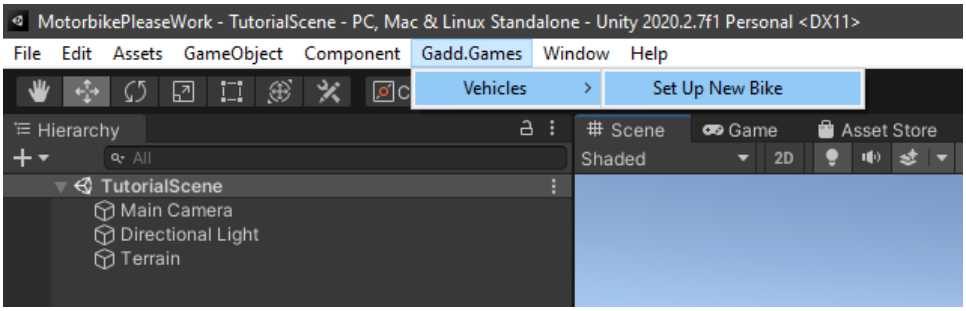
Creating Your Own Bike Tutorial

Full Video tutorial on asset store videos or

www.gadd.games

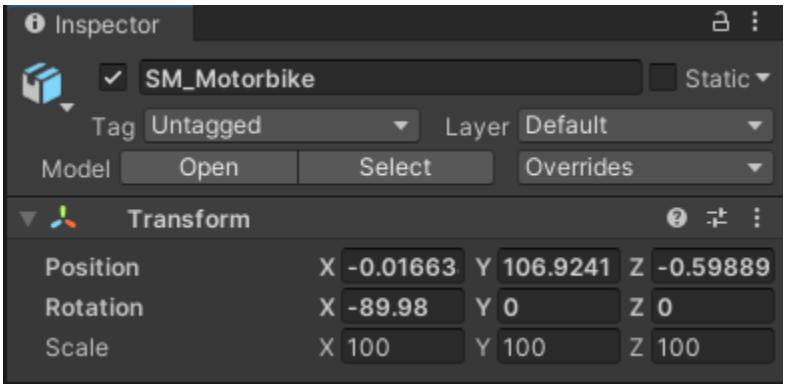
1) Select the Gadd.Games Menu button, then press Vehicles, then press Set Up New Bike.



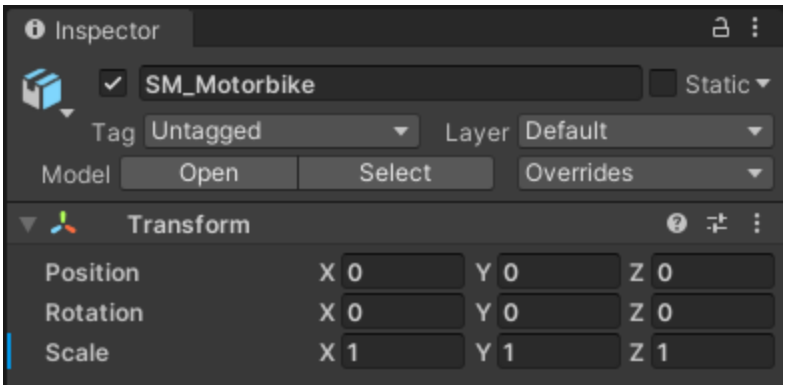
2) Now Import your own bike model or use one of mine from the Models folder.

3) Now select the empty bike parent object and make the scale 1 for all axis and reset the position and rotations to 0. If the size of the bike is wrong in the world change the scale factor on the models import settings.

