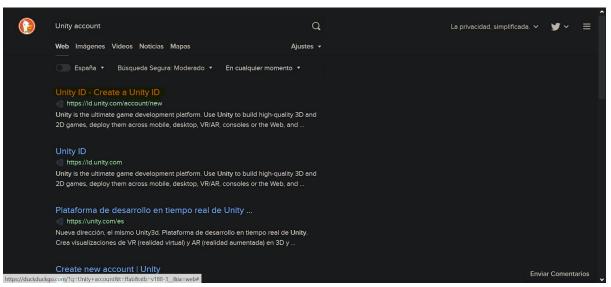


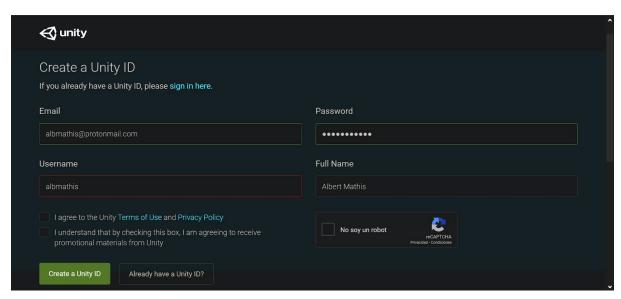
# Script Add and Remove from a List of Strings.

- 1. Console.WriteLine()
- 2. Console.ReadLine()
- 3. Strings C#
  - a. IndexOf
  - b. Substring
- 4. List todoList = new List();
  - a. Count
  - b. Add()
  - c. RemoveAt()
  - d. Insert()
- 5. int.TryParse(char x)

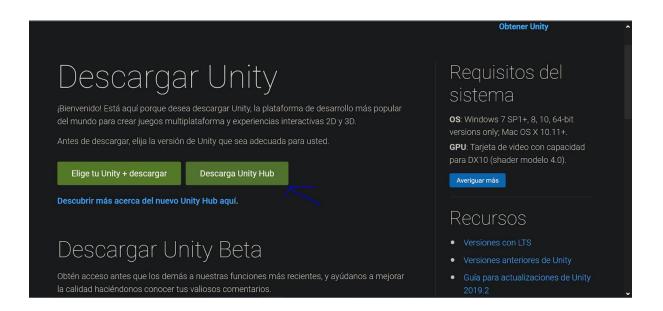
# **Unity and Visual Studio Installation**



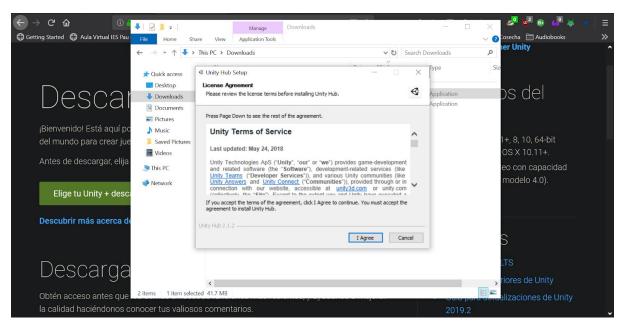
First we search at DuckDuckGo or Google for Unity account and we click on the first link that pops up.



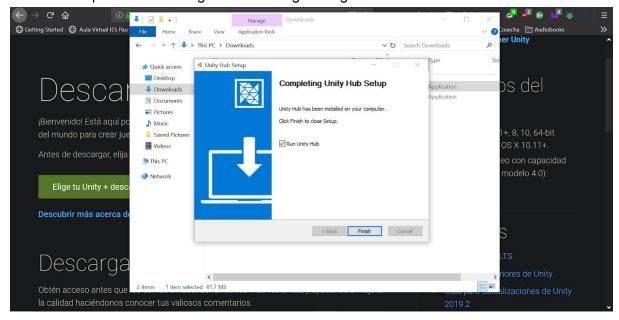
And we create our first account like in the image shown on top. (I had alredy an Unity account)



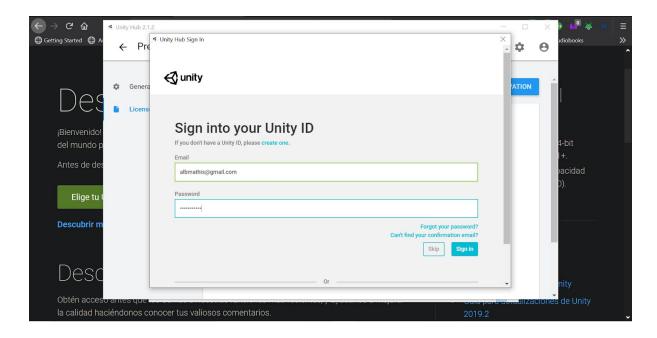
Then we click on Download Unity Hub. (The link based my language preferences based on the ip)



