Highway Racer Complete Project By BoneCracker Games

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First of all, thank you for purchasing Highway Racer! This documentation covers how to add / change / edit player cars, traffic cars, levels, roads, scores, multipliers, modes, menus, etc...

Package Contains

- 12 Player vehicles
- 5 Traffic vehicles
- 1 Main menu, and 3 gameplay levels
- City environment
- User friendly editor scripts and editor windows for create & use your own content
- Photon integration
- All necessary scripts, models, materials, textures, sound FX, etc...

Video Tutorial Series For Creating & Configurating Player Cars, Traffic Cars, New Levels, Edit Prices, etc...

You can access this tutorial series from this link. I'll keep the list updated.

- Soundtracks used in webdemo are not included in the package. All soundtracks used in demo are licensed.

Leading Features

- Powered by Latest Realistic Car Controller V3.6
- Tested and ready to deploy for PC, Mac, Linux, Android, iOS, WebGL
- Four game modes
- Pooling lightmapped roads
- Very low count of drawcalls, triangles (Max DC 90, Max Tri 30k) for mobile devices
- Optimized traffic cars without wheelcolliders
- Lane switching traffic cars
- Variable traffic amount
- Unlockable Cars
- Upgradable Stats
- Attachable spoilers, decals, neons, sirens, NOS.
- Upgradable Cars (You can edit cars, prices, their upgrades from editor easly)
- All systems are related with editor scripts
- Clean code, written in C#
- Easy to use, highly customizable
- Multiplayer with Photon PUN2

Please don’t hesitate to writing a review to us. For support tickets, please contact me via email before writing a review. I’ll do my best as soon as possible.

Before Releasing Your Game And About Intellectual Property Violating

- Do not use same screenshots in the Asset Store page.
- Do not use the same description.
- Do not use the same logo provided with package.
- Use unique game name.
- Change some materials, textures at least.

Before Importing The Package

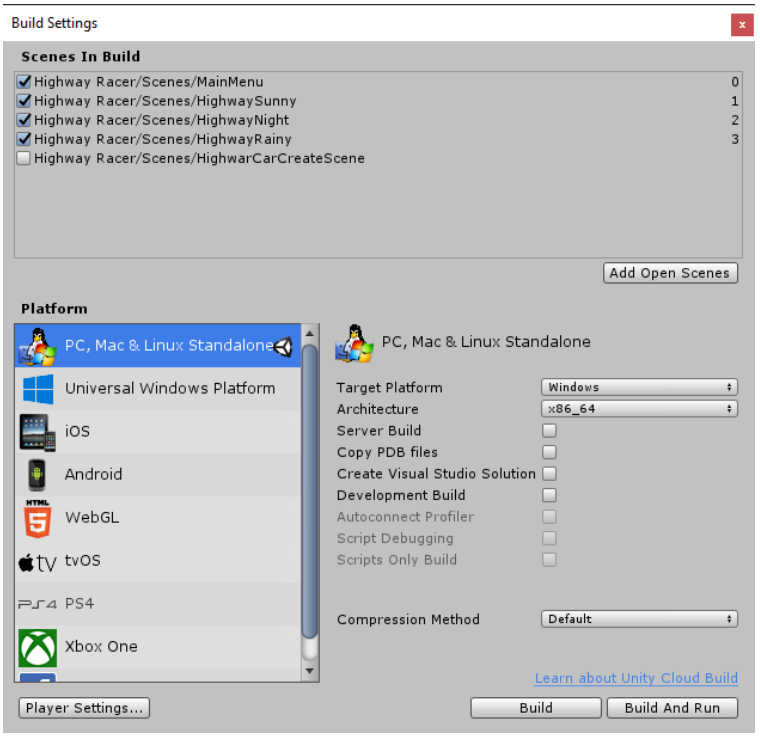
This project was made in **Unity 2021.3.2f1**. Be sure your editor version is **Unity 2021.3.2f1** at least. My advice would be using the long-term (**LTS**) latest Unity versions. Not beta, or the latest version.

Be sure your project is a new fresh project. Package includes “**ProjectSettings**”, and overwrites if your project has own ProjectSettings.

After Importing The Package

Check your console to see if you have any errors. If you get any unreferrenced script error, this means your import was corrupted. Delete everything and reimport the package if this happens(Usually %99 your import will success).

