

LOG BOOK**WEEK NO: 9-10**

WEEK NO	DATE	BRIEF DESCRIPTION OF DAILY ACTIVITIES
9	28th October 2019	<ul style="list-style-type: none">• Provide information (function) for documentation
	29th October 2019	<ul style="list-style-type: none">• Database integration with Unity and other PC
	30th October 2019	<ul style="list-style-type: none">• Solving error regarding database integration with PCs and Unity
	31th October 2019	<ul style="list-style-type: none">• Tested the User Interface of Database through VR Headset
	1st November 2019	<ul style="list-style-type: none">• Do a research on how to appear player's nickname
10	4th November 2019	<ul style="list-style-type: none">• Attend the Professional Practise Project Presentations
	5th November 2019	<ul style="list-style-type: none">• Prepare a documentation explanation
	6th November 2019	<ul style="list-style-type: none">• Appearing player's nickname in the scene
	7th November 2019	<ul style="list-style-type: none">• Fixed sizing of Lobby and Authentication scenes
	8th November 2019	<ul style="list-style-type: none">• Change authentication restrictions

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)

Objective(s) of the activities :

- Provide information (function) for documentation

Contents :

Mr Shri asked us to do a documentation regarding our project. I was assigned to provide the information such as functions in each module, differentiate multiplayer and single-player.

I need to give these information to Wani as she was assigned to compile it.

1. List and describe a few important components that need to be in Unity Project to enable the Multiplayer Mode.
 - i. Photon (can be found in Asset Store)
 - ii. Camera Rig in the scene
 - iii. Photon Transform View and Photon View
 - iv. PUNRPC
 - v. Ownership Transfer
2. Describe every functions in each Modules
 - i. Pickup and Drop Object
 - ii. Throw Object
 - iii. Snapping Object
 - iv. Teleport
 - v. Interaction with UI Unity
3. Integration between Hand/Controller and GameObject in the scene

Objective(s) of the activities :

- Database integration with Unity and other PCs

Contents :

I created a new username and password in PhpMyAdmin and edited the config.inc as follows:

```
/* Authentication type and info */
$config['Servers'][$i]['auth_type'] = 'config';
$config['Servers'][$i]['user'] = 'Ilya';
$config['Servers'][$i]['password'] = 'password';
$config['Servers'][$i]['extension'] = 'mysqli';
$config['Servers'][$i]['AllowNoPassword'] = true;
$config['Lang'] = '';

/* Bind to the localhost ipv4 address and tcp */
$config['Servers'][$i]['host'] = '192.168.0.106';
$config['Servers'][$i]['connect_type'] = 'tcp';
```

PhpMyAdmin account will be changed from root@localhost to Ilya@IVES-PC-2 since the Main database is on another PC which is IVES-PC-4.

Database server

- Server: 192.168.0.106 via TCP/IP
- Server type: MariaDB
- Server connection: **SSL is not being used** ⓘ
- Server version: 10.4.8-MariaDB - mariadb.org binary distribution
- Protocol version: 10
- User: Ilya@IVES-PC-2
- Server charset: UTF-8 Unicode (utf8mb4)

IVES-PC-4 will give privilege to Ilya@IVES-PC-2. For Ilya@IVES-PC-2 to access the database called "unityaccess", we need to change the code as follows in Login as well as Registration and Save Data located in sqlconnect file under Xampp files.

```
Login - ivotepad
File Edit Format View Help
:~php
$con = mysqli_connect('192.168.0.101', 'Ilya', '', 'unityaccess');

//check that connection happened
if (mysqli_connect_error())
{
    echo "1 : connection failed"; // error code #1 = connection failed
    exit();
}

$username = $_POST["name"];
$password = $_POST["password"];

//check if name exists
$namecheckquery = "SELECT username, salt, hash, score FROM players WHERE username='" . $username . "'";
```

Ensure that Xampp in IVES-PC-4 has been started for other PCs to access the database.

Objective(s) of the activities :

- Solving error regarding database integration with PCs and Unity

Contents :

There are a few errors that we found while setup the integration between the database and unity and PCs. Here are the errors:

1. Warning: mysqli_connect(): (HY000/1045): Access denied for user 'Ilya'@'IVES-PC-2' (using password: NO) in C:\xampp\htdocs\sqlconnect\Login.php on line 2
1 : connection failed

We figured out the solution for this is that we need to ensure that the firewall is not blocking so firstly, we tested the connection between two PCs by pinging each other using IP Address.