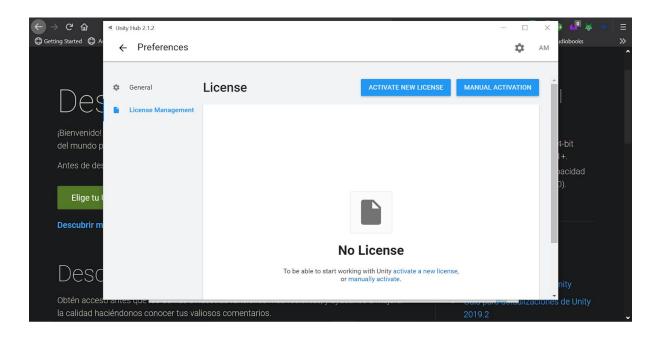
And we accept the License Agreement and go straight forward to next.



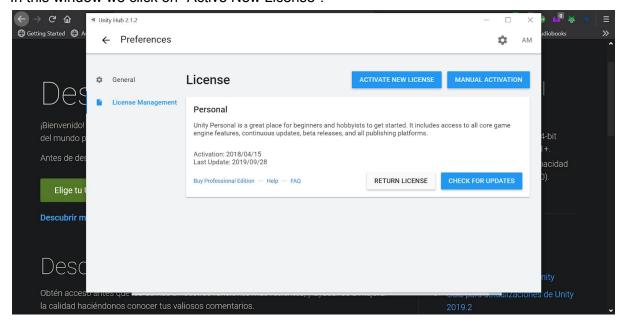
At the end of the installation we click on Finish and keep the button where it says "Run Unity Hub" activated.



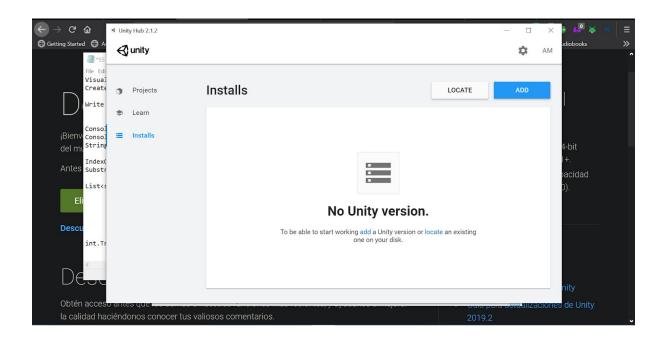
When the installation finishes we sign up with our Unity account previously created.



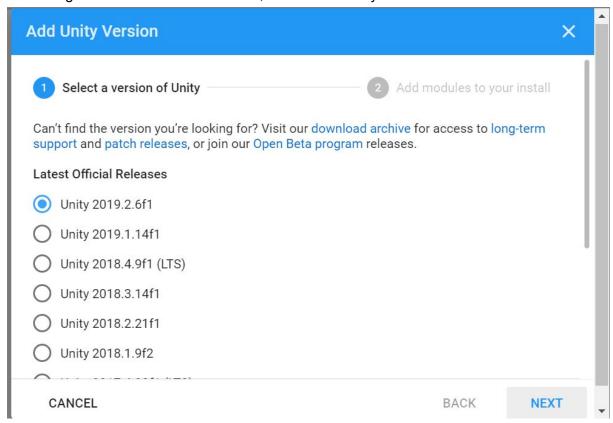
In this window we click on "Active New License".



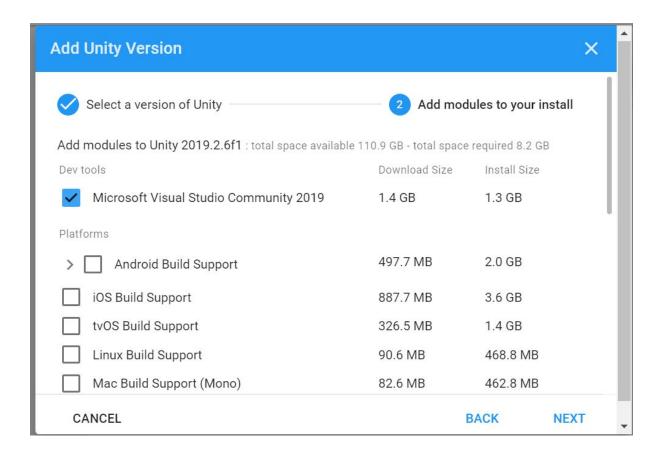
And we adquire a free personal license. After that we check for updates.