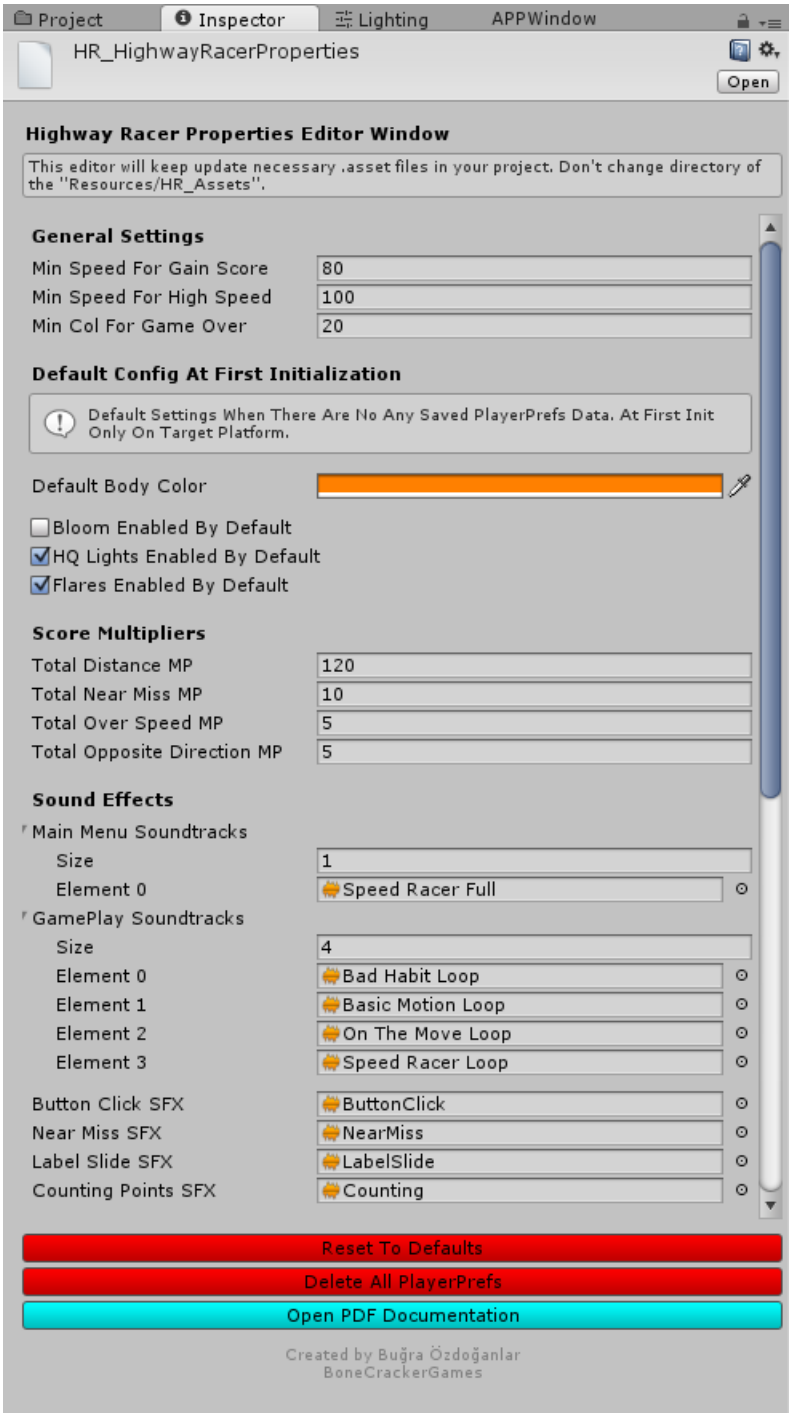
Go to **File → Build Settings** and check out your build settings. Your scenes, build target, player settings. All default package settings are like this;



Hit play and try the game. Every modes, every cars, every upgrades. Be sure your project is working fine before any modifications.

Highway Racer Properties Panel

All global settings are related with this one single editor script. You can access it from **Highway Racer → General Settings** from top bar menu.



