Thanks for purchasing the **Bowling Starter Kit**.

0) PREREQUISITES

Events and delegates:
Please watch mike of prime31 fame tutorial on events and delegates, believe once you have watched and understood these concepts you will love it.
https://www.youtube.com/watch?v=N2zdwKIsXJs

Networking basics:
Okay now thats out of the way, lets take a look at the photon tutorial it will get you up and running in no time.
http://doc.exitgames.com/en/pun/current/tutorials/tutorial-marco-polo

Okay now that thats out of the way…

1) IMPORTING

First go to the asset store and import itween, and either photon unity networking free or Photon Pun+
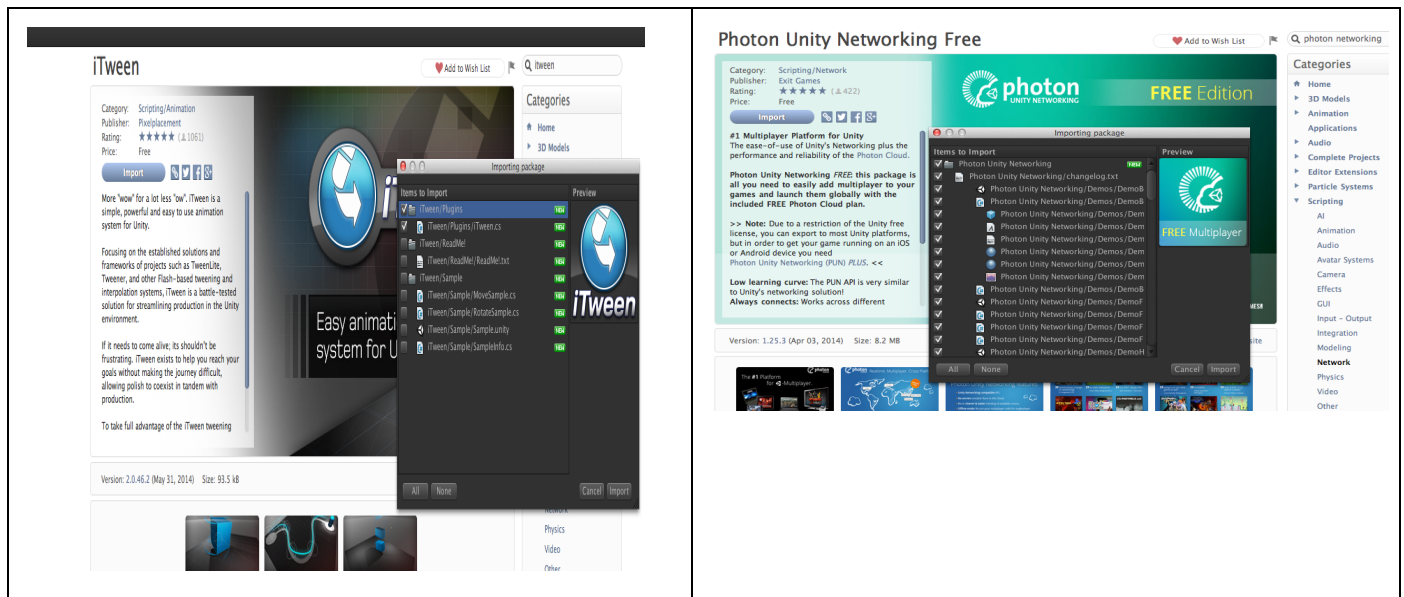
2) SETUP

First thing you want to do is make sure that the mainMenu scene is set to the first scene in your build settings. Then you want to set to laneoutside to the scene1, and laneInside to scene2.

