STUDENT INDUSTRIAL INTERNSHIP PROGRAMME LOGBOOK

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Matric No:	24715
Programme:	BUSINESS INFORMATION SYSTEM (BIS)
Place of Training:	MURDOCH UNIVERSITY, AUSTRALIA
Period of Training:	6TH MAY 2019 TO 6TH DECEMBER 2019
Project Title:	NEUROMENDER (a home computer-based stroke rehabilitation system)

LOG BOOK   WEEK NO: <u>11–12</u>

WEEK NO	DATE	BRIEF DESCRIPTION OF DAILY ACTIVITIES
11	**15th July 2019**	• Connecting PUN to server • Setting up XAMPP
	16th July 2019	• Practicing PUN basic tutorial • Read documentation on Photon Server
	17th July 2019	• Understanding connection of Photon server
	18th July 2019	• Configure the connection of database
	19th July 2019	• Installing and setting up MySQL Workbench
12	**22nd July 2019**	• Fixing the connection of server
	23rd July 2019	• Connecting two PCs using PUN • Connecting database from Unity
	24th July 2019	• Fixing connection from database to Unity
	25th July 2019	• Retrieving data from database to Unity
	26th July 2019	• Importing User Interface on build Unity

Logbook Weekly Evaluation by HOST COMPANY SUPERVISOR					
Instruction to Host Company Supervisor Please refer to the student's to assess his/her performance. Please award the scores based on the range below:					
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: 12**

Objective(s) of the activities :

- Fixing the connection of server

Contents :

We figured out that there was a problem with server connection since when we cannot load room from client. This is because the connection actually not connected to master server.

We changed the IP address in PUN server settings to fix the connection. Then, we restart the Unity and rerun the project back. We can load the scene and player can entered the room. This means that the connection has been established.

Then, we tried to do the same thing at other PCs as to the Peer to Peer connection but we failed to establish the connection.

DETAIL REPORT   **WEEK NO: 12**

Objective(s) of the activities :

- Connecting two PCs using PUN

- Connecting database from Unity

Contents:

We tried to put the same IP address at PUN settings as host server and load the scene. The connection was established and the scene has been loaded. Two players can join the same room but they cannot see each other. We figured out that there must be a problem with the Peer to Peer connection.

Other than that, we managed to create the database. Even though the database server is running but we somehow could not establish the connection between the server and Unity. This because of certain errors such as dictionary errors in visual studio.

The difficulties that I faced during the setup:

- The server detected amount of player wrongly. When the scene is loaded, the server detects more than two players joined the room even though there are only two players joined the room.

- Two scenes are not synchronized to each other between the players.

- Connection to database is failed to establish due to error.

Objective(s) of the activities :

- Fixing connection from database to Unity

Contents :

We keep getting error that state "Error of the given key was not present in the library" that related to several components in MySQL. Other than that, we also get an error that suggest to upgrade the MySQL client, some suggested that we should change the privilege in our MySQL server.

Then, we tried to follow all the suggestions we got form YouTube and internet to fix the error. After tried to change several coding, we managed to established the connection between the database server with Unity. The error fixed when we add the character set in the connection string to be passed to MySQL server.

Difficulties that I faced:

- We still can`t fixed the error even though we tried several suggested solutions.
- We also occur a problem after that when we want to retrieve data from the database.

DETAIL REPORT   **WEEK NO: 12**

Objective(s) of the activities :

- Retrieving data from database to Unity

Contents :

We checked the connection of the database from Unity. The connection was established but we still cannot retrieve the data. We cannot compare and validate data input by user and compare with data in database

Difficulties I faced:

- We cannot get reference on how to fix the error which is how to retrieve data from unity through MySQL serve since, most of the tutorials use PHP language to connect unity with database. We did refer to .NET and MySQL documentation.

- The error finally fixed using parameter of MySQL connectors.

- Then, we faced another problem when we build the scene, the GUI text panel is not displayed.