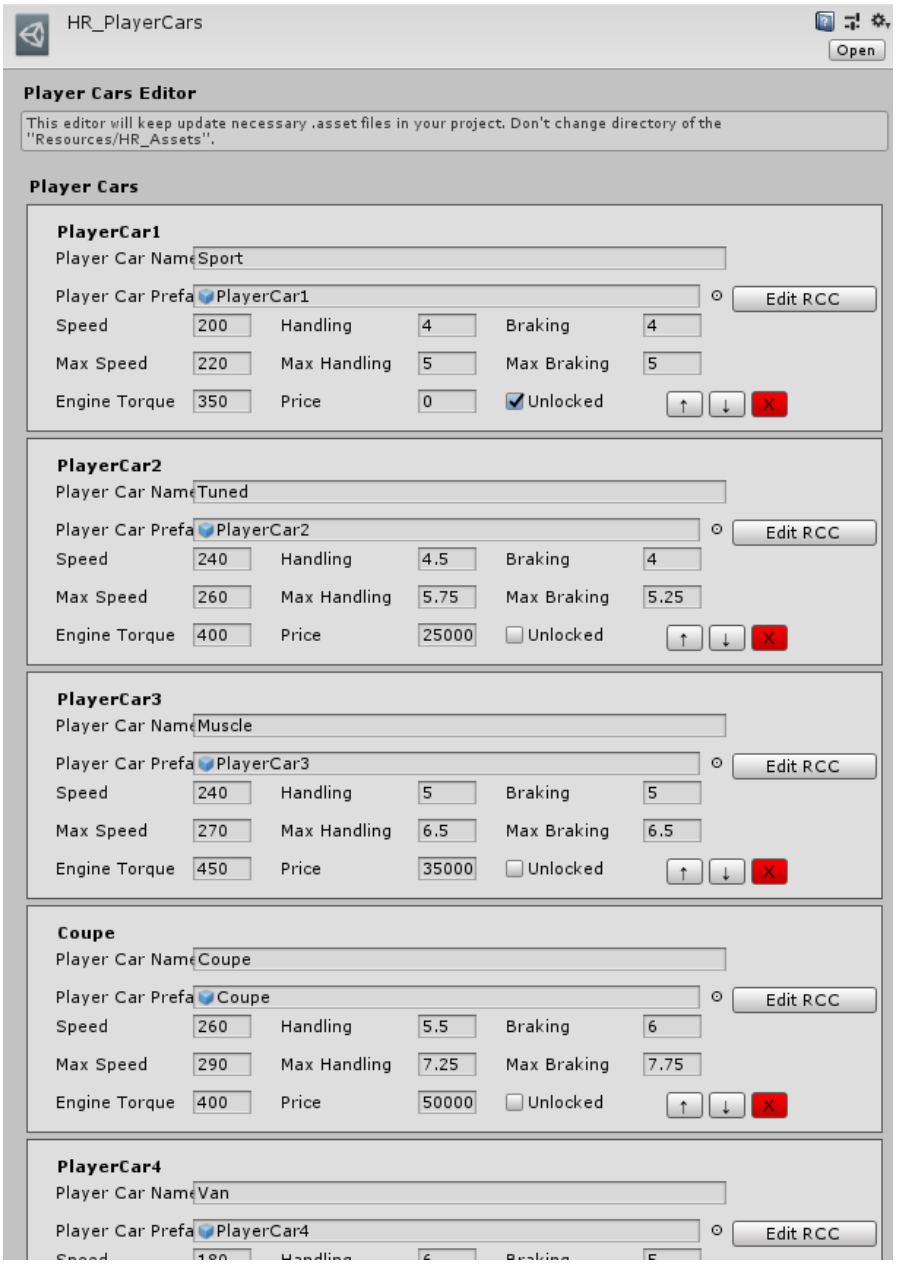
As you can see, you can edit global settings here. Minimum speed for gaining score, default settings, score multipliers, main menu and game play soundtracks, button sfx, nearmiss sfx, label slide sfx, rides, upgrades, their prices, traffic cars, etc... You can edit the package whatever you like here. You don't need to edit scripts for making changes.

You can enable 1M Money for testing purposes. Don't forget to disable it when you are about to publish and release your game.

Configure Player Cars

Click “**Configure Player Cars**” for editing current player cars, and their prices. You can easily edit their maximum speeds, engine torques, and maximum upgradable values. Speed, handling, braking, engine torque is the default values. Variables with “**Max**” defines the maximum upgradable value by the player.