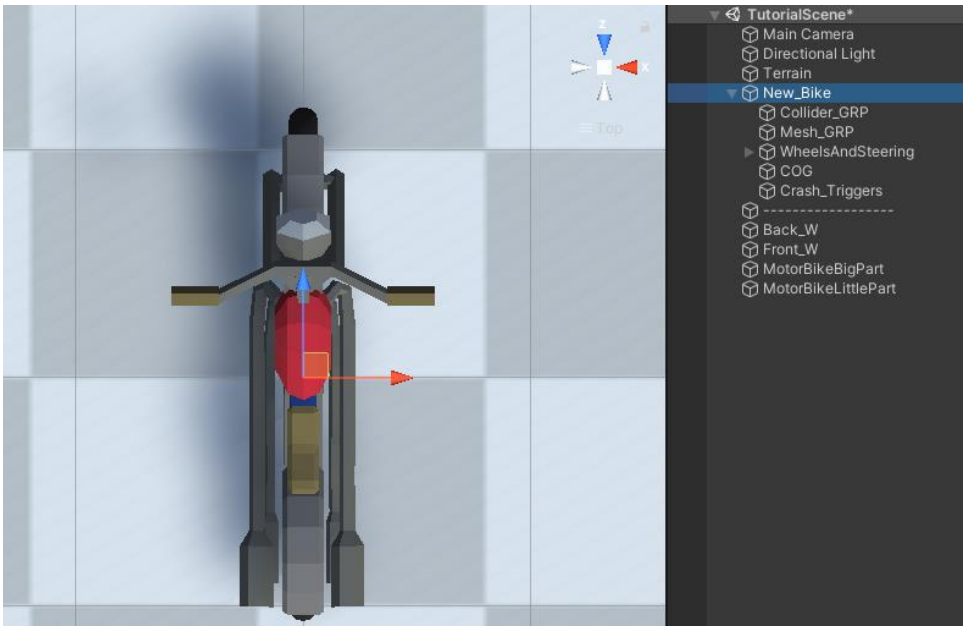
Before



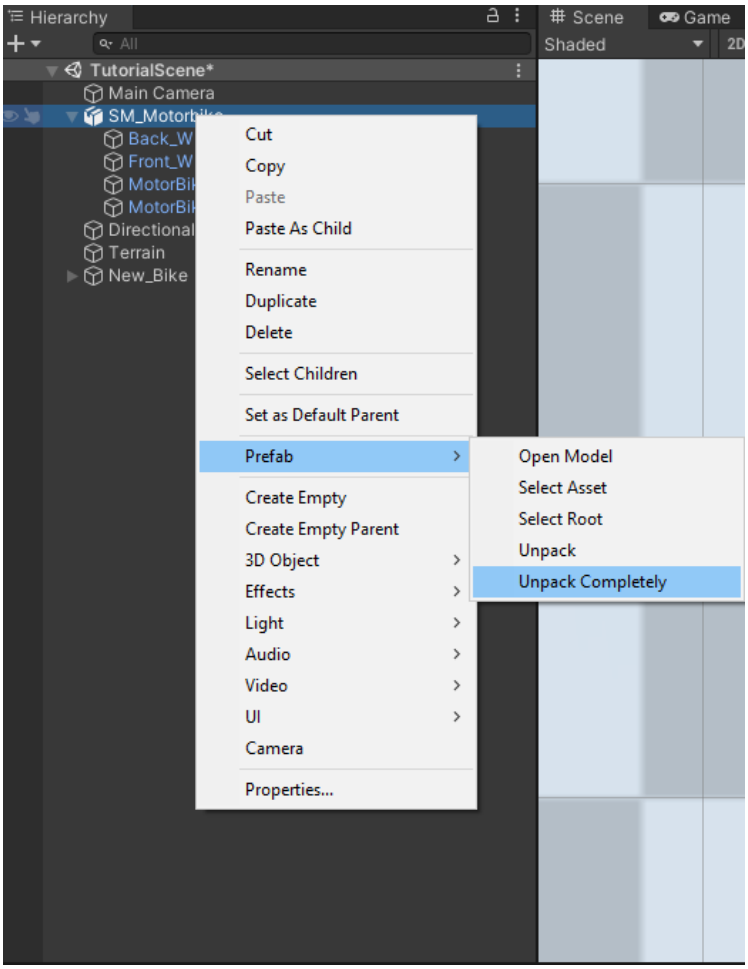
After



4) Ensure that the bike model is in the center of the New_Bike GameObject. If it isn't, move the bike to the center of the New_Bike object.