DETAIL REPORT   WEEK NO: 12

Objective(s) of the activities :

- Importing User Interface on build Unity

Contents :

- As follow up to yesterday problem which was the text set in GUI panel isn't displayed when the scene was run on build. There's no error when running in editor.
- The texts that we wanted to display were:
  - the "connected" statement which show the user has been connected to database when running the application
  - The "login successful" and "login failed" statements to authenticate whether the user has the account in the database or not.

- challenges I was facing along the way were:
  - The text was first assigned as .text component, and displayed whenever the connection to database is established and the user successful to login the apps. However, the text not appears when we build the scene, but it works fine in editor mode.
  - Next we tried to assign the text to a GameObject and set the game object to .SetActive function. However, the text still not appears.
  - The problem detected when the connection cannot was not actually established when we display the database connection status using GUI function on build mode. In Unity community website, solution suggested was to add in I18N.dll and I18N.West.dll in asset.

- The connection was successfully established and texts that we wanted to displayed have displayed when running the build mode.
- We tried to compile all scenes starting from login page, connecting to server and room whenever the players have been connected to server and database. The application has been successfully built but we do not to try to connect two users in multiplayer mode.

A problem arise when two users entered a room but they cannot see each other.

WEEK NO	DATE	BRIEF DESCRIPTION OF DAILY ACTIVITIES
13	29th July 2019	• Connecting database from another PC
	30th July 2019	• To make clients in other PC connect in multiplayer mode • To make other player see each other in other room
	31st July 2019	• To make clients in other PC connect and see each other in multiplayer mode
	1st August 2019	• To make clients on another PC see other player in one room
	2nd August 2019	• To fixed the position of avatar when clients enter a room
14	5th August 2019	• Adding controller to environment
	6th August 2019	• Modules briefing • Oculus Quest setup
	7th August 2019	• Oculus Quest setup
	8th August 2019	• Pairing device (HMD) with oculus application on phone • Transferring APK into oculus quest
	9th August 2019	• Enable two controller in oculus quest

| | | | Logbook Weekly Evaluation by HOST COMPANY SUPERVISOR | | |

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				Total Score	/20

Comments:

Host Company Supervisor's Signature & stamp:

Name & Designation:

Date:

(make copies if necessary)

Objective(s) of the activities :

- Connecting database from another PC

Contents :

There are a few challenges that I faced during making connection from another PC.

- The application is not connected to database at server host when we made connection to another PC through deployed application.

- We received error stating that the "*The connection is invalid and must be open*" and connection also stated that it is not established yet.

- Our first solution is to give privilege to the other pc using IP address to connect to database, but the connection still cannot be established. We found that due to the hosted PC is connected to database server using local IP address. Then, we tried to search for another solution and found two options:
    - Another PC need to install the database and access the database but we found it too risky since the data is not secured when other can access the database directly

    - Online hosted server and use the PHP coding as a layer to allow user to access the database.

Objective(s) of the activities :

- To make clients in other PC connect in multiplayer mode
- To make other player see each other in other room

Contents :

There are a few challenges that I faced to achieve the objectives:

- Player can enter the room and get connected through network in another pc but they cannot see each other. We checked the connection between PC and server and it is established.

- We found the problems which are:

  - It could be the problem with the camera which we are not attaching any object to it so the other player cannot be seen in Virtual Reality environment.

  - It also could be the instantiate method that we were doing it wrongly to the object attached when player entered a room.

DETAIL REPORT   **WEEK NO: 13**

Objective(s) of the activities :

- To make clients in other PC connect and see each other in multiplayer mode

Contents :

- We did the PUN tutorials again but some of the contents might not be applicable in developing the Virtual Reality (VR) environment.