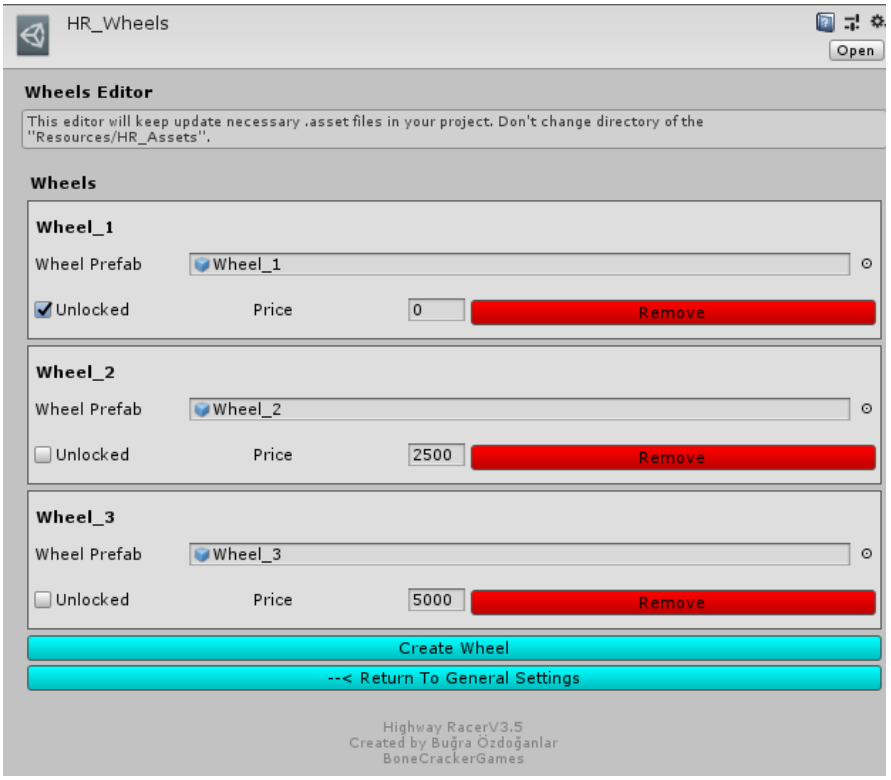
You can access “**Configure Player Cars**” from the **General Settings**, or from the toolbar (**Highway Racer → Configure Player Cars**).



Configure Upgradable Wheels

Click “**Configure Upgradable Wheels**” for editing current upgradable wheels. And their prices. They are just models. Just be sure your models have same sizes. Their pivots and axises must be correct just like other wheels provided with package.

You can access “**Configure Upgradable Wheels**” from the **General Settings**, or from the toolbar (**Highway Racer → Configure Upgradable Wheels**).



Main Menu Scene Scripts

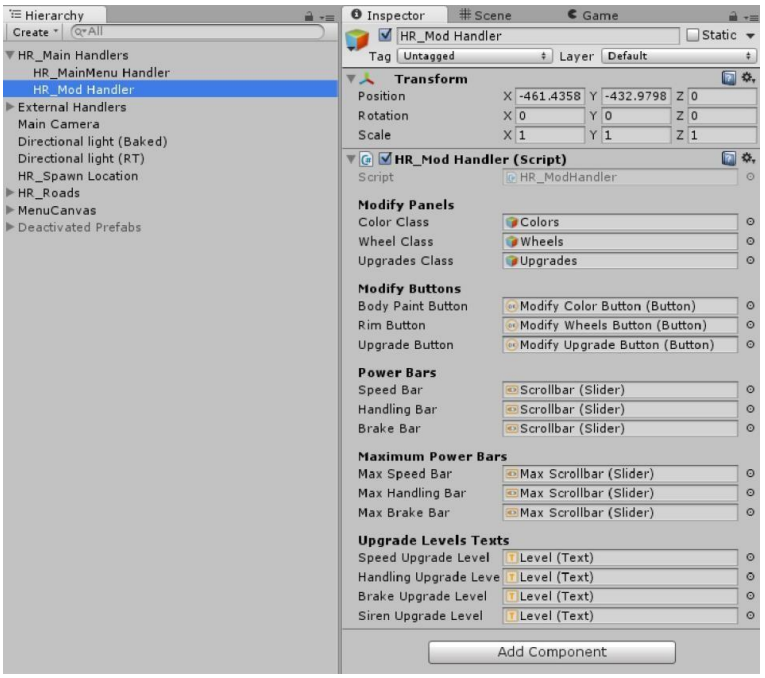
Main Menu must contain **HR_MainMenuHandler** and **HR_ModHandler** scripts.

HR_MainMenuHandler

Manages UI menus, options, interactions, spawning player car, switching them, purchasing new cars, etc...

HR_ModHandler

Manages the modding section, UI buttons for modification, stats slider bars, texts, etc. Receives events from the modder buttons, and sends them to **HR_ModApplier** attached to the player car.

