

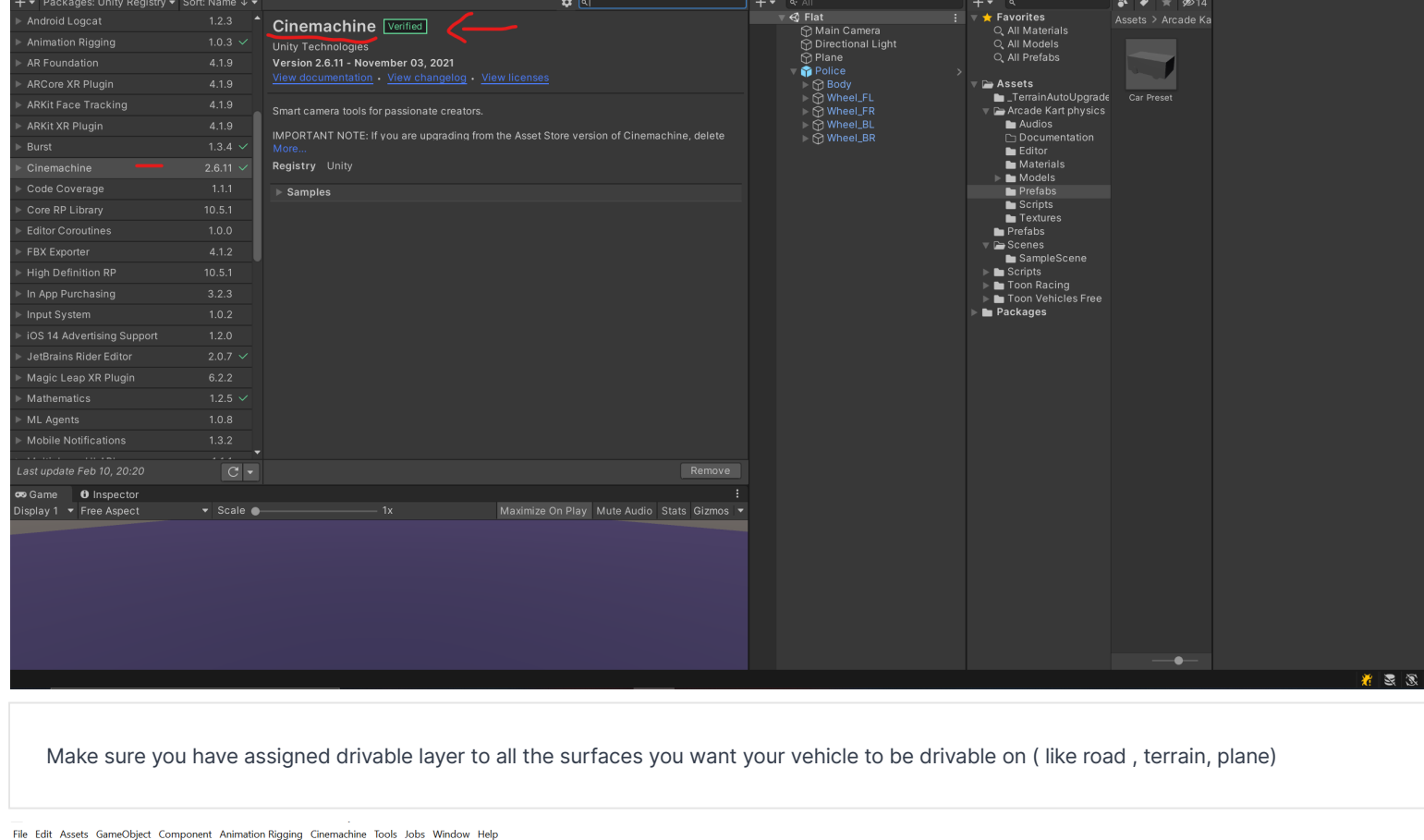
The Pdf file is a documentation of Arcade Vehicle Physics. And Arcade Vehicle Ai is based on same physics for Ai. so everything is same except :
There are 2 extra variables :
1.target(Ai will follow this Transform),
2.Brake angle(minimum angle between target direction and car forward direction at which car will apply brake)