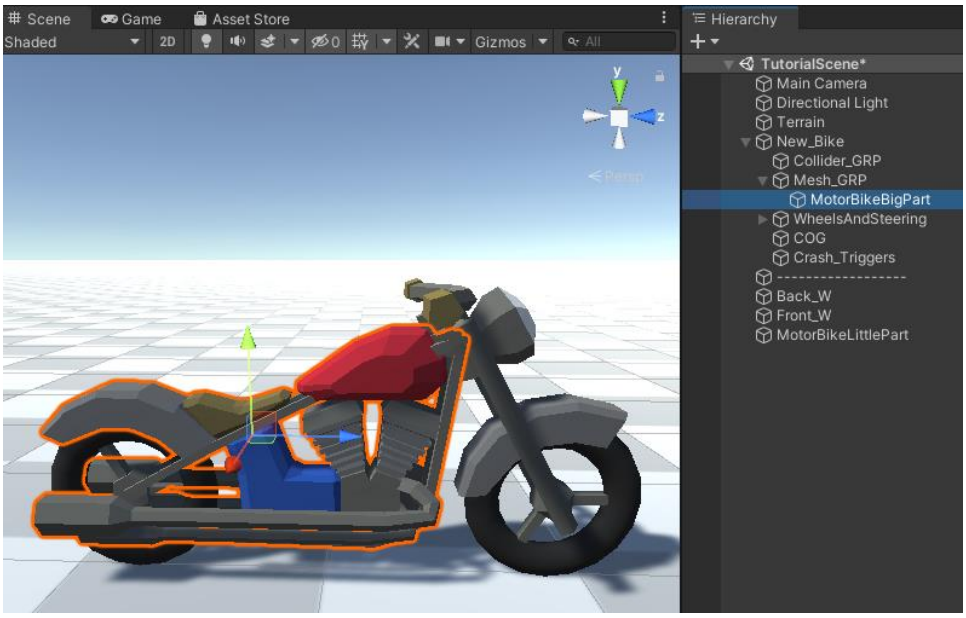


5) Unpack the bike model.

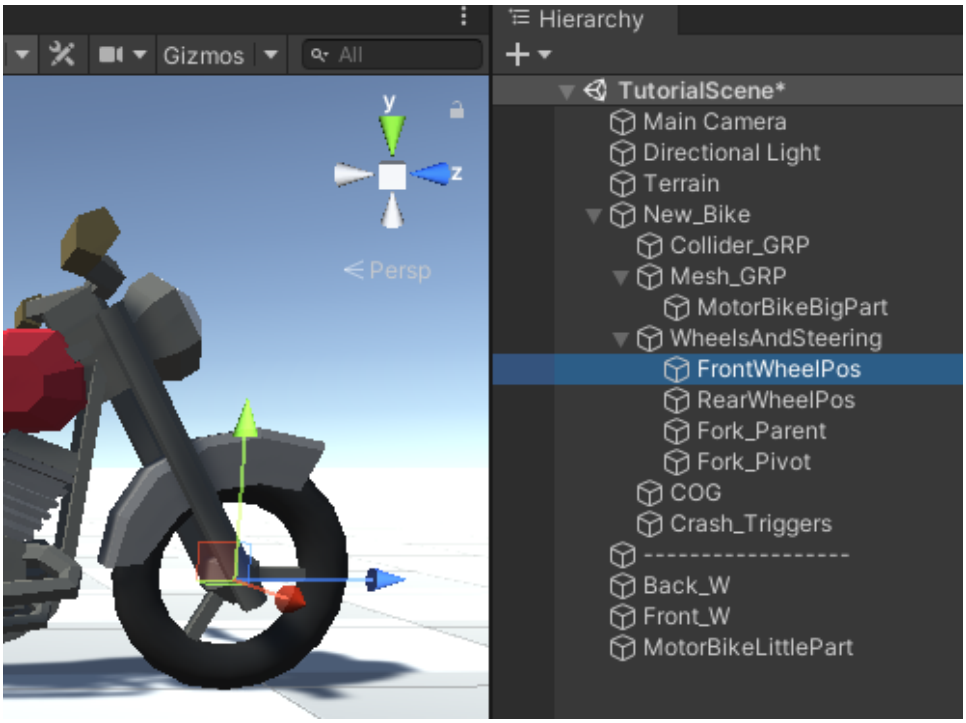


6) Un-Parent all the bike part objects from the empty parent object, then delete the empty object. In my case SM_Motorbike.