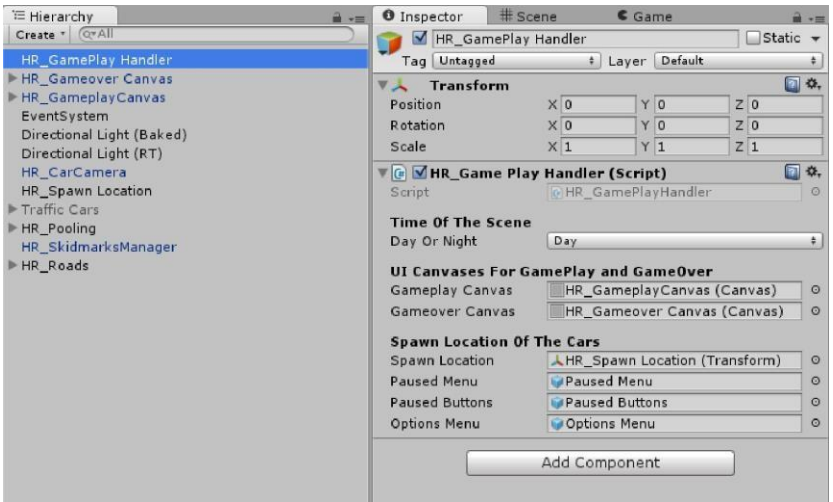


GamePlay Scenes

All gameplay scenes must contain **HR_GameplayHandler**, **HR_TrafficPooling**, and **HR_RoadPooling** scripts.

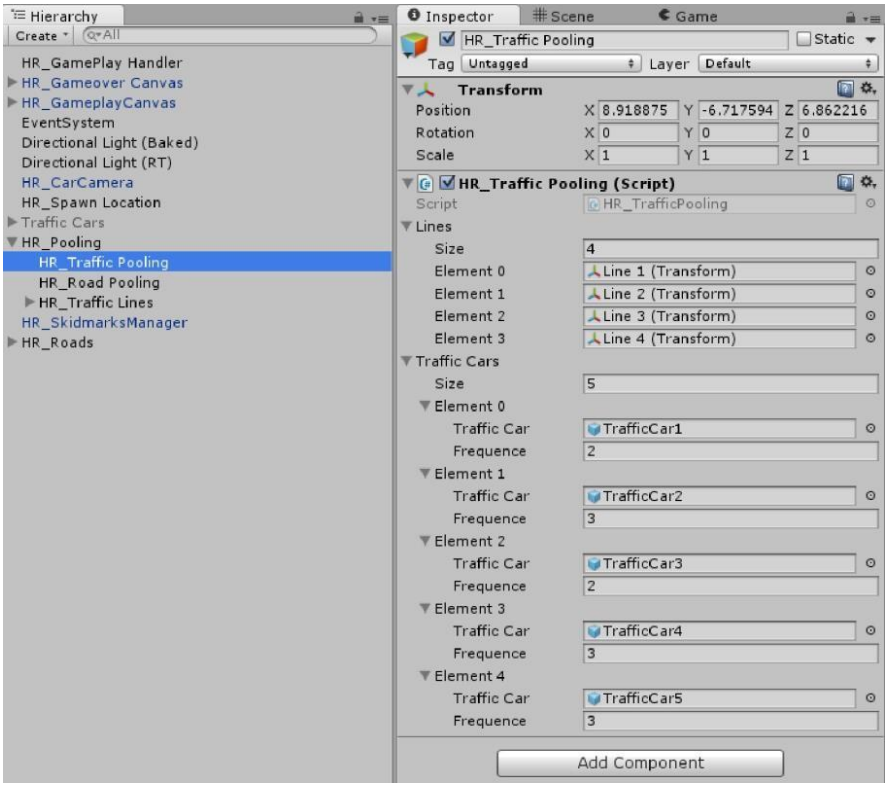
HR_GamePlayHandler

Manages time of the scene, UI Canvases, player spawn location, menus, etc...



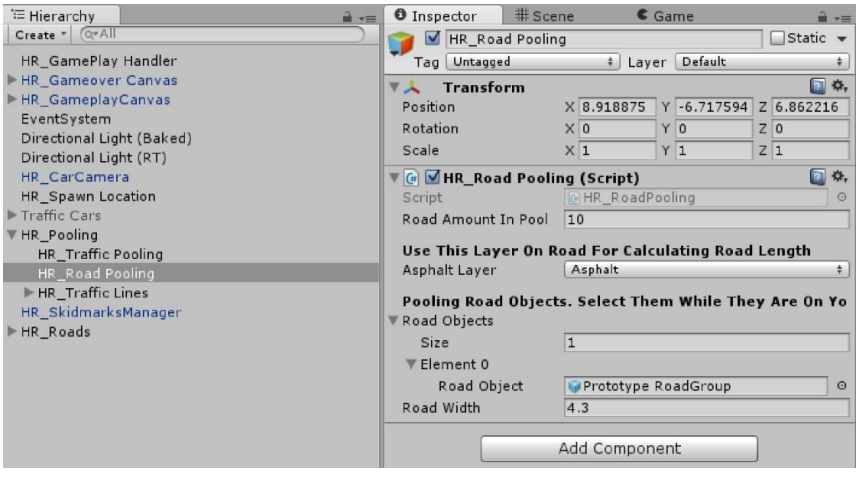
HR_TrafficPooling

Used for pooling and re-using the traffic. Road lines must be selected here. Traffic cars will use these lines. 4 lines needed.