For questions or problems join discord : <https://discord.com/invite/sEWwDQr>
For Better vehicle physics check out Ash Vehicle Physics : <http://u3d.as/2ktp>

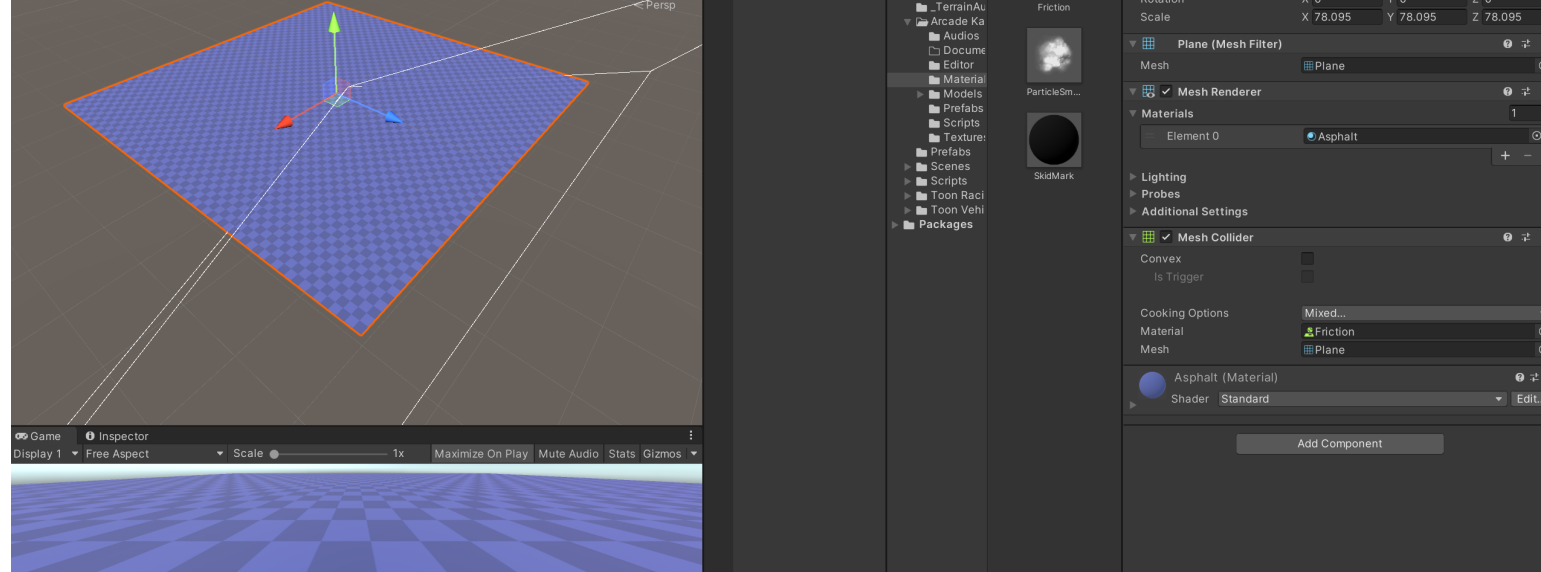
Also watch tutorial from store page.