You will need to import photon networking. If you want to build to mobile devices you will need either the pro version of unity IOS etc, or you you can pick up the PUN+ for only $95 (right now) -- which means you wont need to buy the pro version of unity
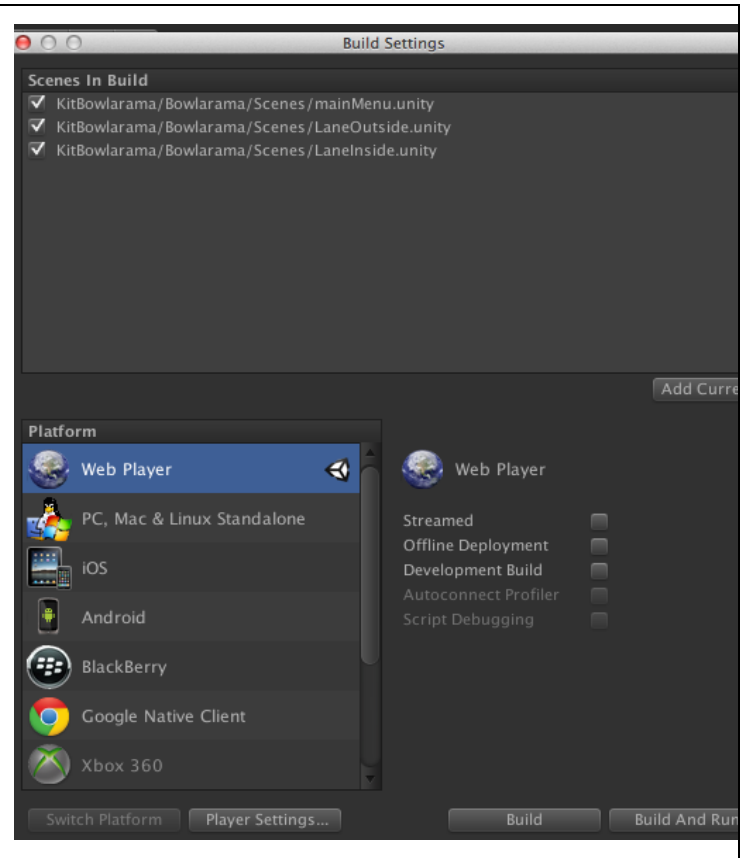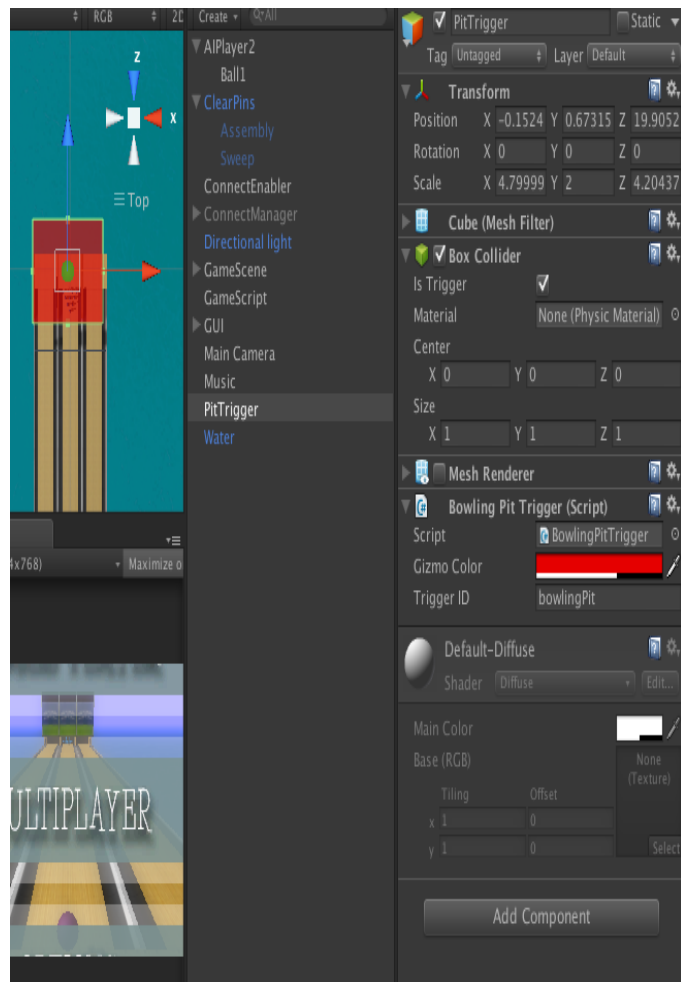
3) MAIN MENU

ClearPins - has a script that will listen for events when to set or sweep the pins -- which have animations. The sweeper actually has a collider on it.

