



UNIVERSITI  
TEKNOLOGI  
PETRONAS

# STUDENT INDUSTRIAL INTERNSHIP PROGRAMME LOGBOOK

**Student Name: Nur Amiera Binti Mohd Noor**

**Matric No: 24651**

**Programme: Bachelor of Technology in Information Technology**

**Place of Training: Universiti Teknologi PETRONAS (UTP) / Murdoch University, Australia**

**Period of Training: 6<sup>th</sup> May 2019 – 6<sup>th</sup> December 2019**

**Project Title: Project Neuromender (A Home Computer-Based Stroke Rehabilitation System).**

**LOG BOOK****WEEK NO: 9–10**

WEEK NO	DATE	BRIEF DESCRIPTION OF DAILY ACTIVITIES
9	01.07.2019	<ul style="list-style-type: none"><li>• Report duty at Murdoch University</li><li>• Set up HMD</li></ul>
	02.07.2019	Meeting for project explanation
	03.07.2019	<ul style="list-style-type: none"><li>• Read research paper about multiplayer collaboration and immersive virtual environment</li></ul>
	04.07.2019	<ul style="list-style-type: none"><li>• Study about what is Photon server and Photon Voice</li><li>• Compared between BitBucket and GitHub</li></ul>
	05.07.2019	<ul style="list-style-type: none"><li>• Present the idea to SV</li></ul>
10	08.07.2019	<ul style="list-style-type: none"><li>• Research about server</li><li>• How to use Photon Unity Networking server</li></ul>
	09.07.2019	<ul style="list-style-type: none"><li>• Study about PlayFab</li><li>• Study about how to create lobby</li></ul>
	10.07.2019	<ul style="list-style-type: none"><li>• Create UI login</li><li>• Study about Playfab dashboard</li></ul>
	11.07.2019	<ul style="list-style-type: none"><li>• Complete code for login</li><li>• Study about how to add custom authentication</li></ul>
	12.07.2019	<ul style="list-style-type: none"><li>• Present progress to SV</li><li>• Design authentication using facebook</li></ul>

Logbook Weekly Evaluation by HOST COMPANY SUPERVISOR					
<b>Instruction to Host Company Supervisor</b> 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
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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
<b>Comments:</b>  					
<b>Host Company Supervisor's Signature &amp; stamp:</b>  					
<b>Name &amp; Designation:</b>  					
<b>Date:</b>  					

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## **DETAIL REPORT**

**WEEK NO: 9**

### **Objective(s) of the activities :**

- **Report duty and insight about Murdoch University**

### **Contents :**

#### **Monday (01.07.2019)**

1. Tour around Murdoch University
2. Get to know more about the project that has been produce using vr
3. Set up several head mounted display
  - HTC Vive
  - Oculus
  - Windows Mixed Reality

## **DETAIL REPORT**

**WEEK NO: 9**

### **Objective(s) of the activities :**

- **Explanation about project**
- **Task given**

### **Contents :**

**Tuesday (02.07.2019)**

1. Dr Fairuz and Mr. Shri explain about what project that we need to produce
2. Task has been given
  - Read some research paper about multi-user collaboration and immersive virtual environment
  - Bitbucket vs Gitbucket
  - Server – user authentication

**Objective(s) of the activities :**

- **Search research paper**
- **Extract information from research paper**

**Contents :****Wednesday (03.07.2019)**

1. Read several research paper
  - Collaboration and Learning within immersive VR Allow communication using intercom
  - Intercom is installed in the helmet
  - Interface created should allow direct manipulation of the object
- DIVE – a multi-user virtual system
  - This paper talked about they represent people by using an icon
  - User se and interact with a word through interface application
  - The program can read user input device and map the physical action
- Human interaction in multi-user VR
  - Talked about immersive multi user environment (IMUE)
  - It synchronized real time by tracking multiple rigid body
  - Use avatar to enable user to identify and localized each other
  - Use haptic information

## **DETAIL REPORT**

**WEEK NO: 9**

### **Objective(s) of the activities :**

- **Search research paper**
- **Extract information from research paper**

### **Contents :**

**Thursday (04.07.2019)**

1. Read more about Photon
  - Photon Voice
    - It allowed player to talk to each other in the VR environment
  - Photon cloud architecture
    - Cross platform client
    - Server SDK
2. Compared between Bitbucket and Github

	Bitbucket	Gitgub
<b>Ease of use</b>	<ul style="list-style-type: none"><li>• Provide user friendly client all operation</li><li>• Can be access via desktop app, web interface</li></ul>	<ul style="list-style-type: none"><li>• Provide user friendly client all operation</li><li>• Can be access via desktop app, web interface</li></ul>
<b>Basic feature</b>	<ul style="list-style-type: none"><li>• Branch comparison view</li><li>• Pull request for code review</li><li>• Integrate issue tracker</li><li>• Native application for windows and mac</li><li>• SVN migration</li><li>• SSL, two factor authentications</li></ul>	<ul style="list-style-type: none"><li>• Branch comparison view</li><li>• Pull request for code review</li><li>• Native application for windows and mac</li><li>• Spoon and JIRA integration</li></ul>
<b>Third party integration</b>	<ul style="list-style-type: none"><li>• Asana</li><li>• Codeclimate</li><li>• Microsoft Azure</li><li>• Google cloud</li></ul>	<ul style="list-style-type: none"><li>• JIRA</li><li>• Crucible</li><li>• Jenkins</li><li>• Bamboo</li></ul>

