Team 14 Final Project Description

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Project Name: The Unmanageable

Project Synopsis

A real-time strategy game that users could place certain army units they want to fight against the enemy. Eventually, who destroys the enemy's fort will be the winner.

Project Description

- Why is the project being undertaken?

We plan to design the computer game as our cap stone project because all four of us are gamers and we like playing the computer games. Hence, we decide to make a game as our cap stone project that we could be proud of.

- Describe an opportunity or problem that the project is to address.

We decide to use Unreal 4 Engine to design the architecture and the map. But none of us has the experience of any gaming engine so it is time-consuming to learn how to use Unreal 4 to design a great map. Furthermore, Unreal 4 does not run on the laptop but not all of us has the desktop PC at home so it might the technical issue for us.

- What will be the result of the project?

The result of the project would be a well-designed playable computer game. Since our game is a strategy game, we hope the players could escape from the stress of the lives and enjoy their time on the game.

Project Milestones

- Milestone1(before Nov): Setup background storyline and functional behaviors of different war units (in text).
- Milestone2(before Dec): Setup interface of game and how program flow for all game (in code).
- Milestone3(before winter break ends): Set all file frame (in code) for different classes(roughly).
- Milestone4(before March): Finish all the game basic function. Then combine them together, make it work.
- Milestone5(before April): Start playing game and figure out if there are any bugs.
- Milestone6(before final time): update graphics to game and finishing debugging.

PROJECT TITLE Time war

Purple- Dev(Haochuan) Pink- Dev(Zitong) Green- Dev(FeiShian) Blue- Dev(Jialei)

STEP ODRER	TASK TITLE
1	Setup background storyline and functional behaviors of different units(in text)
2	Setup interface of game and how program flow for all game (in code).
3	Set all file frame (in code) for different classes(roughly).
4	Full finish all the game basic function. Then combine them together, make it work.
5	sent game to others and testing them, then fix the bugs (pressure test).
6	update graphics to game, and finishing debugging

Project Budget

- Hardware: 4 laptops & 1desktop, software: Unity
- Estimated cost: 500+ USD
- Vendor: None
- Special training: None
- We already have the hardware now, but it costs several hundred dollars to let artists design the character and map graph for us.

Final project design

We will make a real-time strategy game that can first be run on a PC and operated with a mouse and keyboard. The game supports up to two real players, or one player against an AI and it also supports networking, local area network, and independent game modes. The view of the game is overhead. The target audience of the game is basically between 15 to 40 years old. There is no gender difference, but there are certain requirements for game knowledge. Players who are not exposed to the game may spend more than 4 hours of learning time. The complete game time is between 30 and 1 hour, so we expect that players will spend at least 30 minutes on each game. Egg game provides save function so players can use the scattered time to play. After playing this game, players can relax and there is no plan to add educational elements. In the future, the game will be played in a parallel overhead world. The game has multiple regional settings, but the main regional settings are played in the wild and mountainous areas. In this plan, we will use Berlin noise to generate different maps and use different frequencies to make both parties have a fair game.

The map is used as the main interactive interface (basic elements: combat units belonging to the player, neutral buildings, terrain). The map accepts instructions from players to generate fighter jets. The soldiers will advance in accordance with the established method of action. The main method to distinguish different fighters in the field of view and the range of attack. If an interaction event is found in the field of vision (an enemy is found, a neutral building is found,

and interaction with its own unit occurs), the fighter will change its course accordingly and interact with the target when it reaches the attack point.

The winning condition of the game is to destroy the opponent's base which locate at the corner of map for each player, so players need to predict and respond to the opponent's behavior. Because the units cannot be directly affected by the player after the generator, the player needs to regenerate the unit to think and predict the ideas of the opponent player. The game will make players who like to play the game addictive, even if the player loses, they can get the next way to win from the game. Every time you win, you can earn points by purchasing skins. In most of online games, players could earn some points by the victory. It will not affect the balance of the game and the vanity of the player. Compared with similar games, the game has a larger map space and complex units, and has certain requirements in operation, so players will never pass the game in a short time, thereby extending the service life of the game.

Ethical Issues

Computer games have been exploited in the educational procedures since they help in fostering the creativity, in familiarization with technology, and develop problem-solving, logical thinking, communications, and the collaborative skills. People think games could be a drug or medicine to the society since players are fully motivated in either positive or negative ways. Computer games now are ethically affecting players' attitudes, thoughts, and ideas. The ethical issues include violence, racist, education, stereotype against women or any minor groups. There are many games involving violence as well as other content related to the violent acts. Hence, people usually believe that playing these types of computer games can make the players to be more violent. However, games could also be used to teach many positive things. Hence, every member as the game designer in our group must avoid ethical issues mentioned above and tries the best to make the game to not affect the players in any negative ways.

Intellectual Property Issues

Our group uses Unreal 4 Engine to design the map, architectures, and the characters for the game. This gaming engine could be downloaded for free online and it allows users to connect multiple instances of Unreal 4 Engine editors together to work collaboratively in a shared editing session. Also, there are many open source codes available on GitHub repository. Users could use some of them for free or choose to pay for it for a premium version. Since Unreal 4 Engine allows users to collect other's source code, we must be very careful of it. Before using the code, we must check if the author of the source code allows us to use his/her code in our project. Even though the author has clearly pointed that anyone could use the source code for free, we still need to give the credits to the author by citing the name of the author and his/her work in the citation.

Change Log

- The size of the map

We wanted to make an awesome and big map at first. But when it comes to the reality, it takes too much time to generate a map and it also takes too much memory space and the difficulty is totally unexpected, so we decide to limit the size of the map.

- Characters

We decide to use stick-figure for our characters now. Exquisite characters is not hard to designed, but it’s difficult to do the algorithm of how it moves so we give up eventually.