Project Settings

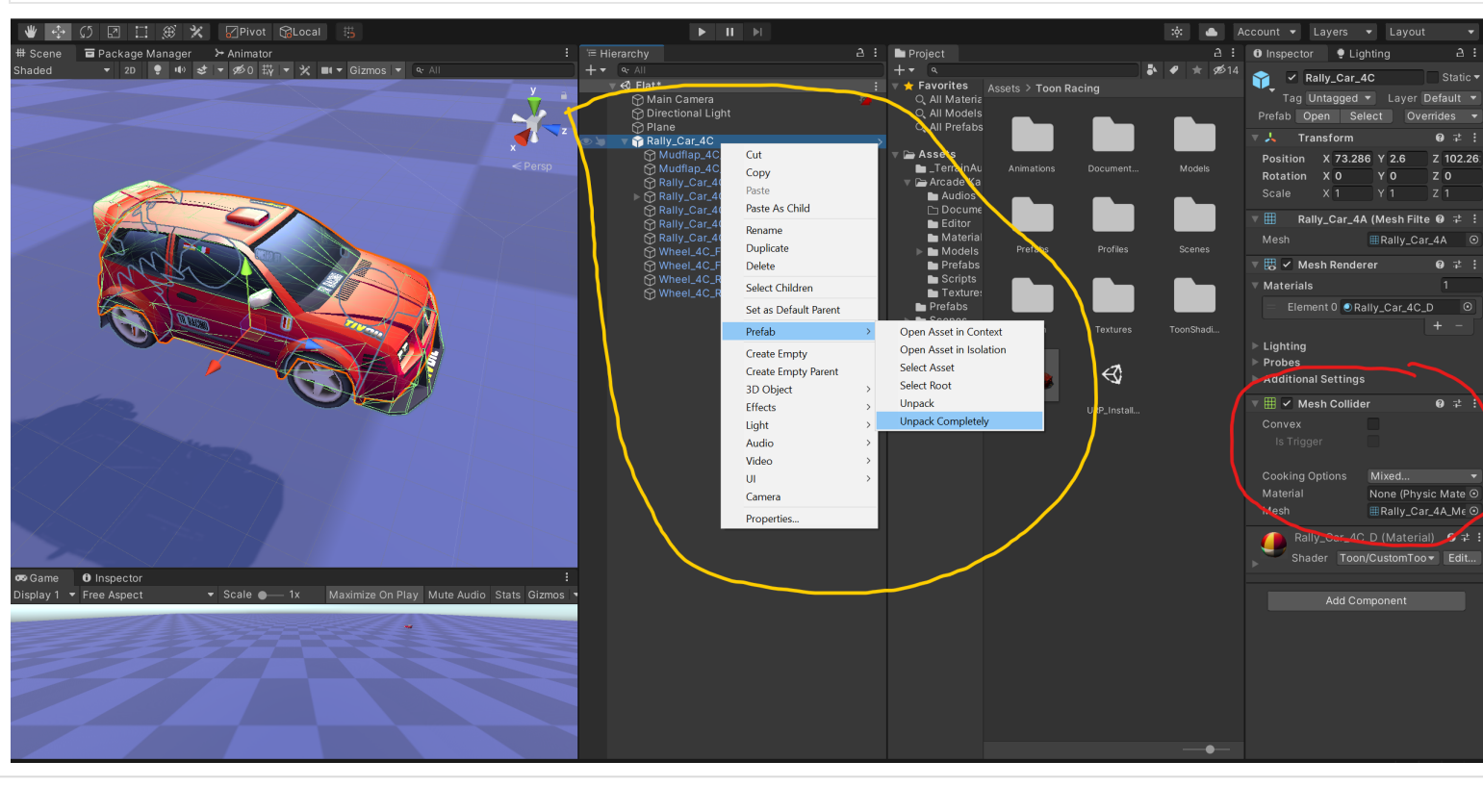
First of All Make sure you have Cinemachine package installed. By going to package manager in unity registry and searching cinemachine.



Make sure you have assigned drivable layer to all the surfaces you want your vehicle to be drivable on (like road , terrain, plane)

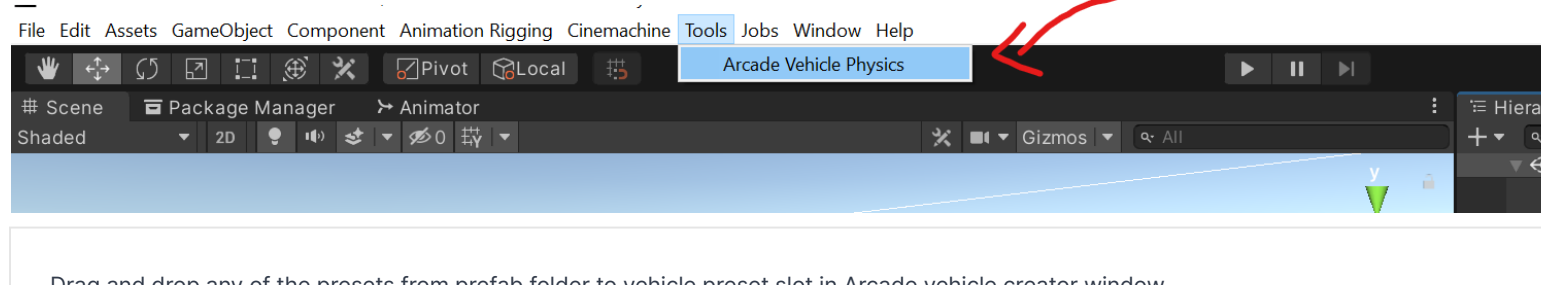


Unpack your vehicle prefab completely and remove all colliders and rigid body components if present on vehicle.

