Car Chase and Drift Template

1.0 Configuring the asset.

Thank you for purchasing the asset. Car chase and Drift asset uses many tags and layers, in order to configure your project properly for the asset to work please complete the following section after downloading and importing the asset to your project

1- Unzip the file **ProjectSettings.Zip**
2- Move the unzipped folder from step 1 Project Settings under your current unity project.
3- Close Unity and open the project again, the editor should take sometime to compile the assets.
4- Enjoy the asset, if you have any questions or you face any difficulties, please do not hesitate to contact us.

The demo levels **LEVEL 1** contain the setup of a sample level and has 2 pre-configured cars to be used in your game.

The script **SimpleCarController.cs** contain all the logic required to setup a simple car drift example, the variables **power, max speed, minimum slide speed, and car grip**. These variables have been configured to match the 2 example cars given, in order to setup your own car you must follow the setup given in the example scene and alter those variables to fit your needs for creating an new car.

To test the game, add the **main_menu** scene and **level 1** scenes to the build settings window, and start the main_menu scene. You may also start playing from **Level 1** Directly.

2. Scripts and Functions

In the following section we explain the main scripts of the asset that you need to know to properly setup your own car drift levels.

2.1 Driver Car Script

The player car controller script **SimpleCarController.CS** is the main script used to control the player car, it has many settings that will enable you to setup the car behaviour based on the parameters and the prefered style of drifting you would like to achieve. the scene **Level1** has 2 example cars setup to drift differently, please refer to those cars and use it for reference in designing your own drift car. This section we will list all the attributes of the script and how they affect the car behaviour.

Parameter Name	Explanation
MaxSpeedToTurn	in this parameter we set the speed the car has to reach before it can be drifted around, the value is decided based on the weight of the car and its center of gravity, the heavier the car the less the value.
ExplodePrefab	This is the explosion effect, it will be spawned when the car crash. For differrent effect, please change this prefab accordingly
RearLeftSkidGenerator	This parameter holds an empty object, it is placed right under the rear tire as the tire touches the ground. It is used to spawn the tire skid trail
RearRightSkidGenerator	Same as **RearLeftSkidGenerator**
CarBody	This variable holds the parent body of the car. This should be the main car body that everything is a parent under it.
Power	The tire rotation engine power
MaxSpeed	Maximum speed of the car
MaximumSlideSpeed	The maximum speed at which the car can reach during drift.
CarGrip	How much traction the car has, the less traction makes the car slide easily. Keep the value reasonable to avoid strange behaviour
SelectTurnType	This is the steering angle allowed for the car, you can choose Normal or Sharp.
TurnSpeed	How fast the car reach maxiumum steering turn angle
CenterOfMass	This variable holds an empty object that is a child of the car body, it is used to set the car center of mass.
SkidTrailPrefab	This variable holds the skid trail geometry that is spawned when the car starts sliding
JustDemo	Check this box if you just want the car to keep drifting, this option is used in the main_menu scene to show the cars drifting

	on their own just for demoing purposes.

2.2 Police Car Script

The police car is controller using the unity **nav mesh agent** and the custom script **PoliceCarController.CS** after you have setup the level and added all obsticles, next you need to bake the navigation mesh as explained in this tutorial **here**. Once the navigation mesh is ready, place the **navMeshAgent** component on the police car and assign the script vairable **Agent** to the **navMeshAgent.** In the prefab folder there is already a police car setup for you to refer and use in your own levels, it is also used in the scene **Level1**. The police car will always follow the player car that has the Tag **Player** assigned to it.

2.3 Camera Script

The camera script is used to follow the player car as it drift, the default setup locks the rotation axes and only follow the car from one angle. the **CameraFollowScript.CS** has the following parameters. By default the camera will follow the car that has the tag **Player** assigned to it.

Parameter	**Explanation**
Target	The player target car mesh
Distance	How far the camera is from the player car
Height	The height distance from the player car to the camera
HeightDamping	How smoothly the camera height changes.
RotationDamping	How smooth the camera rotate if rotation is enabled
IncludeRotationFollow	If checked it will also allow the camera to rotate as the car rotates.