7) Now drag the body part(s) into the Mesh_GRP.

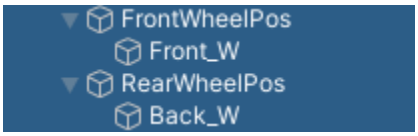


8) Expand the WheelsAndSteering Object and move the FrontWheelPos and the RearWheelPos to the center of the wheel mesh.

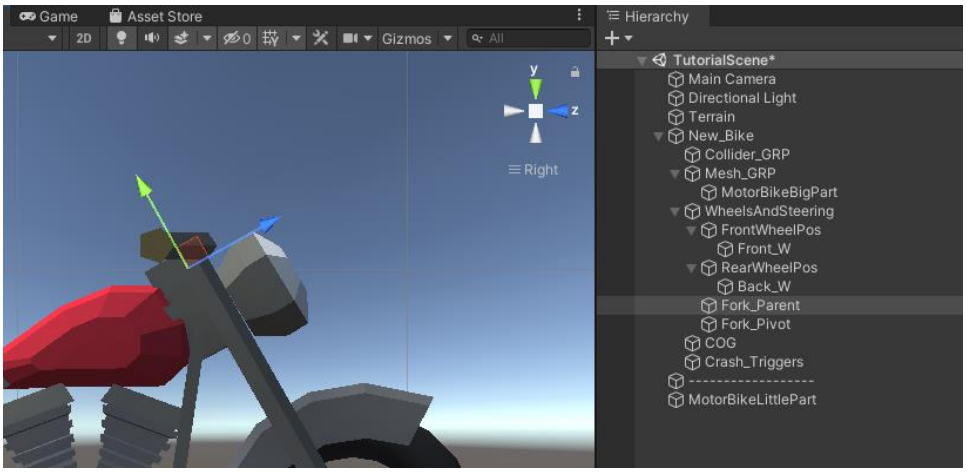


To get them in the same place, keep checking the center of the wheel mesh before adjusting the WheelPos.

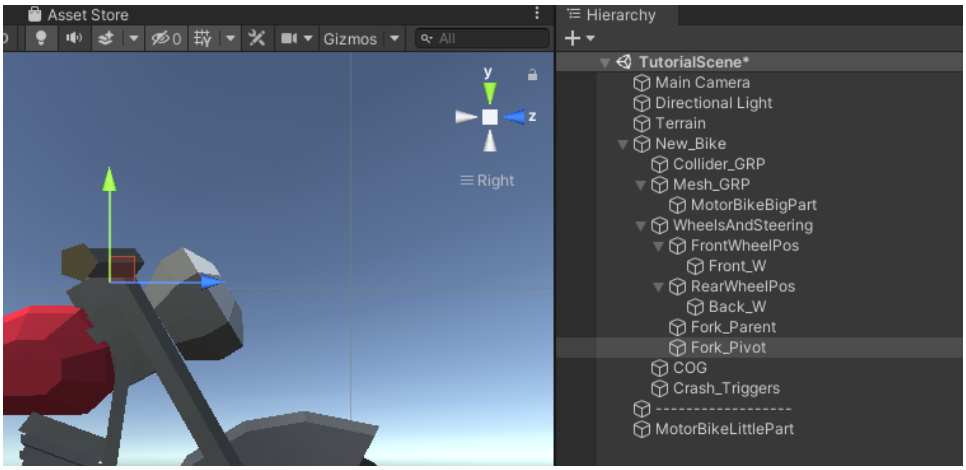
9) Now child the front wheel mesh to the FrontWheelPos. Then child the back wheel mesh to the RearWheelPos.