- We did run and built the scene successfully in both hosted and other PC. The avatar in the scene can be spawned when other player entered the same room and also the action is synchronized correctly such as running, and lighting beams using keyboard input from player

- There are a few challenges that I faced to achieve the objectives:

  - The tutorial is not for the Virtual Reality settings players can connect with other PC in the same room since it gets the input from the keyboard

DETAIL REPORT   **WEEK NO: 13**

Objective(s) of the activities :

- To make clients on another PC see other player in one room
- To fixed the position of avatar when clients enter a room

Contents :

- We need to transfer one player position and rotation to other player through photon server and the object will be spawn when other player enters the room while retrieving data from other player about their position in the scene

- In the tutorial, we run the scene without VR devices, and when two players entered a room, the avatar can be spawned and there are 2 avatar which represents 2 players in one room

- Then, we tried to change the camera view into camera rig in the Virtual Reality package, and attached the avatar with the camera rig but the avatar seems to fall down because of the collider.

- There are a few challenges that I faced to achieve the objectives:

  - The avatar that attached to camera rig fall down while the scene is running.

  - When other player enters the room, both player can be seen but the position sometimes hard to determine because it is not fixed to the camera

- Then, we tried to adjust the collider and the character is fixed successfully and finally attached to the camera.

- The result of the deployed application: users can enter the same room and see each other along with its position in the room, the avatar also attached to the camera all the time

Objective(s) of the activities :

- Adding controller to environment

Contents :

There are a few problems that I faced during adding controller to environment which are:

- The controller is invisible to other player in the scene. The controller cannot be attached to the character so, an avatar is added to allow the controller to be visible

- We add the game object to instantiate during playing so, the controller can be spawned in when other player enter the room and it fixed the problem.

Objective(s) of the activities :

- Modules briefing
- Oculus Quest setup

Contents :

- Dr Fairuz briefed us about modules that we will be doing. We were asked to divide into pairs which each of team will be given one project.

- The first task for four of us to setup the Oculus Quest since we will be handling a project related to Oculus.

- We learnt about two devices of Oculus which are Oculus Quest(two controllers) and Oculus Go(one controller).

- We were given a guideline to setup the android SDK and NDK

- The task are :

  - Integrating multiplayer mode
  - Nursing model for injection: The model requires a model with different layers of cylinders like the real arms with layers of skin, each layers of cylinders has different resistance to depict that the injectors has goes in the layers of skin.

Objective(s) of the activities :

- Oculus Quest setup

Contents :

There are a few procedures that I need to follow during the Oculus Quest setup which are:

1. We need to download the oculus apps in a device.
2. In the application we have to connect the device and application through Bluetooth.
3. Change the Oculus Quest to developer mode.
4. Connect Oculus Quest to PC.
5. Add APK file to Oculus through command or SideQuest.

There are a few problems which are:

- After downloading the apps, we has a problem in connecting the oculus head device (HMD) with the apps.

- Out of date ADB version

- The device was not found when the application (APK) was ready to transfer into device. It is because the devices was not yet connected to the PC and application in the phone

Objective(s) of the activities :

- Pairing device (HMD) with oculus application on phone
- Transferring APK into oculus quest

Contents :

We got problem which are the device can't get connected through the apps in phone so, we followed a few solution suggested by the Oculus Developer website:

- factory reset the oculus quest (updating ADB in Oculus Quest)

- Connecting to other device

- get the 5-digit code and sync with oculus apps on phone

- Restart PC and phone

- Use other cable to connect to PC

- Use other PC

DETAIL REPORT   **WEEK NO: <u>14</u>**

Objective(s) of the activities :

- Enable two controller in oculus quest

Contents :

The next thing we need to do is to enable the two controller in the application using Oculus Quest device. There are a few method that we tried to enable the controller:

- We tried to change the setting in OVRInputManager, OVRInput, OVRInputModule

- Some coding in the APK files was changed

- Some tutorials provided through given link were tried, but still the apps work on one controller

Problem still unsolved. When running the application, the controller was still using input as one controller. All the changes still does not allow having two controllers setting in the APK file.