ConnectEnabler - Will enable one version of the connectmanager

ConnectManager - will handle photon connecting the players together. Also has a shot clock script attached to it which only act in multiplayer, which start a countdown when the countdown expires it will "fire the ball"

Gamescript - in this scene it has a dummy script attached to it, will simply reset the ai's turn after its finished -- without doing any of the scoring or multiplayer. Its only to give some background noise to the main menu.

Pit Trigger -The pit trigger will show where the ball enters in order to trigger ball to start looking at the pins getting 'knocked down'

MainMenu GUI

There are 5 main menu screens. Each 'button' guiTexture will have a TouchButton2 attached to them and when pressed will fire a button pressed event, which will be caught by the mainmenustate. The mainmenustate will then handle it. It will use the name of the controls, so if you changed the UI to work with Dokion Forge it should be relatively painless to change over.

Adding another bowling alley.

If you look at the alleySelect array for example it has an array of images, all you would need to do is add another image at the end of it and match the corresponding scene to the third index and you could add another bowling alley.
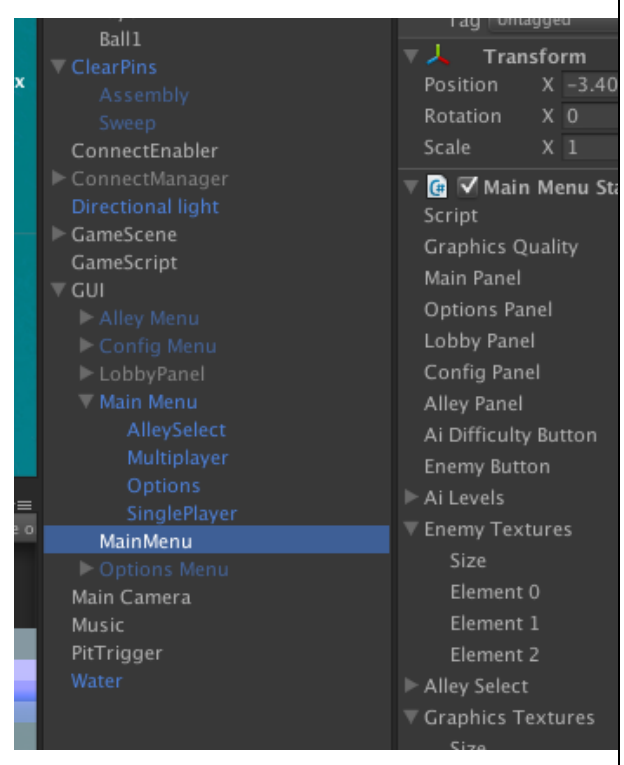
4) GAME SCENE

Audio - you can easily configure the audio by simply changing the values in the audio helper. There is an audiovolume script attached to the audiohelper object this will ensure that the sounds will simply be set to 0, when you hit the audio button
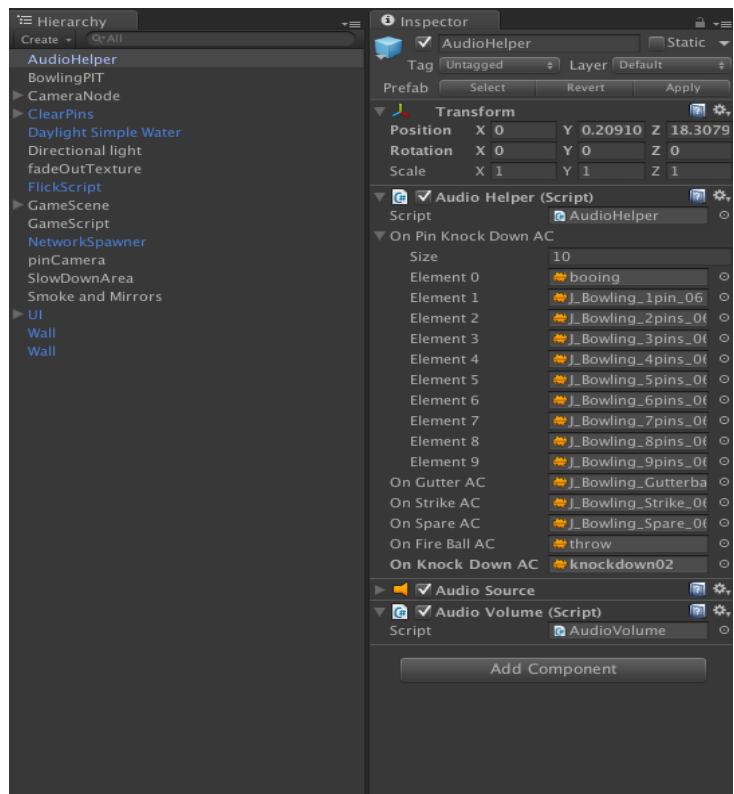
OnPinKnockDown - is an array of sounds that plays when you get 0-10 pins down.

