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# Instructions.

Specifications

This is a Unity3D example implementing the Emotiv library to play a simple Roll a Ball game. The game includes a UI for manage training sessions and users and profiles from the EmotivCloud. You can train two mental commands, PUSH and NEUTRAL, the first one move the ball forward and the camera is controlled by the gyroscope of the headset.
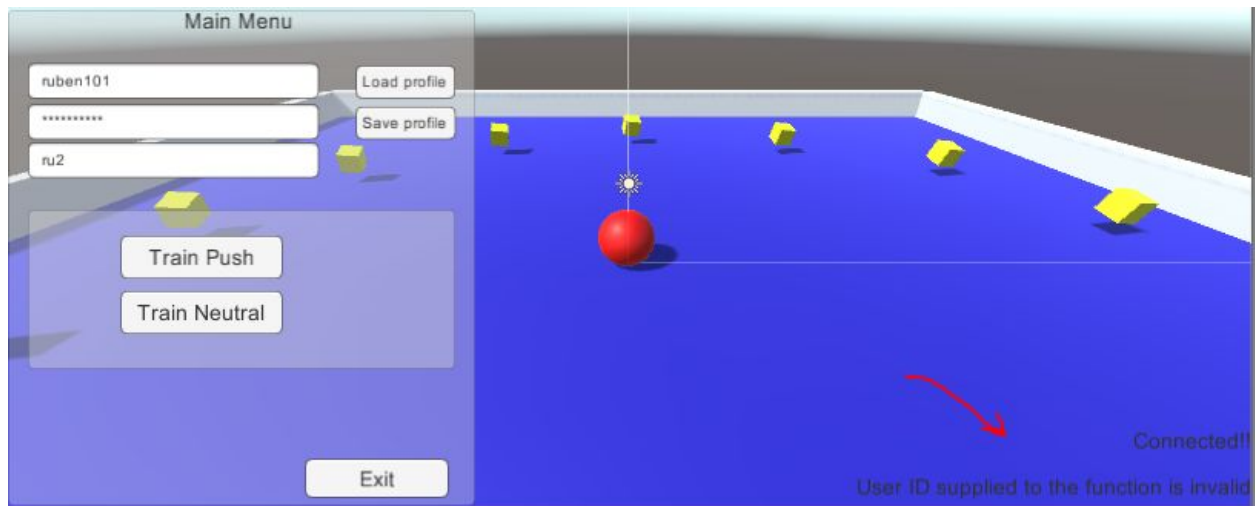

This example was developed using:
- Unity 5.3.4 or newer
  - MonoDevelop
- Windows 10 (you can use MAC instead)
- Emotiv Epoc Headset
- The Emotiv community-sdk
  - Edk.dll
 - DotNetEmotivSDK (the example include a precompiled DLL)

Setup

1. The first step is to declare a system variable in your operating system for edk.dll, this will allow Unity and MonoDevelop to locate and load the library, both of programs are 64 bit, so EDK.dll for 64 bits is the correct one.
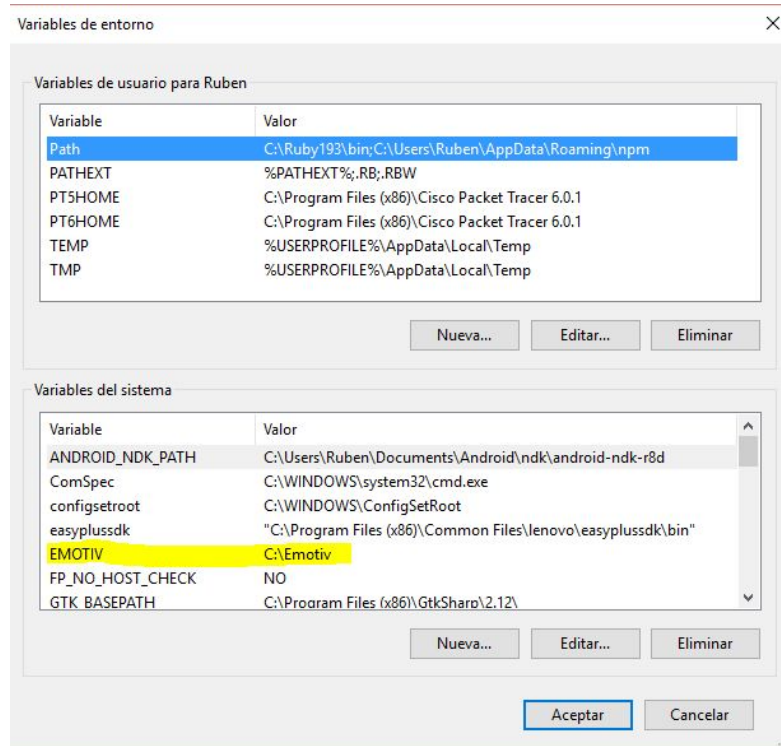
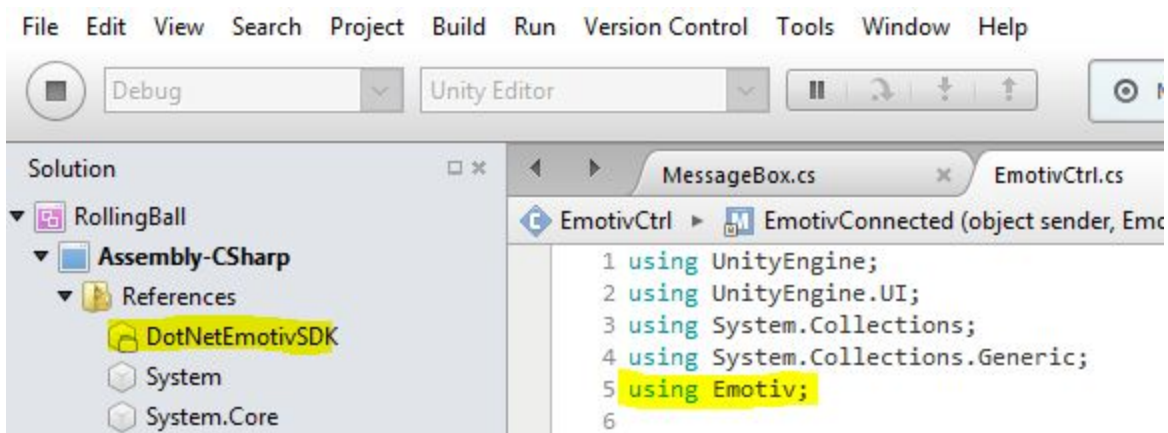