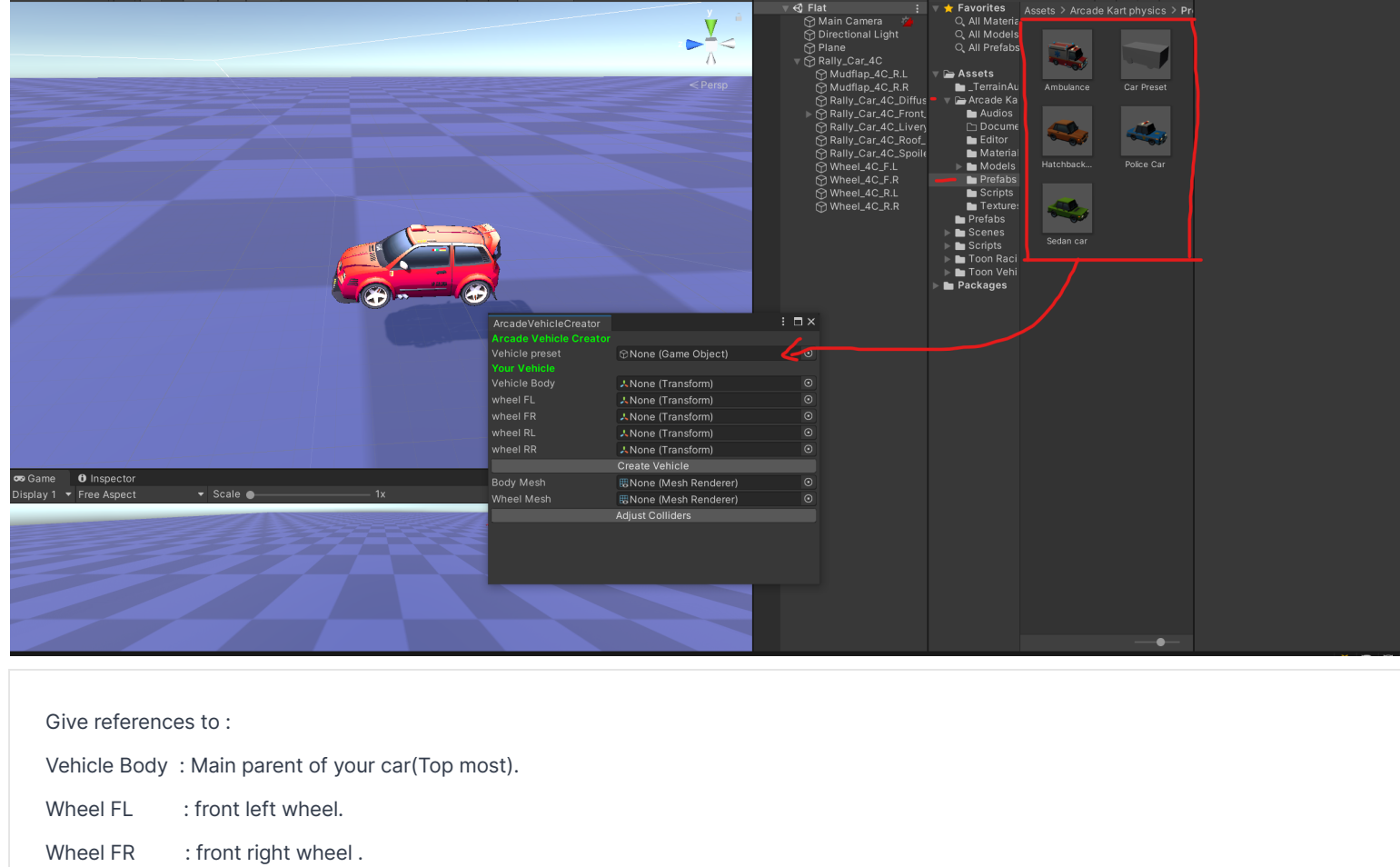


Quick Setup

Go to tools and open Arcade vehicle physics.