OnGutterAC - is played when you get a gutter ball

OnSpareAC - is played when you get a spare ball

OnKnockDownAC - is played when you knock down a pin

onFireBallAC - is played when you throw the ball

PITS - The pits in this game we have two triggers we are calling pits, when the ball enters the yellow area we turn off the balls minimum speed, and when the ball enters the green area we turn indicate the the ball has entered the pit and wait 2 seconds before calculating how many pins were knocked down.

CameraNode - has a script which will follow the ball.

Attached to it that will follow the camera. There is a maincamera attached to it as a grandchild which has a bloom script which will make the scene brighter and **MyQualitySettings** which will set bloom and fog on/off depending on the quality setting.

ClearPins - similar to the main menu there is a clearpins which will set the pins and clear them.

GameScene - this has the bowling alley, gutter, and "pit models". All of these models are set to "static", so that we can bake them. Setting down on draw calls if we want dynamic shadows. Especially useful for older hardware -- or mobile devices

FlickScript - this script is useful for capturing a flick

Gamescript - this is where most of the meat and potatoes happens

Networks spawner - will spawn the AI, or human players, along with the bowling pins.

Smoke and Mirrors - has the music track, which will loop
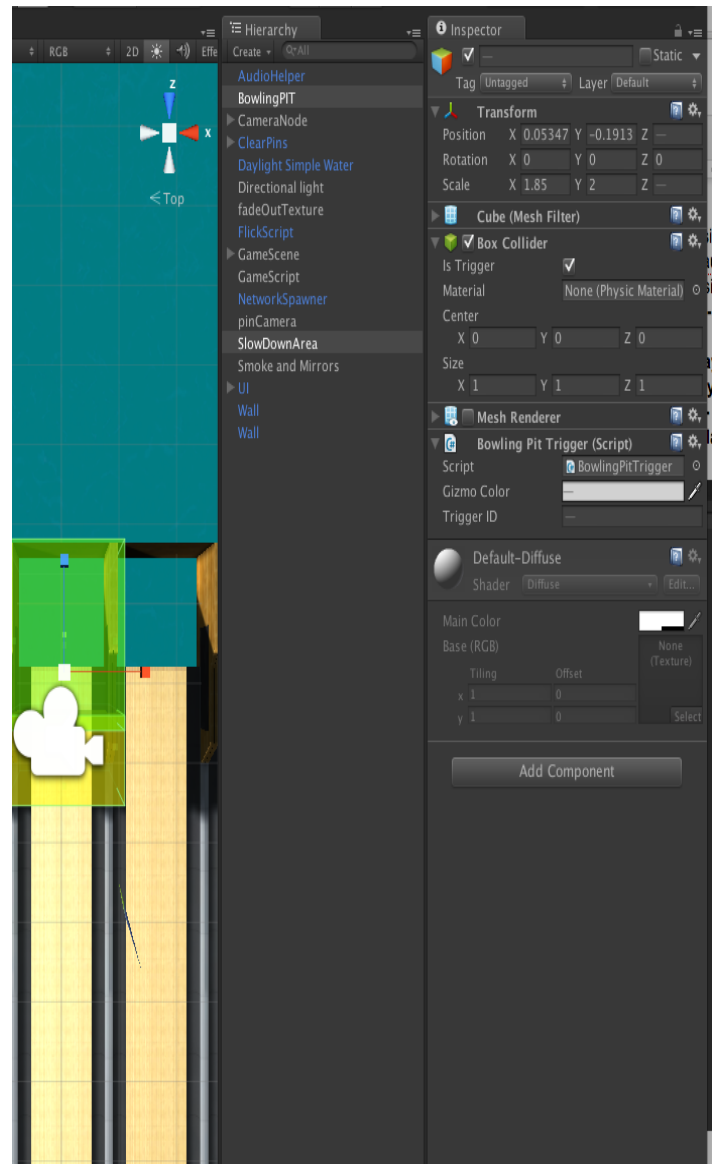
Game UI - its important that your scenes will have these objects in them.