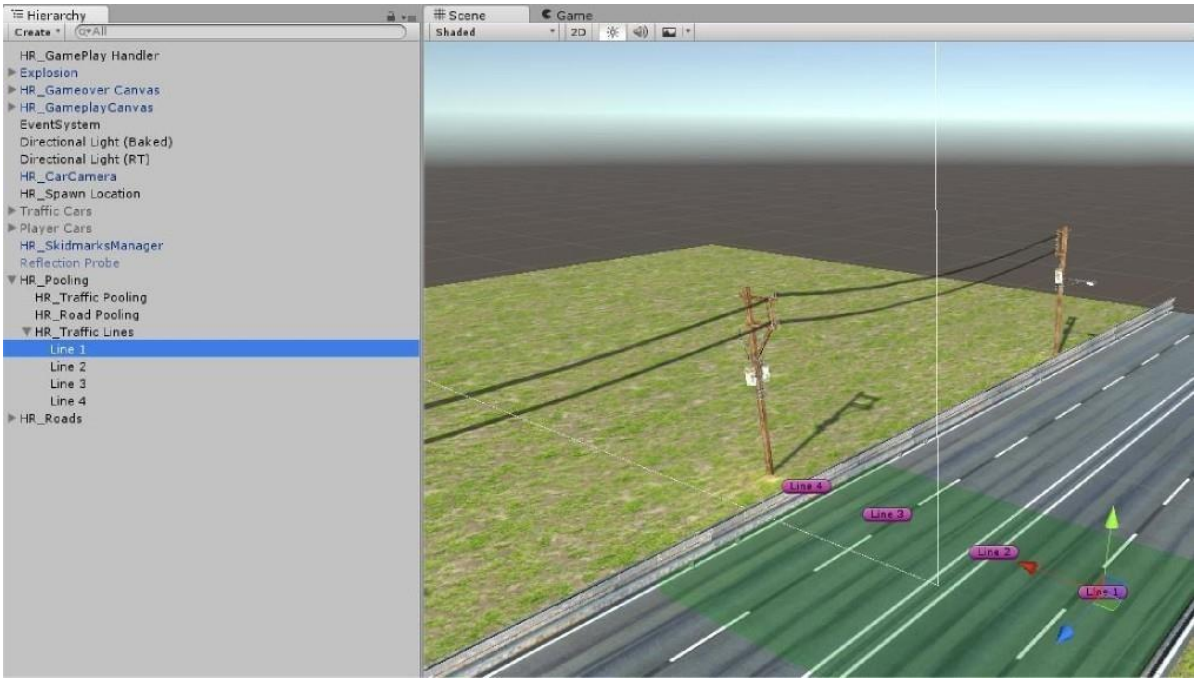
HR_RoadPooling

Used for pooling and re-using the roads. If you want to use lightmapped roads, you must bake having them on your scene. Once your baking is completed, select your road group while they are on your scene. If you select a prefab in your project, you will lose the lightmaps.