## **DETAIL REPORT**

**WEEK NO: 9**

### **Objective(s) of the activities :**

- **Present the idea to SV**
- **Received comment**

### **Contents :**

#### **Friday (05.07.2019)**

1. Present all the idea that has been captured from reading the research paper
2. Some issue has been arisen
  - It is better to used own server rather than use Photon server
  - Try to make the idea work
  - Use HMD such as HTC Vive and Lenovo
3. Task given
  - Create own server for authentication
  - Create authentication for user to log in



## **DETAIL REPORT**

**WEEK NO: 10**

### **Objective(s) of the activities :**

- **Introduction to Photon Unity Networking**

### **Contents :**

**Monday (08.07.2019)**

1. Photon Unity Networking (PUN)
  - Unity package for multiplayer
  - Can be sync over network
2. Photon Unity Features
  - Realtime cloud
    - Has low latency
    - Short round-trip time
  - Cross platform
    - Can be export to mobile, desktop, web and console
  - Matchmaking API
    - Can match player randomly, parameterized search and create search
  - Unmatched Flexibility
    - Can use authentication from Facebook and custom authentication

## **DETAIL REPORT**

**WEEK NO: 10**

### **Objective(s) of the activities :**

- **Create lobby**
- **Study about Playfab**

### **Contents :**

#### **Tuesday (09.07.2019)**

1. Lobby is a virtual container or list of room. It also defined as a scene in the game for player to join before playing the actual games. Player can pick option and set themselves as ready for the games to start
2. Type of lobby in PUN
  - Default lobby type
  - SQL lobby type
  - Asynchronous random lobby type
3. Playfab is backend platform provider of service to build, launch and grow cloud-connected games.
  - Account management
  - Can store player data
4. Offer multiple form of authentication
5. Support Photon Chat
6. Store player information in cloud
7. Issue arise
  - It is better to connected the authentication to our own database so that all the data are being managed by the developer

## DETAIL REPORT

**WEEK NO: 10**

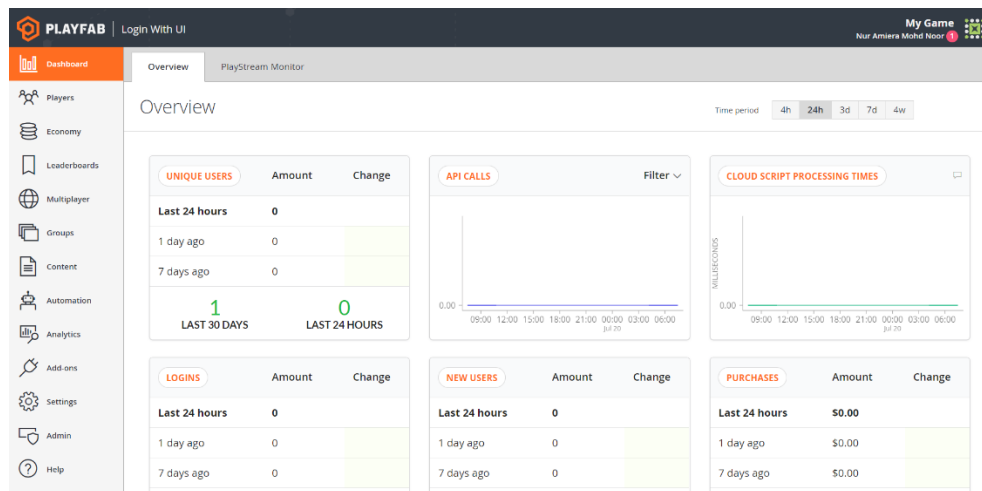
### Objective(s) of the activities :

- Design UI for login
- Run login code

### Contents :

**Wednesday (10.07.2019)**

1. Create UI for login
  - Username
  - Password
  - Email
  - Login
  - Register
2. Create code to attach playfab for authentication
3. Create playfab studio to insert all player information



## **DETAIL REPORT**

**WEEK NO: 10**

### **Objective(s) of the activities :**

- **Complete login code**
- **Add custom authentication for login**

### **Contents :**

**Thursday (11.07.2019)**

1. Complete code for login function. Make sure all username, password and email are recorded on playfab
2. Adding custom authentication for login. For example, through Facebook and Google
  - Install Facebook sdk and import to unity

The screenshot displays the 'Master player account' interface in PlayFab. It features three main panels: 'Display', 'PlayFab login', and 'Details'. The 'Display' panel shows the 'Player ID' as '1A7AS860DE69A11B'. The 'PlayFab login' panel includes fields for 'PlayFab username' (filled with 'miera') and 'PlayFab login email' (masked with dots), an 'UNLOCK' button, and checkboxes for 'Change password' and 'Send password reset email'. The 'Details' panel shows the 'Created' timestamp as '7/16/2019 3:38:28 AM'. A header bar at the top reads 'Master player account' with a subtitle 'Attributes of this player which span all titles in the studio.'

