Strategy :

**Thank you Holly for giving background information of our project. Now I would like to talk about** Methodology that is strategy, how to build the application step by step and how will it achieve our project objectives.

Minimum Viable Product 1:

Before developing the whole planned big-scale game, **the project would be break down into some smaller parts as a milestone to build. The first step,** we want to make ensure game core is working first. But how?

In development there is a term calling minimum viable product which refers to the smallest thing you can possibly make

How to determine we are down to that minimum, the basic idea is to find the absolute minimum set of features that wont affect core development. If we conld cut a feature and it can still be launched, that is probably not part of our minimum viable product

Mario :

Let run on some example say super mario

So what is the minimum of fundamental gameplay of super mario is engaging

Do we need fire flowers? No. Do we need pipes that you can climb down? No. mushrooms?Block?extra lives? No No No. For mario, the minimum viable product is probably one level where you can move jump and fall into pits. That is. if running along and jumping over doesn’t feel good, super mario simply doesn’t work no matter how many extra features throw in.

Flow:

So back to our application. what is the minimum that we can build

The first one is database model. The database is used for storing the data of the whole application, including the questions and answers used in the games, and also the user accounts data. That is the main core of the application, we cant lost any question in a question-base game right?

Next, A login system is also required. You may wondering is login function necessary to build so early. The answer is Yes. The first reason is this is an online game which require network connect to get user data from database and let each other to know who they are. The second reason is for classifying students and teachers. So according different user ID which belong to student or teacher, 2 different interface will be shown once they login. login system is necessary to our application

Then, a question-base game is built. By answering sample multiple choice question, user can instantly know the result. Once finishing the game, result will be sent back to game server for later analysis. It is necessary for us to test is database working. That is the whole process of our minimum viable product.

Milestone2

**In milestone 2, that is game design. after ensure the game core work, it is time to** expand the application by **adding some interactive game element.** Just like adding mushrooms or boss these additional features to super Mario. **In this stage, detail application flow and game interface. Which interface will you choose for secondary school teenager? I would prefer this one**

**Some beautiful graph and RPG-game element will be added such as this capon**

**So it can achieve our second objective.**

Milestone3

**Next stage, development is focus on the perspective of teacher. In order to fulfill the third project objective, enhance teaching, user experience of teachers would be the best consideration. What analysis of game result they need and how to display these results are the main tasks to investigate. The Web interface would be implemented for teachers to import their quizzes and questions.**

**Before launch, there are still long way to go. Such as testing to ensure it can work well.**

Current Status

**Currently, our first milestone was almost completed. Database was set up and ready for use. Login system is functioning properly. All user can register and login to the application.**

**Students are allowed to join a room. After answering all questions, they can review the result in the application.**

**In the coming stage, we will design game play and these algorithm.**

**Let see some screen cap on our project, the interface is simple, but**

Strategy :

**To achieve our project objectives, some strategies are identified as each of the following:**

**Before start the implementation of whole planned big-scale application, the project would be break down into some smaller parts as a milestone to build. Our first goal is to construct a minimum viable product. It is a collection of the absolute minimum set of features that will not affect core development. Apart from detail game design and complicated application flow, game server, database server, login system should be ready to produce minimum viable product.**

**Once completing minimum viable product, detail application flow and game interface would be designed. In this stage, a better user experience would be required in order to achieve our second objective. That is break of tradition by lively and interactive lectures.**

**Before delivery, the whole application will be tested to ensure it can work well. Modification will be made if necessary. Bugs which affect equity of players and lead to unfair game should be eliminated. Through the final developing and testing part, our application can be launched smoothly. That will accomplish our first objective, developing games for playing in real-time lecture.**

Minimum Viable Product 1:

Before developing this big-scale game. We want to make ensure game core is working first. But how?

In development there is a term calling a minimum viable project which refers to the smallest thing you can possibly make that will still give you useful data once released that should be our goal

How to determine we are down to that minimum viable product, the basic idea is to find the absolute minimum set of features that wont affect core development. If we conld cut a feature and still technically ship our game, that is probably not part of our minimum viable product

Mario :

Let run on some example say super mario brothers what do we need in order to test if the fundamental gameplay of super mario brothers is engaging what is the minimum that we can build and test before deciding if what we have is something worth expanding upon with additional features. Do we need fire flowers? No. Do we need pipes that you can climb down? No. mushrooms?Block?extra lives? No No No. For mario, the minimum viable product is probably one level where you can move jump and fall into pits. That is. If just that much is engaging we will able to add all those other features later and make it better. But if running along and jumping over pits doesn’t feel good, super mario brothers simply doesn’t work no matter how many extra features throw in.

Flow:

In the beginning, the database model will be designed first. The database is used for storing the data of the whole application, including the questions and answers used in the games, and also the user accounts data. Which kinds of question type used will be decided before the implementation of the game. In other words, whether multiple choice or fill in the blank question can be used into the game.

A login system is also required for classifying students and teachers. The database will transact different data. The interface of students need to load their own character while the interface of teachers can acquire personal information and online status of the students.

Milestone2

**Once completing minimum viable product, detail application flow and game interface would be designed. In this stage, a better user experience would be required in order to achieve our second objective. That is break of tradition by lively and interactive lectures.**

After that, the details of game play will be designed. In order to get rid of traditional passive lectures, interactive game element will be applied. Teacher’s computer can display game result of students instantly.

Then, detail of the game interface will be devised. Simple graphics will be applied to implement the basic functions. There are two different interfaces for teacher and student.

Milestone3

**Next stage, development is focus on the perspective of teacher. To fulfill the third project objective, enhance teaching, user experience of teachers would be the best consideration. What analysis of game result they need and how to display these results are the main tasks to investigate. The Web interface would be implemented for teachers to import their quizzes and questions.**

**Before delivery, the whole application will be tested to ensure it can work well. Modification will be made if necessary. Bugs which affect equity of players and lead to unfair game should be eliminated. Through the final developing and testing part, our application can be launched smoothly. That will accomplish our first objective, developing games for playing in real-time lecture.**

Next, the detail of the games will be designed and hence, the implementation of the game logic. Before delivery, the whole application will be tested to ensure it can work well. Modification will be made if necessary. Bugs which affect equity of players and lead to unfair game should be eliminated.

Current Status

**Currently, our first milestone was almost completed. The minimum viable product was produced and run smoothly. Database was set up and ready for use. Login system is functioning properly. All user can register and login to the application. A simple application with a simple interface can be launched. Students are allowed to join a room. The character will lose Health Point (HP) when answering wrong and gain rewards when answering correctly. After answering all questions, they can review the result in the application. However, the Web application for teacher inputting question are still on the progress. The sample quizzes were imported by us manually.**