

**STUDENT INDUSTRIAL INTERNSHIP PROGRAMME LOGBOOK**

**Student Name: Nur Nabilah Bt Nor Azelan**

**Matric No: 24606**

**Programme: Information Technology (IT)**

**Place of Training: Murdoch University, Australia**

**Period of Training: 7 months**

**Project Title: Nueromender Project**

**SIP LOGBOOK REPORT**

**LOG BOOK WEEK NO: 13-14**

|  |  |  |
| --- | --- | --- |
| **WEEK NO** | **DATE** | **BRIEF DESCRIPTION OF DAILY ACTIVITIES** |
| **13** | **25/11/2019** | * **Take a leave** |
| **26/11/2019** | * **Fixing Jittering problem** |
| **27/11/2019** | * **Finding study case of Jittering** |
| **28/11/2019** | * **Finding study case of Jittering** |
| **29/11/2019** | * **Testing Jittering** |
| **14** | **02/12/2019** | * **Testing jittering on cubes scene** |
| **03/12/2019** | * **Compiling videos for documentation** |
| **04/12/2019** | * **finalizing project documentation and executable file** |
| **05/12/2019** | * **finalizing project documentation and executable file** |
| **06/12/2019** | * **Meeting with supervisor** * **Finalizing documents needed to be submitted** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Logbook Weekly Evaluation by HOST COMPANY SUPERVISOR | | | | | |
| I**nstruction to Host Company Supervisor**  Please refer to the student’s detailed report for that particular week before assessing his/her performance.  Please mark in the appropriate box based on the following score : [5] Excellent [4] Good [3] Average [2] Below Average [1] Unsatisfactory | | | | | |
| **Student’s Score** | **Beginning**  **(<2.0)** | **Developing**  **(2.0 to <3.25)** | **Accomplished**  **(Rare)**  **(3.25 to <4.0)** | **Exemplary**  **(Exceptionally Rare)**  **(4.0 to 5.0)** | **Score** |
| Initiative & Creativity | Had little observable drive and did not have new ideas | Some observable drive and some new ideas | Mostly self-starter and sometimes sought new challenges and offered new ideas | Always a self-starter and consistently sought new challenge and offered new creative ideas | **/5** |
| Task Accomplishment & Commitment | Partially accomplished given task despite full supervision | Accomplished given task but with full supervision | Accomplished given task but with some supervision | Accomplished given task with very minimum supervision | **/5** |
| Attendance & Punctuality | Frequently absent and always late | Sometimes absent and sometimes late | Never absent and almost always on time | Never absent and always on time | **/5** |
| Attitude & Self Control | Unable to demonstrate positive attitude and hardly maintained self-control under pressure | Occasionally demonstrated positive attitude and occasionally maintained self-control under pressure | Sometimes demonstrated positive attitude and maintained self-control under pressure | Consistently demonstrated positive attitude and consistently maintained self-control under pressure | **/5** |
| Total Score | | | | | **/20** |
| **Comments:** | | | | | |
| **Host Company Supervisor’s Signature & stamp:** | | | | | |
| **Name & Designation:** | | | | | |
| **Date:** | | | | | |

*(make copies if necessary)*

**DETAIL REPORT WEEK NO: 13**

|  |
| --- |
| **Objective(s) of the activities :** |
| **Contents :**   * **We took a day leave** |
|  |

**DETAIL REPORT WEEK NO: 13**

|  |
| --- |
| **Objective(s) of the activities :**   * **Fixing Jittering problem** |
| **Contents :**  While finding the solution for jittering, some developer suggested that the problem of jittering might be related to unusual interaction of networking system. Some other solution suggested by developers are: (the solution suggested are based on problem of jittering while stacking cubes)   1. To enable *“Adaptive Force”*  in Unity setting;   The option will enable improvement in stability while stacked object.   1. To set mass according to area or size of mesh   Solutions have been tried but nothing is changed in the project. Therefore we still try to configure other solutions to try. |
|  |

**DETAIL REPORT WEEK NO: 13**

|  |
| --- |
| **Objective(s) of the activities :**   * **Finding study case of Jittering** |
| **Contents :**  There are several case studies about jittering problem, however most solution are not using Unity engine. The first study case, the developer is developing a multiplayer 3D game (as shown in figure below). The problem encountered by the developer is jittering in client side. The developer also sending the input from clients to the server and running movement code just like our module. However, the problem posted by developer does not receive any reply from other developer.      The developer also describes several possible problems that might cause the jittering to occur;   1. The client was calculating physics based on the velocity coming back from the server and conflicting with the updates coming from the server. As a solution, the developer used Destroy() function, but still does not make any changes. 2. The issue might be related with packet arriving out of order in networking. |
|  |