My PC which is IVES-PC-2 can ping to IVES-PC-1 which is the Main database that we tried to connect to it but IVES-PC-1 cannot ping back to my PC. What we did to resolve this is check the outbound and inbound rule in Firewall setting in each PCs. I created a new inbound rule to allow the connection between two PCs as picture below

✓ Firefox (C:\Program Files\Mozilla Firefox)	Private	Yes	Allow	No	C:\Progr
✓ IVESPC01	All	Yes	Allow	No	Any
✓ IVESPC-01	All	Yes	Allow	No	Any
✓ Microsoft Office Outlook	Public	Yes	Allow	No	C:\Progr
✓ Microsoft Visual Studio 2017	Public	Yes	Allow	No	C:\progr

Then, I also ensure that ICMPv4-In is also enable as the picture follows:

Distributed Transaction Coordinator (TCP-In)	Distributed Transaction Co...	Private...	No	Allow	No	%System...	Any	Local subnet	TCP
Distributed Transaction Coordinator (TCP-In)	Distributed Transaction Co...	Domain	No	Allow	No	%System...	Any	Any	TCP
Feedback Hub	Feedback Hub	Domai...	Yes	Allow	No	Any	Any	Any	Any
File and Printer Sharing (Echo Request - ICMPv4-In)	File and Printer Sharing	Private...	Yes	Allow	No	System	Any	Local subnet	ICM
File and Printer Sharing (Echo Request - ICMPv4-In)	File and Printer Sharing	Domain	Yes	Allow	No	System	Any	Any	ICM
File and Printer Sharing (Echo Request - ICMPv6-In)	File and Printer Sharing	Domain	No	Allow	No	System	Any	Any	ICM
File and Printer Sharing (Echo Request - ICMPv6-In)	File and Printer Sharing	Private...	No	Allow	No	System	Any	Local subnet	ICM
File and Printer Sharing (LLMNR-UDP-In)	File and Printer Sharing	All	No	Allow	No	%System...	Any	Local subnet	UDP
File and Printer Sharing (NB-Datagram-In)	File and Printer Sharing	Domain	No	Allow	No	System	Any	Any	UDP
File and Printer Sharing (NB-Datagram-In)	File and Printer Sharing	Private...	No	Allow	No	System	Any	Local subnet	UDP
File and Printer Sharing (NB-Name-In)	File and Printer Sharing	Private...	No	Allow	No	System	Any	Local subnet	UDP

We figured out the solution and succeed in setup the connection between IVES-PC-1 that contains Main Database with other PCs in the lab through Xampp.

Objective(s) of the activities :

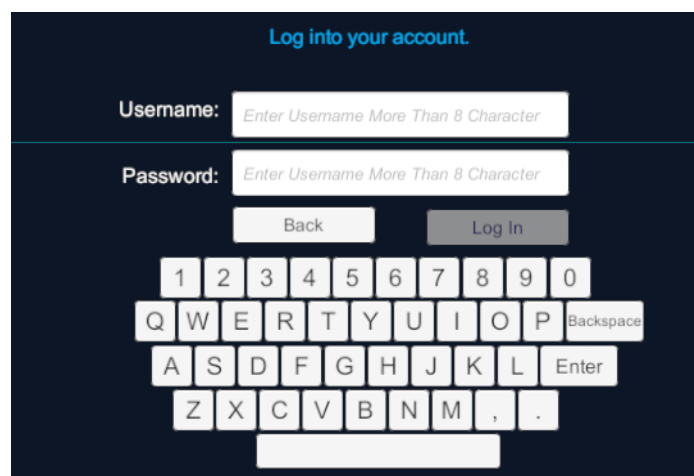
- Tested the User Interface of Database through VR Headset

Contents :

The database User Interface currently only can be access through keyboard. We wanted to make it in VR.