2. Add the DotNetEmotivSDK.dll to the assets folder, the architecture does not matter.
   a. You can compile the DotNetEmotivSDK.dll from his project in examples/C#/ if you want the most recent updates, just make sure you use .NET Framework 3.5.
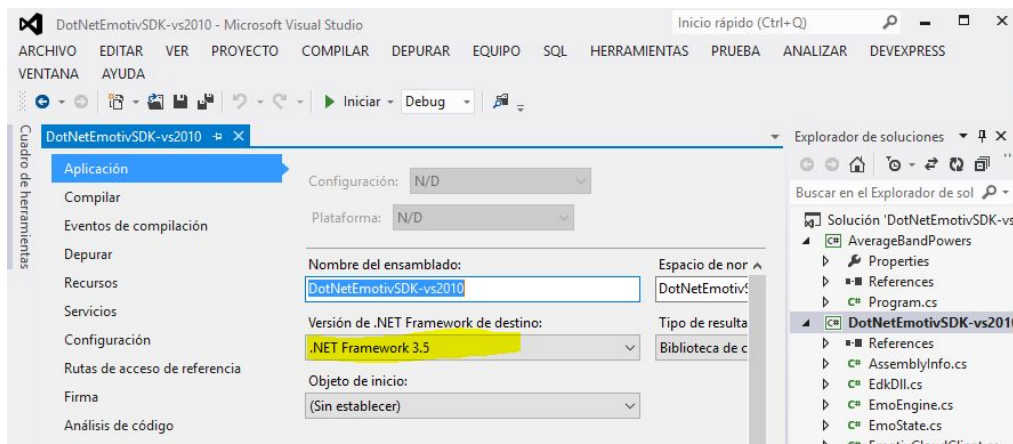
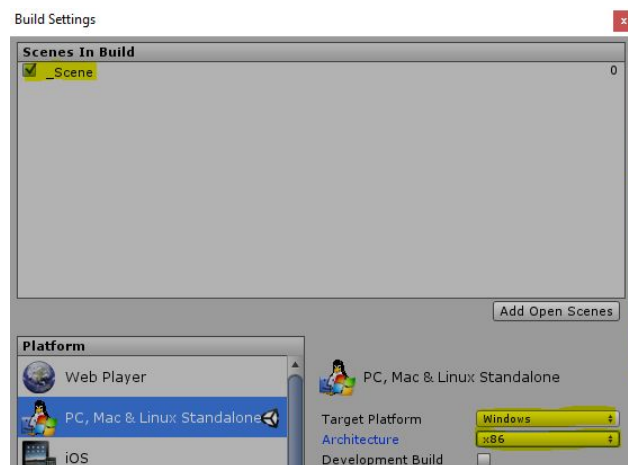b. Or you can use the one already in the assets folder.
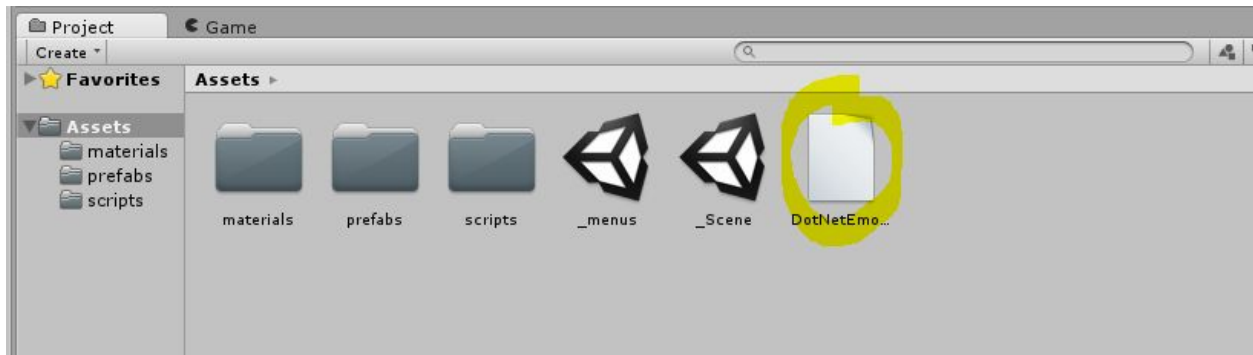
3. Now you can import the library and use his classes and methods.
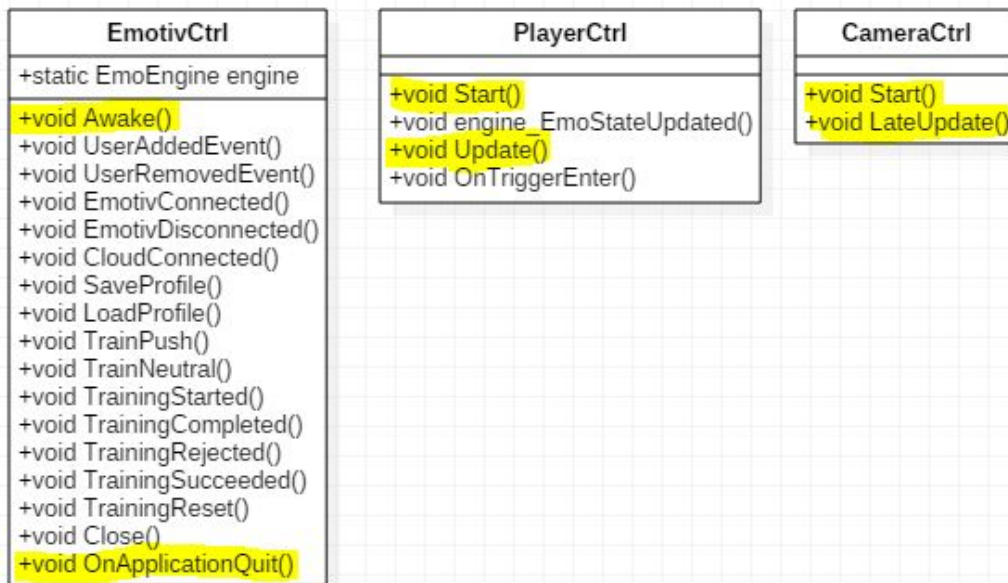

Building

For building the executables binaries it is necessary to specify a computer architecture, x86 or x64, and include the respective edk.dll and DotNetEmotivSDK.dll in the your_output_folder\RollingBall_Win_Data\Mono

Scripts

The main three scripts are EmotivCtrl.cs, PlayerCtrl.cs and CameraCtrl.cs. The first one manage the Emotiv classes and events, the second one manage the Ball movement and the last one moves and rotates the camera.

EmotivCtrl
+static EmoEngine engine
+void Awake()
+void UserAddedEvent()
+void UserRemovedEvent()
+void EmotivConnected()
+void EmotivDisconnected()
+void CloudConnected()
+void SaveProfile()
+void LoadProfile()
+void TrainPush()
+void TrainNeutral()
+void TrainingStarted()
+void TrainingCompleted()
+void TrainingRejected()
+void TrainingSucceeded()
+void TrainingReset()
+void Close()
+void OnApplicationQuit()

PlayerCtrl
+void Start()
+void engine_EmoStateUpdated()
+void Update()
+void OnTriggerEnter()

CameraCtrl
+void Start()
+void LateUpdate()

Test

This project was tested and recorded on April 2016 and it is accessible from the youtube page https://www.youtube.com/watch?v=5jCBEIx6NSI.