Fade Out - will fade out using the setting the gui textures value to 1, and then later made back to 0 (when fade in is called)

The pause button will slide in the pause panel there is a script attached to the pause button called **HideIfOnline** -- which will hide this gameobject if you are playing online. Once your in game your stuck there until its over.
Pause Panel - will allow you to to toggle the audio, return to the main menu or restart the game
Results - holds a gameobject that will display the resultspanel when its gameover and set the results

Scoreboard - the scoreboard will slide in after the player knocks down pins. The guitexts will be automatically created at runtime. The scoreboard is mandatory as it handles some of logic firing events to play the right sound, display the correct title card etc

TitleCard - will slide in displaying the GUI text
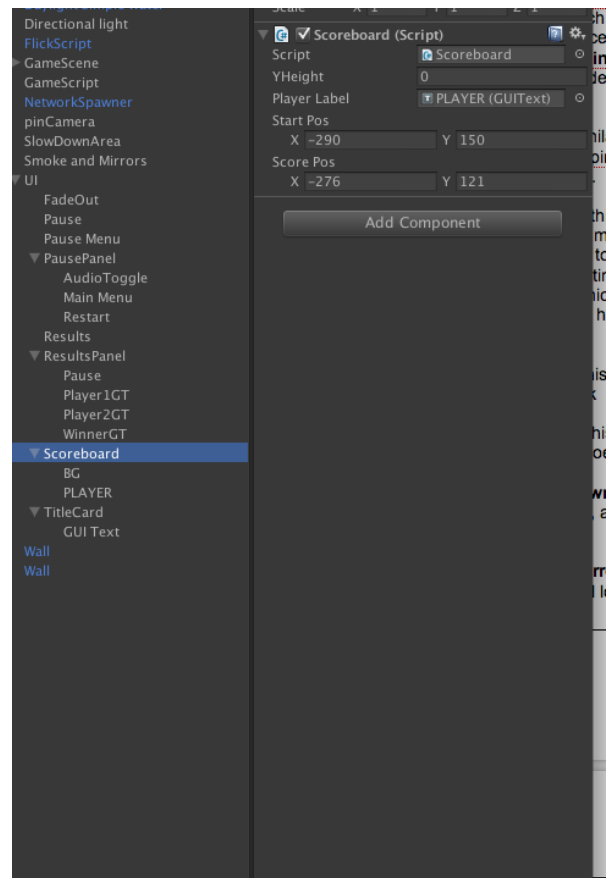
5) RESOURCES FOLDER

These prefabs will be created via script

AIPlayer# - AIPlayer0 is easy, AIPlayer1 is normal, AIPlayer2 is hard, you could add more AIs. Notice the only real difference is xMax this is simply a scalar value where it randomly chooses between -xMax and xMax to create an offset from the centre. You might want to come up with more a complex AI to target the best pin -- on a second strike -- right now it simply chooses the closest. Notice the player index is set to 1 for all AI Players, and has a photonview.

HumanPlayer# - the only difference between humanplayer1 and humanplayer2 is the playerindex (either 0 or 1).