We did a few things like we did with the Lobby User Interface:

1. We add Keyboard Virtual in the scene



2. Add Camera Rig and Steam_VR_Laser_Pointer in one of the controllers
3. Add Login Script in Canvas and drag all the GameObject to the Login Script
4. Create keyboard script and insert in Camera Rig

Objective(s) of the activities :

- Do a research on how to appear player's nickname

Contents :

Here a few things that I discovered throughout the research:

1. Use PhotonNetwork.Nickname
2. Use UI Canvas > Text and set it to worldspace and drag the CameraRig > camera to the Event Camera
3. Make Canvas as a child of Camera to let the canvas follows CameraRig position
4. Use PhotonView and Photon Transform View

Objective(s) of the activities :

- Attend the Professional Practise Project Presentations

Contents :

Dr Fairuz invited us to attend the Professional Practise Project Presentations at Robertson Lecture Theatre at 8:30 am. The presentations started with Land Bird Mode group. The group presented a project regarding the creation of a system that will allow for the automated deployment and management of virtual machines that will be used by students in their studies. Then, proceed with StaChat group where they developed a prototype emergency satellite communication devices.

The next group is FlexTable is about allowing a content management system application to be utilized. It developed a permission-based real-time database implemented through existing open-sources technologies. After that, RegNQuiz emphasized on providing a central source of information of student learning activities including presentation of quizzes during teaching activities at Murdoch University.

Black Widow group's project is about transform the extracted information from CourseLoop and load it to Callista. They demonstrated to us on how it can drag and drop Courses and Major in json.files to the system. Broad Spectrum Solution built a complaints portal where the complainers will be updated to the flow of resolution from the Admin or the Head of department.

Simjection is a project build by SimTouch Development group. The project is used as a training and testing platform for nursing students on injections and wound management. They built used a VR Hardware, haptic pen by 3D system and Unity. Team Interface has developed a Multi-User Virtual Learning platform. They build two applications which are Assembly Furniture and cell biology educational game.

Objective(s) of the activities :

- Prepare a documentation explanation

Contents :

I need to explain to Wani on how the teleportation works in Multi-user Mode.

```
private void Update()
{
    if (photonView.IsMine)
    {
        //pointer
        m_HasPosition = UpdatePointer();
        M_Pointer.SetActive(m_HasPosition);

        // Teleport
        if (m_TeleportAction.GetLastStateUp(m_Pose.inputSource))
            TryTeleport();
    }
}

private void TryTeleport()
{
    //Check for valid position, and if already teleporting
    if (!m_HasPosition || m_IsTeleporting)
        return;

    //transform
    CameraTesting = GameObject.FindWithTag("Player").transform;
    Debug.Log("Camera Rig Found!" + CameraTesting);

    //vector3
    Camera = GameObject.FindWithTag("Camera").transform.position;
    Debug.Log("Camera Found ! " + Camera);

    //Figure out translation
    Vector3 groundPosition = new Vector3(Camera.x, CameraTesting.position.y, Camera.z);
    Vector3 translateVector = M_Pointer.transform.position - groundPosition;

    //Move
    StartCoroutine(MoveRig(CameraTesting, translateVector));

    Debug.Log("Position = " + CameraTesting.transform.position);
    Debug.Log("Head Position: " + Camera);
    Debug.Log("Teleport");
}
```

There are a few things that I need to explain including their function in the teleporting script:

- M_Pointer
- CameraTesting
- m_HasPosition
- m_TeleportAction

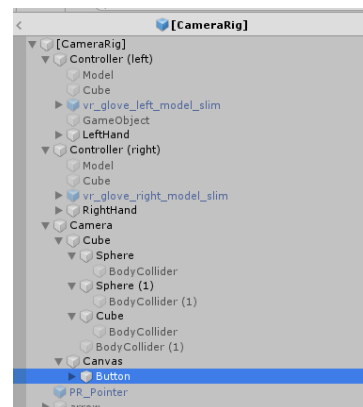
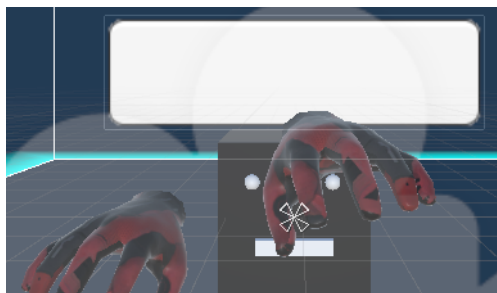
Objective(s) of the activities :