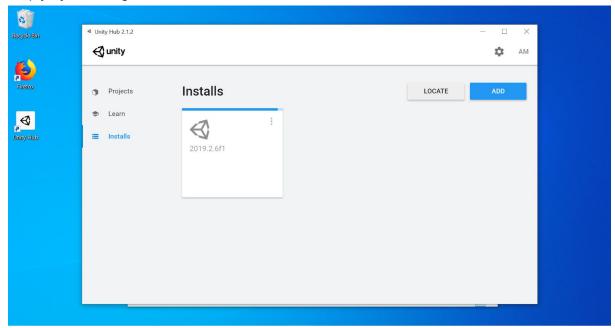
Then we go to installs and click to ADD, for the new Unity installation.



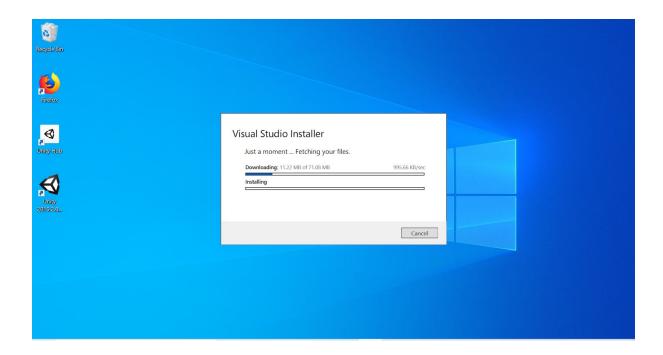
We click on the radio button where it shows the last Unity version and click on NEXT.



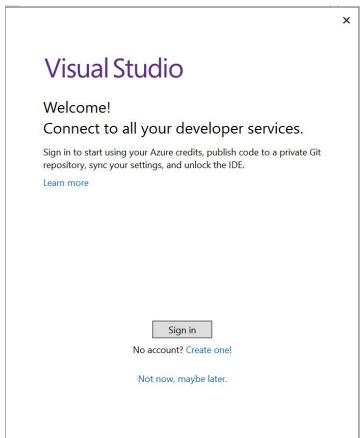
Here in my case I leave Microsoft Visual Studio checked cause I didn't installed it in the first place cause I just had a Linux distribution on my Laptop installed, but if you have alredy Visual Studio you can uncheck it. You must also download the Windows dll for the patch, simply by checking it on the bottom.



And now we must wait until the install finishes. Please keep the laptop charging because it will take several hours to finish. And don't shut down the computer.



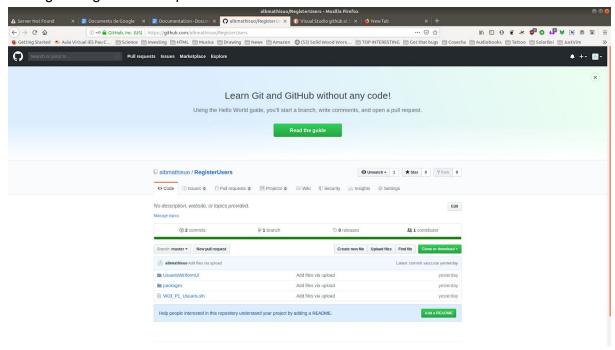
After the installation finishes we can see how automatically it installs Visual Studio for us.



When the installation of Visual Studio finishes we sign in with our Hotmail account, if we have on, and if not, we create one.

## **GITHUB SETUP**

For registering users we upload it to Github.



### >>https://github.com/

Create and sync repo from existing project

- Create a new repository with same name as Solution
- Don't add Readme and neither .gitignore
- Create a new Readme.md, #First Winforms All ##
- # We are creating a github repo from an existing one
- +Review markdown syntax
- +Write something in Readme.md

Search for .gitignore Visual Studio file.

Create text file in root solution folder. Rename to .gitignore.

In root solution folder right click and git bash here.

\$ git init

\$ git add.