**DETAIL REPORT WEEK NO: 13**

|  |
| --- |
| **Objective(s) of the activities :**   * **Finding study case of Jittering** |
| **Contents :**  In another case study is based on Oculus device, where the developer describes criteria in using network physics in Virtual Reality (VR). In this case study, the developer wants to develop a module in which there a several players could interact with physically stimulated cubes on table. The situation really fits our module in the project.  There is some component that been emphasized by developer which is authority scheme. There are two main component:   1. **Authority**. Each object in are given an authority in which characterize the behavior of object while interacting with player. When other player interact (changing of player), the authority will be updated. 2. **Ownership.** Once object is owned by a player, no other player could take the ownership until the current player gives away the ownership.   The developer also implements Authority sequence and Ownership sequence. Authority sequence ensures that the final at rest state for cubes under guest authority are committed back to the host, even under significant packet loss. While, Ownership sequence increments each time a player grabs a cube. Ownership is stronger than authority, such that an increase in ownership sequence wins over an increase in authority sequence number. |
|  |

**DETAIL REPORT WEEK NO: 13**

|  |
| --- |
| **Objective(s) of the activities :**   * **Testing Jittering** |
| **Contents :**  In our project, we tried to change the time setting in player setting:   * Fixed timestep: 0.01 and 0.04 * Timescale : 0.5   The results are:   |  |  | | --- | --- | | Fixed Timestep :0.01 | In master client view, the cubes scene can be stacked without jittering problem. However, on client (other player) view, they still see the cubes jittering while stacking | | Fixed Timestep :0.04 | Both players can stacked cubes without jittering, but when one player tries to stack cube on others stacked cubes, the jittering starts again. | | Timescale : 0.5 | The movement of players in the scene will be slower. | |
|  |

**DETAIL REPORT WEEK NO: 14**

|  |
| --- |
| **Objective(s) of the activities :**   * **Testing jittering on cubes scene** |
| **Contents :**  We try the "Photon Transform View Classic" and put the component as observed component in photon view. While trying, the jittering was not fully solved but the jittering was slower than tested before. The testing using PC connected to Wi-Fi and PC connected to WLAN. Both connections have difference in terms of latency. With PC connected to Wi-Fi, the jittering is higher than PC connected using WLAN |
|  |

**DETAIL REPORT WEEK NO: 14**

|  |
| --- |
| **Objective(s) of the activities :**   * **Compiling videos for documentation** |
| **Contents :**  For video documentation, we compile the project starts with:  a. Introduction  b. Objectives  c. Setup Photon Server and database  d. Demonstration of Creating and Joining Room and modules of project  As shown in figure below, Xbox Screen Recording is used to record all demonstrations. Videos were recorded and compiled to be used in documentation videos. |
|  |

**DETAIL REPORT WEEK NO: 14**

|  |
| --- |
| **Objective(s) of the activities :**   * **Finalizing project documentation and executable file** |
| **Contents :**  Compiling videos is part of the documentation. The documents needed to be compiled are :   * Project Documentation consists of how to setup the project, possible problem and solution for the project. * Video that demonstrates the project * Executable files of project |
|  |

**DETAIL REPORT WEEK NO: 14**

|  |
| --- |
| **Objective(s) of the activities :**   * **Finalizing project documentation and executable file** |
| **Contents :**  While finalizing executable project file, some errors has occurs such as:   * The connection between users / players was not stable. When player enters the room, one player lost connection and leave the room abruptly. The possible problem is one of the PC used to run the project is connected to Wi-Fi, whereas the other PCs are connected to WLAN. Therefore the connection is more stable when using WLAN. As a result, the player needs to restart the project every time it leaves the room unexpectedly. * We also need to display the player nickname for player in modules. The challenges in meeting the requirement is the nickname disappear after player leave and reenter the room. The problem solved after fixing some coding related to Photon Network function. * Object Jittering is the most challenging problem when finalizing the project. We have tried few solutions but the problem remains the same. Therefore, our supervisor suggested the team to include the problem into documentation mentioning the possible cause of the problem. |
|  |

**DETAIL REPORT WEEK NO: 14**

|  |
| --- |
| **Objective(s) of the activities :**   * **Meeting with supervisor** * **Finalizing documents needed to be submitted** |
| **Contents :**   |  |  | | --- | --- | | **Objectives** | **Contents** | | Meeting with supervisor | We demonstrate the final project to supervisor and get some review about project. | | Finalizing documents needed to be submitted | Documents submitted to our supervisor are:   * ZIP Files of executable project * Project documentations * Video demonstration of project | |
|  |