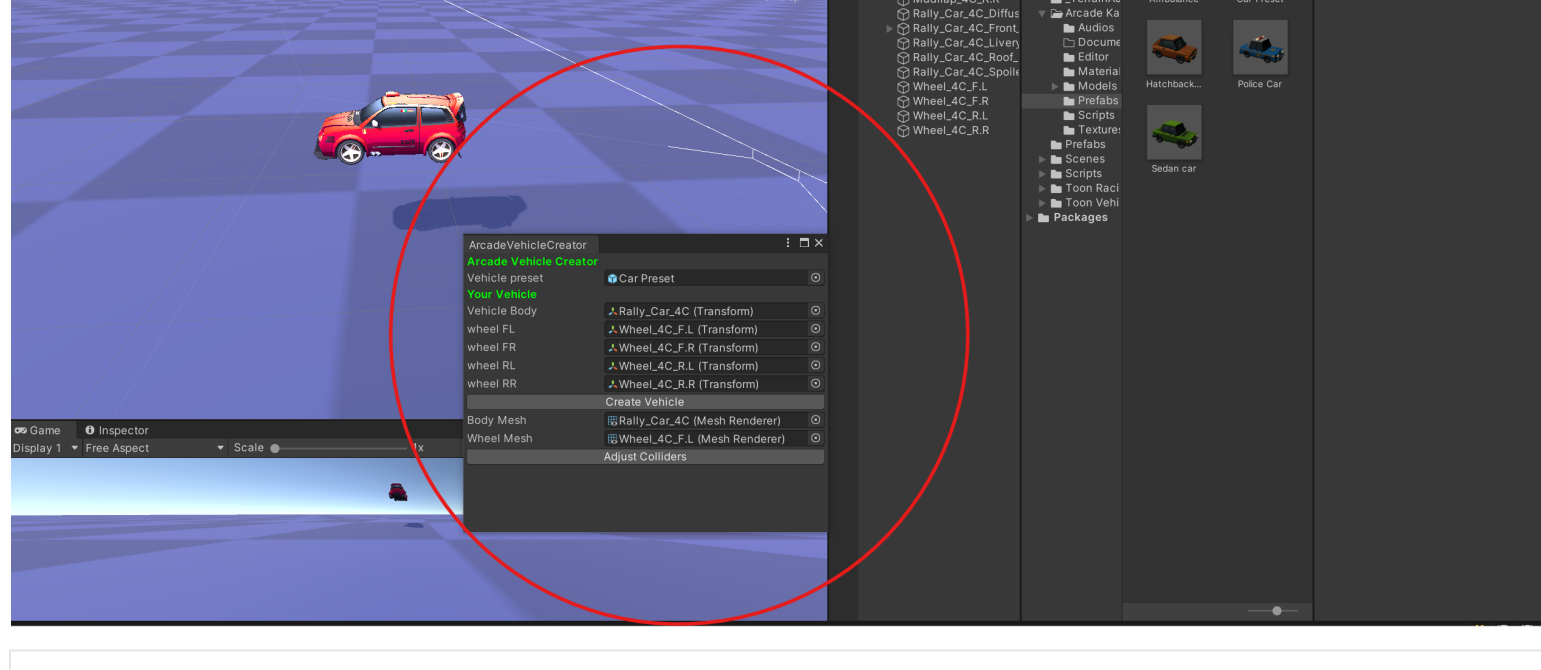


Drag and drop any of the presets from prefab folder to vehicle preset slot in Arcade vehicle creator window