\$ git commit -m "Initializing our repo for the Winforms"

\$ git config user.email

(Windows>> Credential MANAGER >> Windows credentials >> github.com)

\$ git remote add origin https://github.com/githubuser/Solutionfoldername
\$ git push origin master
To clone a repository:
\$ git clone "URL"

Window → Layouts

Important windows

- Hierarchy
- Scene
- Game
- Inspector
- Project
- Console
- Assets
- Asset Store

## **UNITY WITH 3D OBJECTS AND PERFORMANCE**

Windows > Rendering Lighting Settings

- For best performance, uncheck Auto Generate Light Windows > Animation > Animation

Hierarchy

GameObjects > Very Important in Unity

Scene - Contains game Objects - Start menu, Level 1, Level 2 Examples of GO:

- Camera
- Direction Light
- 3D Object
- 2D Object
- UI

GO are made of components (they appear in Inspector window). For instance, Transform component.

Add new GO 3D and place it in (0,0,0)

Moving through Unity:

- Right click + WASD

- Right button mouse click + move mouse > Turn head around
- Left Alt + Left mouse button clicked > Move view around object selected
- Zoom > Mouse wheel
- Shift > Up speed
- Select a GO > Double Click on Hierarchy

#### 01/10/2019

### Basic 3D objects

- Cube, sphere, capsule, cylinder
- Plane

#### Grid

```
W - Move objects - Snap to Grid(Cntrl)
Change Grid > Edit > Snap settings
```

#### Decorate GO

- -Material > Assets R > Create > Material Choose Color or albedo play with Metallic & Smoothness. Drag material to GO.
  - -Texture (seamless texture)
  - -Save the texture in Assets
  - Drag directly to the GO (a new material will be created automaticaly)
  - Create new material (FloorMaterial), Albedo > Select texture image, assign

FloorMaterial to GO

### Assets

- Assets store (3D models).

#### 3D models

```
-FBX, OBJ
```

- .max, .blend, .. (need to have installed 3D Studio Max, Blender..)

Prefab: Assets > Folder > Prefabs > Drag Projectile to Prefabs folder

Create Bullet Creator and Create a new Script

```
GameObject projectilePrefabRef;
void Update()
{
        if (Input.GetKeyDown(KeyCode.F)
        {
            Instantiete(projectilePrefabRef, transform.position, Quaternion.identity);
        }
}
```

#### FOR MOVING GUN:

New script asociated with the gun.

```
void Update()
{
    // Input.GetAxis: Returns a value from 1 to -1 depending if we press -> or <- and the
duration we have been pressing the key. Can be set up in Edit -> Project Settings -> Input ->
Axes

// Know why hInput must be in Z position if we want to move from left to right.

float hInput = Input.GetAxis("Horizontal");
    Debug.Log(hInput);
    transform.Translate(new Vector3(0, 0, hInput) * Time.deltaTime * moveSpeed);
    }
    Transform.Rotation
    Transform.Translate
```

Campera FPS (Standard assets)

Characters -> First Person Character -> Prefabs -> FPS Controller

- Resize and reposition
- Put gun inside
- Pull bullet creator inside

## MYSQL AND WINDOWS.NET FRAMEWORK

Mysql: Grant all privileges on \* (root) we must change it to grant all grant select on lector to biblioteca

F7 per canviar entre codi i el diseny.

Double click to the button to create the object in the code.

Search Button:

We create a string that lately we use to connect to Mysql, then we put the output of the ArrayList in a "con.Query<User>(sql).ToList()". And Display the information in the Array of the list users.

For showing the output of the MySql:

```
for (int i = 0; i < books.Count; i++)
{
          booksListBox.Items.Add( books[i].TITOL );
}

foreach(var book in books)
{
          booksListBox.Items.Add(book.ID_LLIB + ":\t" + book.TITOL);
}</pre>
```

- If we want to Display it in a ListBox, the ID\_LLIB and the TITOL of the sql we do it this way.

For the connetion with Mysql we need to import from Nugget Packages this two libraries:

```
using Dapper;
using MySql.Data.MySqlClient;
```

-Script

# **Unity Movement Reminder**

-3D Unity RigidObject, Force, Gravity, ProjectWindows where assets are, and well organized. Prefabs, scripts, textures, and Assets Store (Nuget Packages)

## Moving in 3D space:

- Right Mouse + WASD (Move itself)
- Right mouse clicked + move mouse (Move only direction)

It's better to select an object in the hirerchy than in the game object.

E - Rotate Tool

R - Scale 3D tool

x axis -> Vector3.left and Vector3.right

y axis -> Vector3.up and Vector3.down

z axis -> Vector3.forward and Vector3.backwards