10) Move the Fork_Parent to the pivot point of the bars and angle the object so the Y direction matches the fork angle.

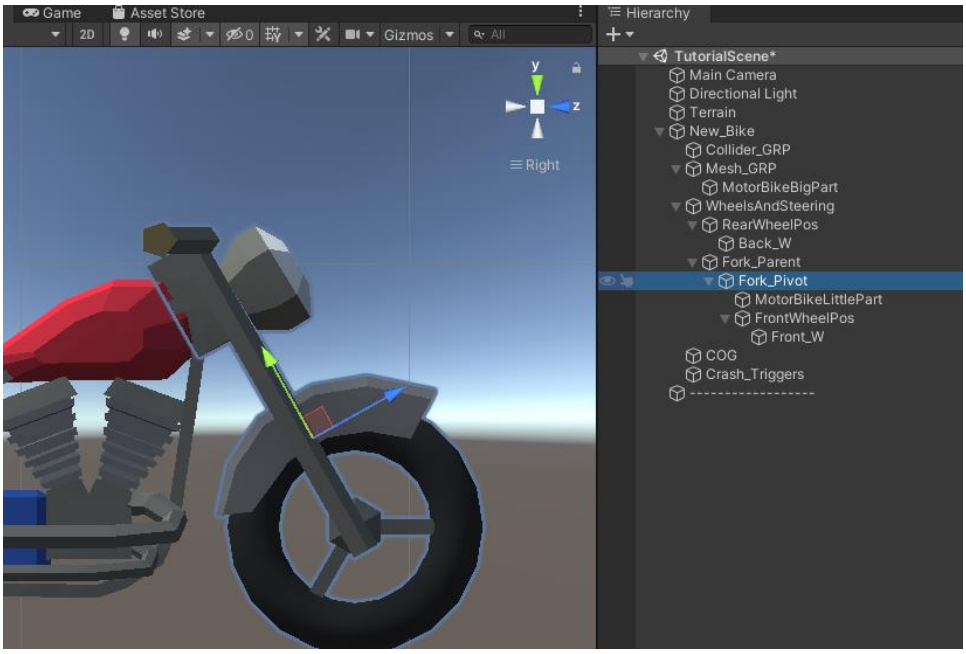


11) Now move the fork pivot to roughly the same place as the Fork_parent but don't change the rotation.