Display	PlayFab login	Details
<b>Player ID</b> 1A7AS860DE69A11B	<b>PlayFab username</b> miera <b>PlayFab login email</b> ..... <a href="#">UNLOCK</a> <input type="checkbox"/> Change password <input type="checkbox"/> Send password reset email	<b>Created</b> 7/16/2019 3:38:28 AM

## **DETAIL REPORT**

**WEEK NO: 10**

### **Objective(s) of the activities :**

- **Present all the work to SV**
- **Study about facebook authentication**

### **Contents :**

**Friday (12.07.2019)**

1. Present progress to SV for this week

#### Comments:

- Check all the install unity to see the version. Unity sometimes release its alfa version which some of function cannot be used
  - Make sure always download unity version with f version which is the final version
2. To connected unity with Facebook for authentication, it need to have facebook sdk to support all Facebook function

**LOG BOOK****WEEK NO: 11–12**

WEEK NO	DATE	BRIEF DESCRIPTION OF DAILY ACTIVITIES
11	15.07.2019	<ul style="list-style-type: none"><li>• Detect problem with facebook authentication</li></ul>
	16.07.2019	<ul style="list-style-type: none"><li>• Design authentication using google</li></ul>
	17.07.2019	<ul style="list-style-type: none"><li>• Continue google</li><li>• Set up playfab authentication to host server</li></ul>
	18.07.2019	<ul style="list-style-type: none"><li>• Study how to multiplayer games work</li><li>• Create multiplayer games</li></ul>
	19.07.2019	<ul style="list-style-type: none"><li>• Presentation to SV</li><li>• Figuring out the error</li></ul>
12	20.07.2019	
	21.07.2019	
	22.07.2019	
	23.07.2019	
	24.07.2019	

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## **DETAIL REPORT**

**WEEK NO: 11**

### **Objective(s) of the activities :**

- **Detect error with facebook authentication**

### **Contents :**

#### **Monday (15.07.2019)**

1. Connecting our games authentication with facebook is to get the authentication either the user account is valid or not
2. However, when everything has been code, when we press play the program is running but it asked for user token to log in
  - This issue arises because the program is running in unity
  - Some people said it is the code is right, but the program need to build in apk file and try running the application
  - The other problem is some of the tutorial are outdated version, so some of the fucnction are not supported



## **DETAIL REPORT**

**WEEK NO: 11**

### **Objective(s) of the activities :**

- **Authentication using google**

### **Contents :**

#### **Tuesday (16.07.2019)**

1. We also try to get authentication to ensure that the email player used are valid
2. To do that we need to add google authentication, we need to import google sdk
3. However, the issue arise I because when login with google email, we need to have google keystroke but it is not been pop up unlike the tutorial
4. Some people also said it is because the API which make it did not produce

## **DETAIL REPORT**

**WEEK NO: 11**

### **Objective(s) of the activities :**

- **Connecting PlayFab authentication to database**
- **Find tutorial to connect multiplayer**

### **Contents :**

#### **Wednesday (17.07.2019)**

1. All the authentication using Playfab working well however to ensure our data are well secure, we need to connect it to the connect it to our own database
2. Comment from SV
  - The headless server is already exist
  - Make sure to connect the authentication to own database
  - Try to make a multiplayer game which both player can see each other
3. Find on how to connect the multiplayer in a VR environment

## **DETAIL REPORT**

**WEEK NO: 11**

### **Objective(s) of the activities :**

- **Connect the multilayer sample games to server**
- **Make 2 user to see each other in the VR environment**

### **Contents :**

#### **Thursday (18.07.2019)**

1. Study how to connect the multiplayer in a game
2. Connecting 2 player to in unity
  - Import SteamVR sdk in unity
  - Import Photon sdk
  - Enter server ip address and port
  - By using code, connect the program to server
  - However there were an error saying that we are connecting to false serve. It also says that we need to be disconnect before we can connect to the server.
  - Other than that, the server also did not detect either the program connected or not.
  - Next, the program can already running HMD.
  - Player also can do some action in the program such as teleport and grab.

## **DETAIL REPORT**

**WEEK NO: 11**

### **Objective(s) of the activities :**

- **Figuring out either the program is connected to server or not**
- **Present work to SV**

### **Contents :**

#### **Friday (19.07.2019)**

1. Trying to figure out either the program are connected or not the server.
2. The outcome is the server are now connected to true server
3. But the problem is server still cannot detect the client
4. Present all work to SV
  - Standalone server
  - Standalone server which can accept login
  - A sample multiplayer VR app which can see other player in the VR environment
5. Comment from SV
  - There is some code error which need to be fixed to ensure that it can be detect by the server
  - The server is exist
  - Database are already there but, the are some error in code which need to be fixed to make it to taking the data