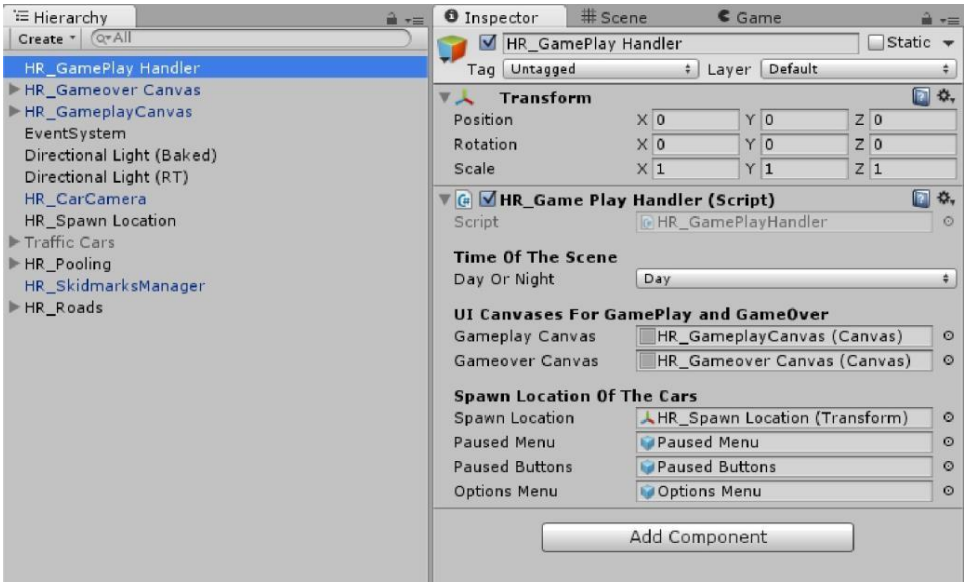


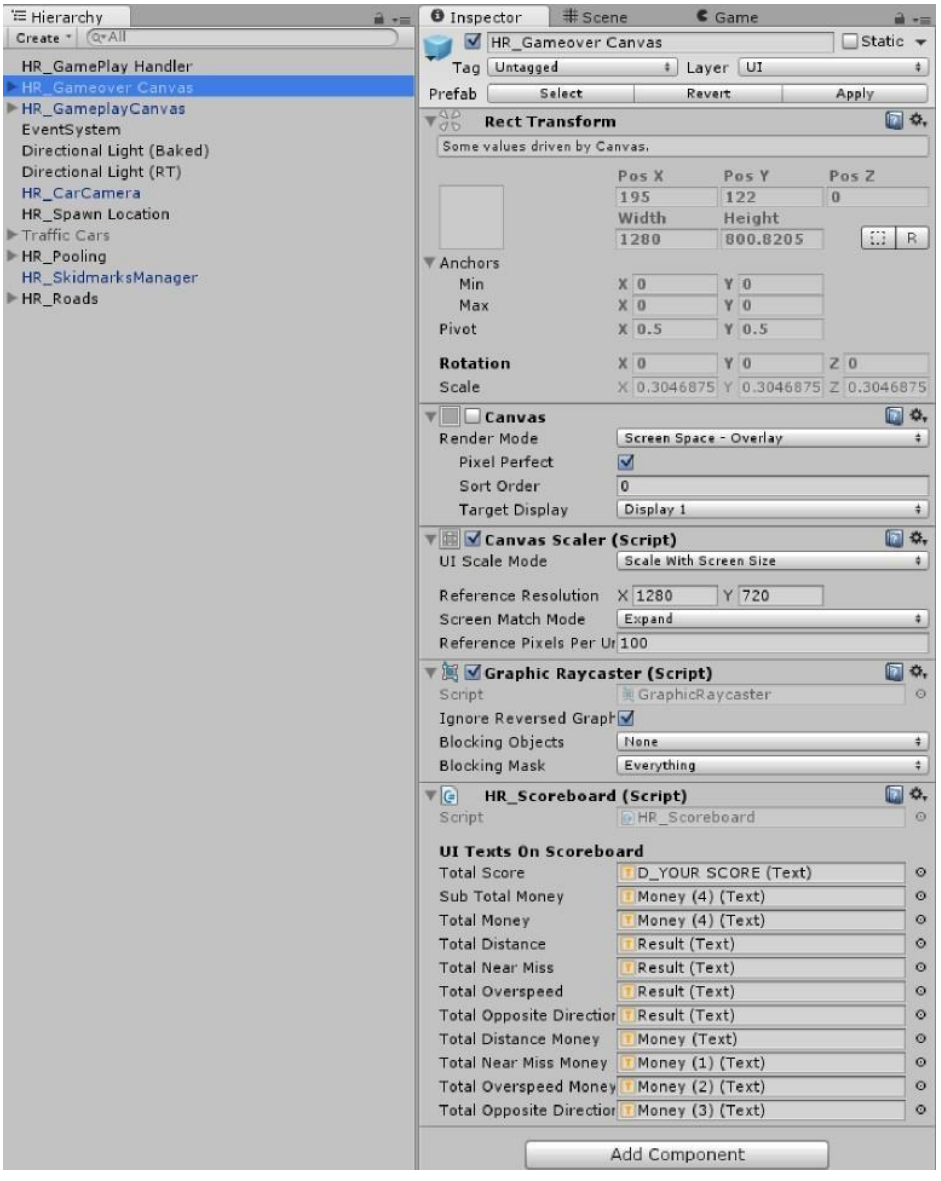
Traffic Lines

They are just transforms without any components. Traffic cars will use these lines. They must be selected in Traffic Pooling.)



GamePlay and GameOver UI Canvases





Adding / Editing Player Cars

All player cars are controlled by Realistic Car Controller. If you want to add your own car in the game, you have to create it according to Realistic Car Controller documentation. Also you can watch the tutorial video to how to add a new vehicle.

Highwav Racer Create Player Vehicle Tutorial Video

There is a scene named "**HighwayCarCreateScene**" in the scenes folder. Open it up, and build your car here. If final results are good, you can add it to your game.

Make a prefab of your car. Just drag and drop your car root to "**Prefabs / PlayerCars**". Select your prefab in **Highway Racer → Configure Player Cars**. Or you can just click "Create Prefab" on your inspector panel and add it to the list with the button.