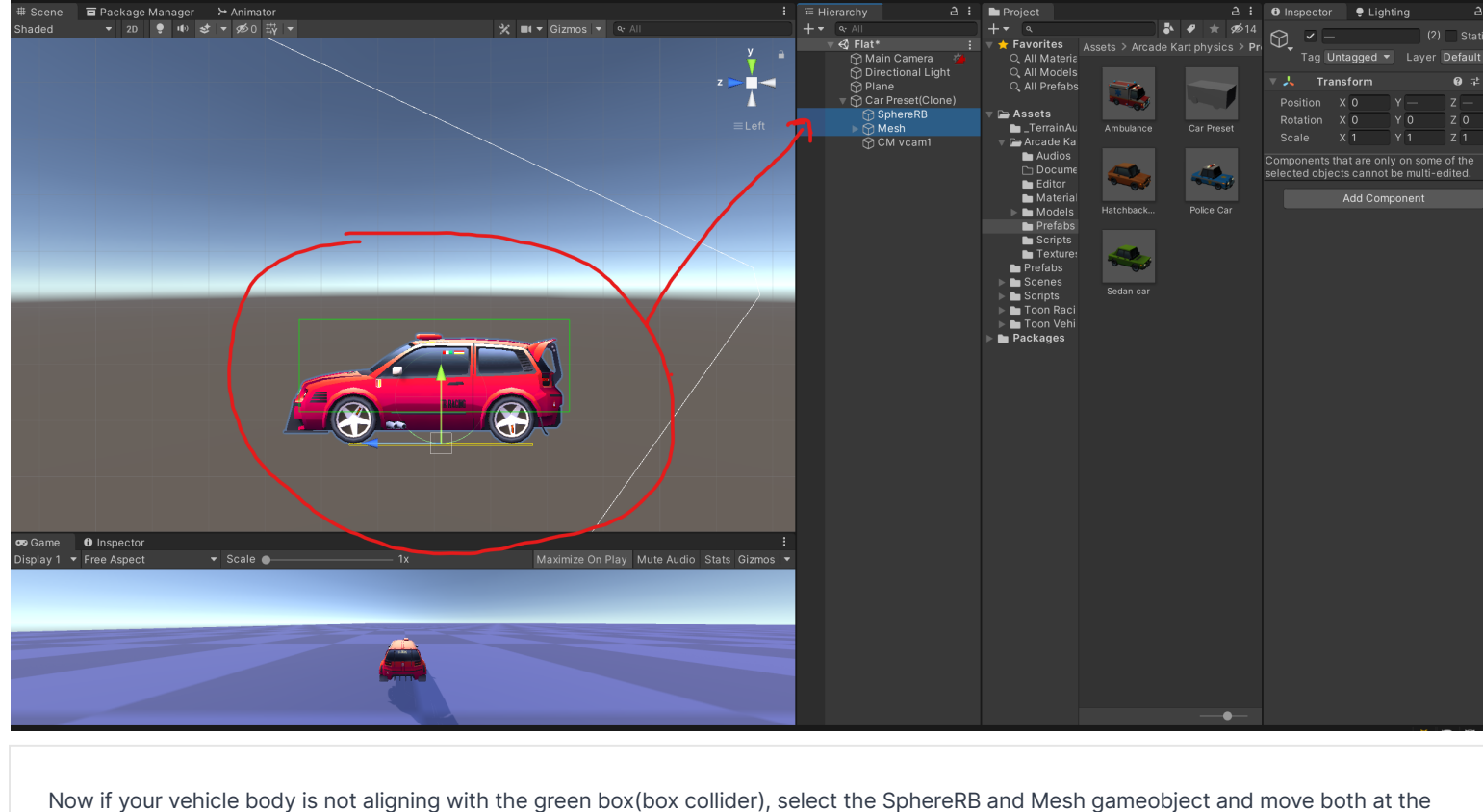


Give references to :