- Appearing player's nickname in the scenes

Contents :

Amiera and I tried to make the player's nickname appear on top of the cube (Camera Rig) in each scenes. Here are a few things that we did:

1. Add UI > Canvas > Button in the Camera Rig > Camera
2. Add script in "MyPlayer" script to make the player's nickname appear
3. Use PhotonNetwork.Nickname to call the nickname that the player has inputted at Lobby scene



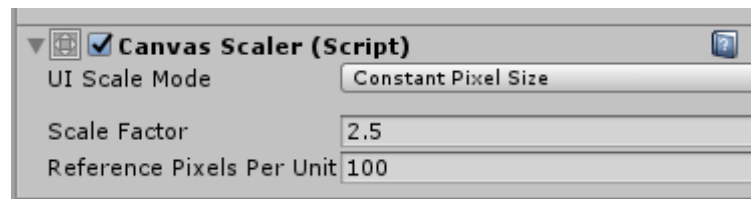
The problem is when tested using one PC or One player, the name will appear as what the player has inputted but when tested using two PCs and if there are two players in the scenes, the other player's name is not appearing.

Objective(s) of the activities :

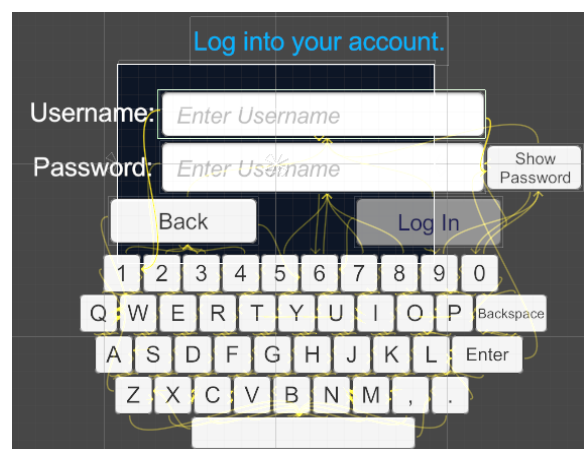
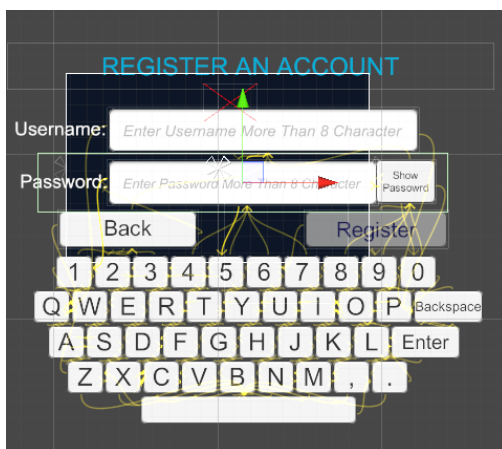
- Fixed sizing of Lobby and Authentication scenes

Contents :

I fixed the size of the Register and Login scenes I scale the canvas to 2.5 to let the text and UI appear clearer.



The problem with scaling it to 2.5 is that when it display in Head-Mounted Display (HMD), the scene will appear bigger which is not very convenient. Then, I remove all the UI to the position that gives convenience and comfort to player



Objective(s) of the activities :

- Change authentication restrictions

Contents :

The current authentication, we put minimum 8 characters for username and password that the player need to input or register an account but we found it is not convenient since it will take a lot of times. Hence, we change the characters to 4.

Player needs to input minimum 4 characters to activate the Login and Register buttons

Image below shows that Login button cannot be activated since the password character is lesser than 4 characters.

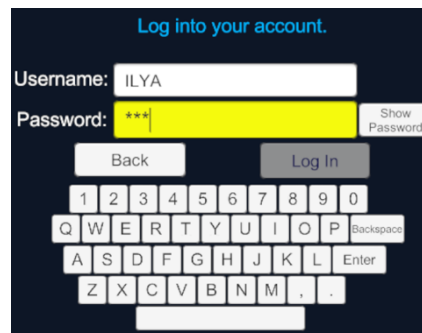


Image below shows that Login button is activated since the password character is 4 characters.