Steps are;

1- Create your car controller.

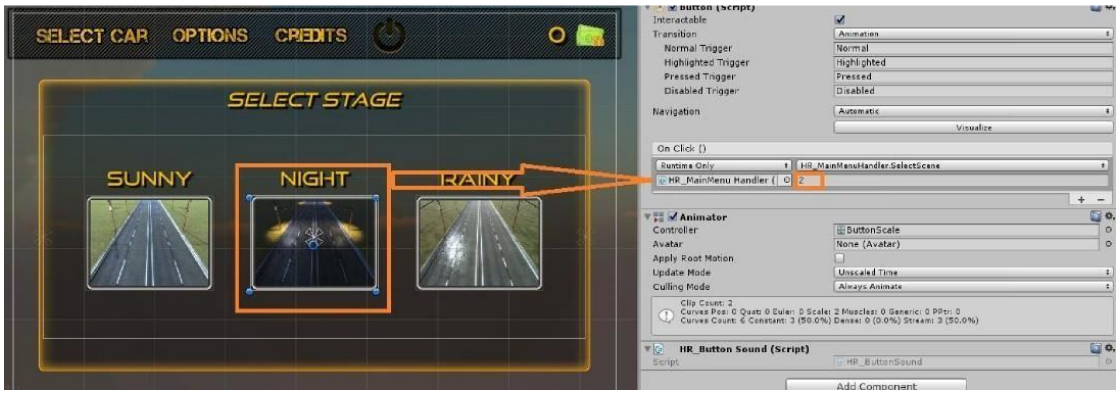
2- Add "**HR_PlayerHander**" script to it (**HR_ModApplier** will be added automatically).

3- Create and save the prefab by clicking on.

4- Add the prefab to the player cars list by clicking on.

Adding / Editing Scenes

All these necessary handlers are located in "**Scenes / Scene Setups**" folder. You can drag and drop them to your scene for quick install. Actually you won't need to create a new scene and placing them. Just duplicate one of the gameplay scenes, and redesign the level. That's it! Add this new scene to Build Settings. At the Main Menu scene, all UI buttons in scene selection canvas are using scene names. Be sure the button for your new level has proper scene name in the OnClick event.



(This is old screenshot that uses the numbers for scenes. Be sure to type your scene name here)

All scenes are using just one big grouped road gameobject. This grouped gameobject must be selected in the **HR_RoadPooling** script. You have to use big grouped gameobjects like in other gameplay scenes.

HR_RoadPooling is calculating the road automatically. You don't have to specify road length, or make some triggers. But if you want to set it manually, simply disable automatic calculation and set your own value.

Also there is a blank prototype road gameobject for your new roads in "**Prototype**" folder. If you can't build your road, you can use this one. Just place your models on this prototype, change materials, textures, and you are done.

Optimization On Levels

All models have minimal amount of materials. Therefore, scenes have maximum 50 - 55 drawcalls at top camera mode, 80 — 90 drawcalls at fps or tps camera mode.

Scenes are using pooled traffic cars and roads. No wasting any resources. Also roads are lightmapped. This will avoid realtime lighting on roads and scene environment.

In the Main Menu, closest roads around spawn location are lightmapped at high quality settings. Other far away roads are lightmapped at low quality settings. All lightmaps are at 2048 * 2048 resolution.

None of any lights on any traffic car using as pixel lights. They are not affecting on any surface. They are just used for nice looking halo and lens flare effects. If you are planning to release it to PC or Mac, you can use pixel lights instead of vertex lights from **Tools → BCG → RCC → Edit Settings**. In the "**Optimizations**" section.

Local Saved Files

Package is using PlayerPrefs registry data for saving player settings, cars, upgrades, highscores, achievements. To see them and edit easily, I can recommend "Advanced PlayerPrefs Window" asset on Asset Store.

API

You can use the API to get currency, add currency, consume currency, unlock vehicle, lock vehicle, get unlocked vehicles, and get high scores.

HR_API.GetCurrency() = Current player cash.

HR_API.AddCurrency(int add) = Adds player cash.

HR_API.ConsumeCurrency(int consume) = Consumes player cash.

HR_API.UnlockedVehicles() = List of the owned vehicles as int list.

HR_API.LockVehicle(int index) = Locks the target vehicle.

HR_API.UnlockVehicle(int index) = Unlocks the target vehicle.

HR_API.OwnedVehicle(int index) = Checks if the target vehicle is owned or not.

Int[] scores = HR_API.GetHighScores() = Gets high scores with int array.

Contact

If you need any support, just contact me via BoneCrackerGames@gmail.com with your invoice number.