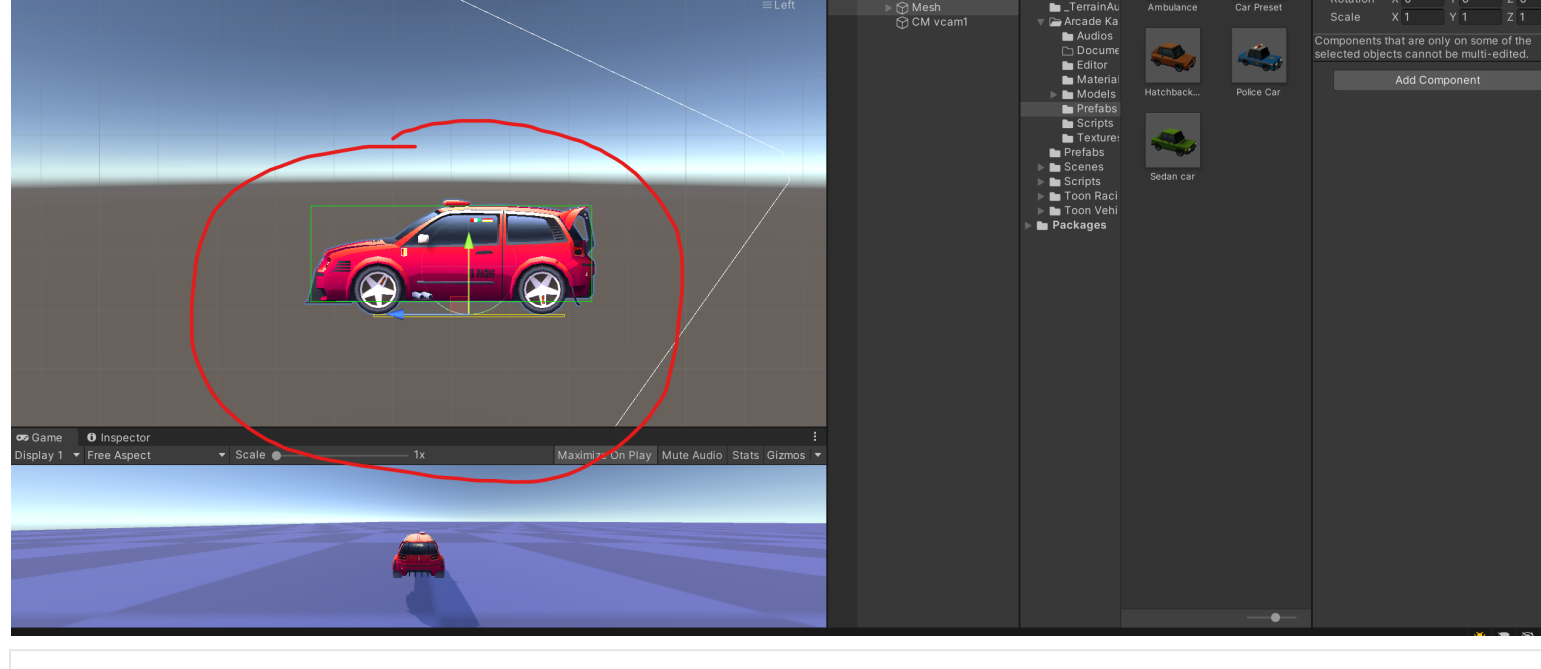
- Vehicle Body : Main parent of your car(Top most).
- Wheel FL : front left wheel.
- Wheel FR : front right wheel .
- Wheel RL : rear left wheel.
- Wheel RR : rear right wheel.
- Body Mesh : mesh renderer of your cars body.
- Wheel Mesh : mesh renderer of any of the 4 wheels.



Then click on create vehicle and adjust colliders buttons.



