>
<i>Animation, modeling</i>	<ul style="list-style-type: none"> <li>Try to add some animation of the environment such as wind, cloud, etc.</li> <li>I have collected some objects and modified them with Blender, then it will be great for the game.</li> </ul>	<ul style="list-style-type: none"> <li>Animation for champions and minions.</li> <li>Fixing models with Blender (wrong hierarchy order, missing textures, materials, etc.).</li> </ul>
<i>Aesthetics</i>	<ul style="list-style-type: none"> <li>I'm collecting the sounds for background, attack effect, win or lose effect, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Will import the sounds corresponding when the game is almost ready (I will do this at the end of the progress)</li> </ul>
<i>UI</i>	<ul style="list-style-type: none"> <li>Try to add friendly UI, and have at least 3 modes for player (easy, normal, hard).</li> <li>The ratio of camera is good now, already have many objects to cover background when zoom in and out camera.</li> </ul>	<ul style="list-style-type: none"> <li>Need the menus and UI for beginning of game.</li> <li>I do not plan to create many scenes for each level now. Instead, I will increase the level of the game by increasing the speed and damage of champions, minions, towers, etc. over time.</li> </ul>
<i>Schedule with Remaining Milestones</i>	<ul style="list-style-type: none"> <li>With the features that remain need to be completed above, I will do:</li> </ul>	
	<ul style="list-style-type: none"> <li>Try to complete all the collider boxes in the map</li> </ul>	○ expecting to be completed by 4/17
	<ul style="list-style-type: none"> <li>Import models (towers, champions, minions)</li> </ul>	
	<ul style="list-style-type: none"> <li>Add moving for the objects</li> </ul>	
	<ul style="list-style-type: none"> <li>Add script for user interaction with game (important)</li> </ul>	○ expecting to be completed by 4/24
	<ul style="list-style-type: none"> <li>Add effect for the damage, bullets</li> </ul>	○ expecting to be completed by 5/1
	<ul style="list-style-type: none"> <li>Add UI (menu, money, buy items)</li> </ul>	
	<ul style="list-style-type: none"> <li>Add some basic animations</li> </ul>	○ expecting to be completed by 5/5
	<ul style="list-style-type: none"> <li>Add sounds</li> </ul>	
	<ul style="list-style-type: none"> <li>Prepare for the presentation and demo of game</li> </ul>	○ due 5/9
<ul style="list-style-type: none"> <li>Final paper</li> </ul>	○ due 5/16	

❖ I have added some screenshots of my progress for this game below. It shows:

- some of global variables in the camera's script
- how I arrange the position for the object, the object to cover background
- camera moving in game mode
- the box collider for terrain in the map, and more.