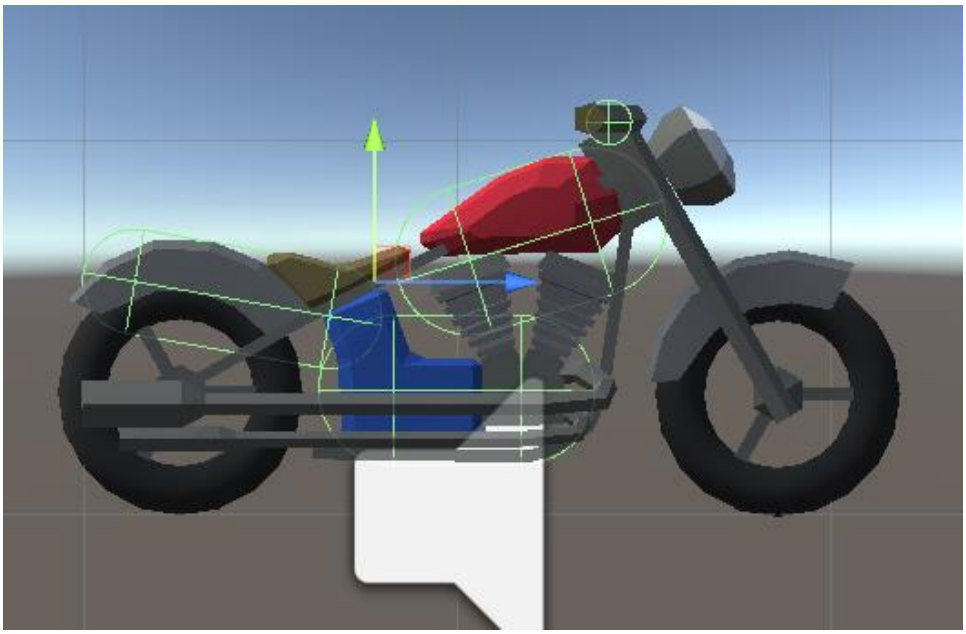


12) Now put the Fork_Pivot as a child of the Fork_Parent and you will notice the X rotation will have changed. Set this to 0.

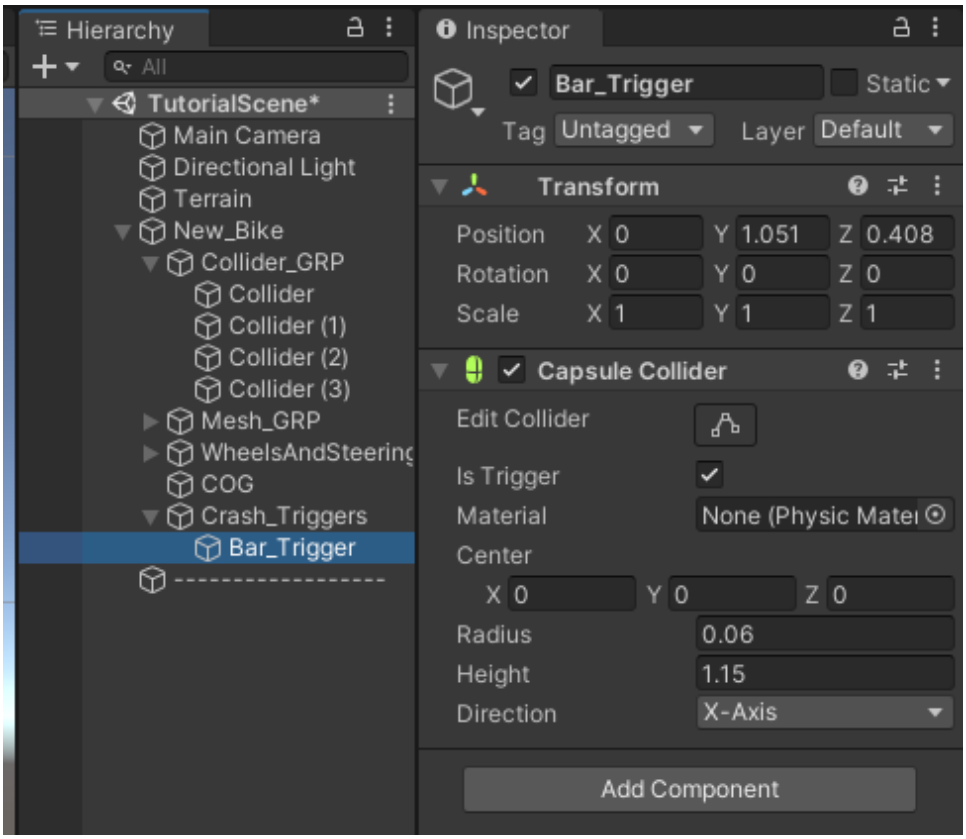
13) Now put the steering part(s) as a child of the Fork_Pivot and also set the FrontWheelPos as a child of the Fork_Pivot.



14) Create an empty GameObject under the Collider_GRP and add colliders to cover the bike as well as you can. Note that colliders cannot be connected to the Fork_Pivot or any of its children.