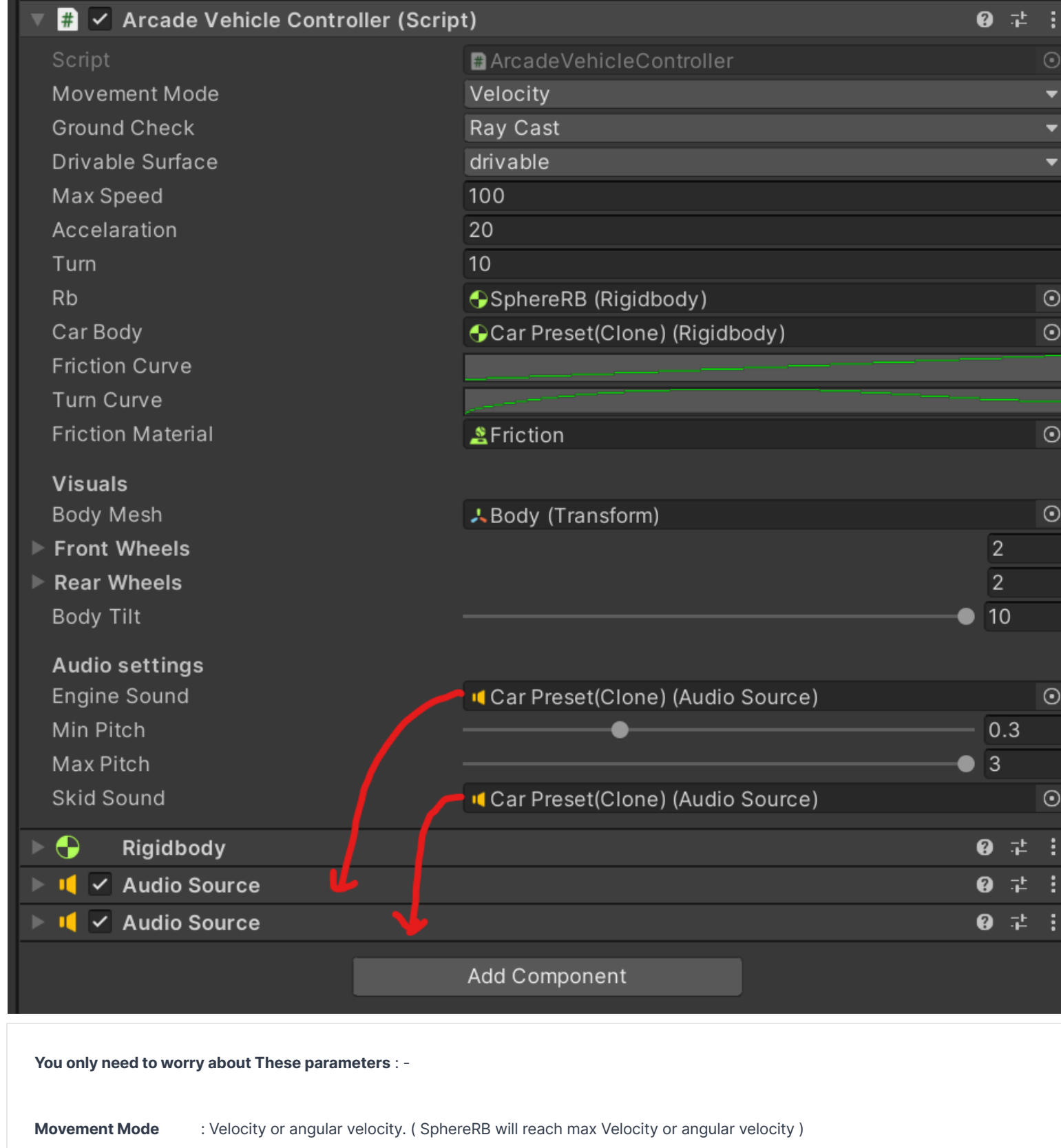
Now if your vehicle body is not aligning with the green box(box collider), select the SphereRB and Mesh gameobject and move both at the same time so that the body is inside the box collider.



Now hit play and play around with the values in Arcade vehicle controller script present on the top most parent of car.

Arcade Vehicle Controller Script

This script present on the top most parent of the car.



You only need to worry about These parameters :

- Movement Mode** : Velocity or angular velocity. (SphereRB will reach max Velocity or angular velocity)
- Ground Check** : raycast or spherecast method to ground detection.(for plane roads use raycast, for terrain like surfaces use spherecast
- Drivable surface** : layer that you want your vehicle to be drivable on.
- Max Speed , acceleration , turn** are self explanatory. just play around with these values.
- Friction Curve** : on this curve x axis is cars sideways velocity, y axis is friction material's Dynamic friction.
- Turn Curve** : on this curve x axis is cars forward velocity, y axis is Torque should be applied to turn vehicle.
- Body Tilt** : how much car body should lean while turning.
- Engine Sound** : Audio source of engine sound. you can change engine audio clip but it should be loopable.
- Min Pitch** : Minimum pitch of engine sound. (at 0 speed).
- Max Pitch** : Maximum pitch of engine sound. (at Max speed).
- Skid Sound** : Audio source of skid sound.