Each player human or AI has a Ball gameobject as child a child which has a **ballscript**, **mesh renderer**, a **mesh filterer**, a **sphere collider**, a **rigidbody**, a **ballscript**, a **constraint** script, an audio source, an **audiovolume**, a **max speed script**, a **minseedscript** and a **photonview**

Pins# - Pin1 and pin2 the only difference between them is which pin material to use.

Each Bowling Pin has a **pinscript** which configures how it behaves, it also has a **photonview,** a collision mesh (convex), and a meshrenderer
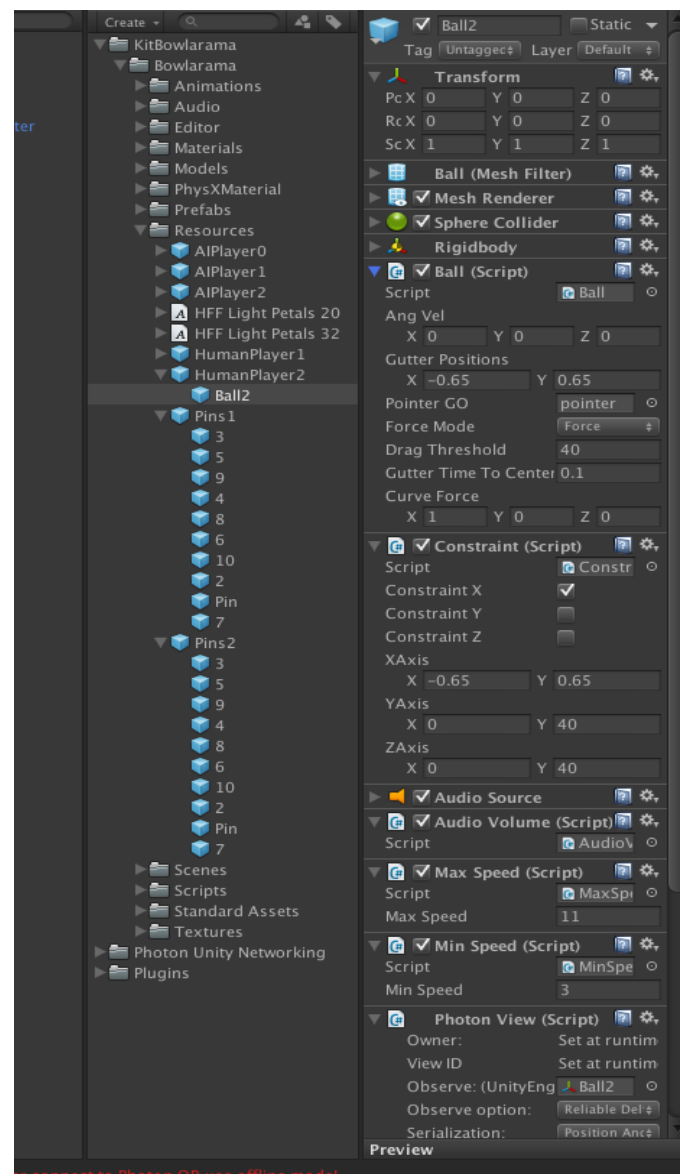
6) NETWORKING

The networking for this kit is really simple.

Master Client controls simulation
We have the master client he basically controls the simulation, the client simply uses the master client.

OnDisconnect - whenever one of the player disconnects, or goes back to the main menu the game will end and both players will be kicked back to the main menu and disconnected.

Pause Button - the pause button has a hideIfOnline script which will simply deactivate it -- so a player cant get back to the main menu until the game is over.

This seems okay for the demo and I think its okay for two players but if you tried expanding it for say 2+ players you are going to want a more sophisticated way of hadling it -- you dont want the game to end every single time someone is disconnected from the server. You might want to add in a grace period where the players have a time before they reconnected to the server.

Shot Clock - the shot clock is our way of ensuring what happens when the player simply does nothing, he has "10 seconds" before the ball automatically fires for him. If you dont want the shotclock simply remove it from the ConnectManager gameObject in the main menu scene.