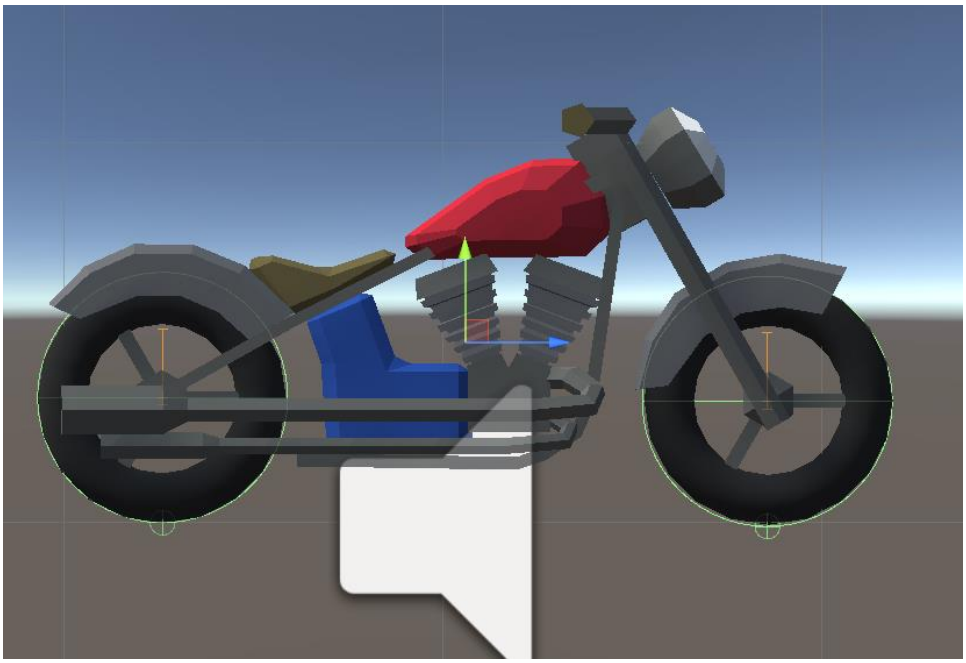


15) If you have a collider for the bars, duplicate it and put it under the Crash_Triggers and set the collider to Is Trigger and increase the height 0.01.



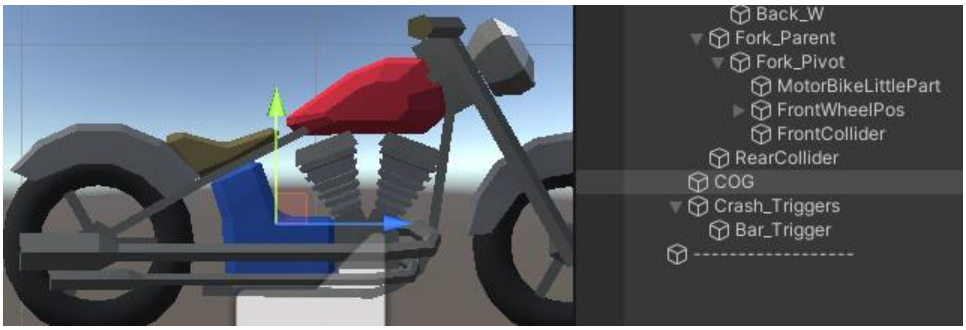
16) Now drag the FrontCollider and RearCollider object from the WheelCollider folder to the WheelsAndSteering GameObject. Then unpack both the prefabs completely.

17) Align the FrontCollider and RearCollider to their respective wheels.



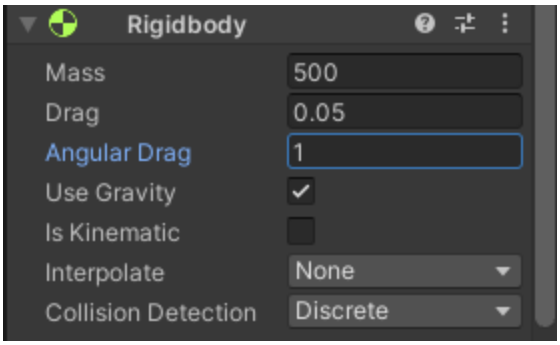
18) Put the front collider as a child of the Fork_Pivot.

19) Now move the COG (center of gravity) to where you think it should go. Test different places after setup to see which position is best for the bike.

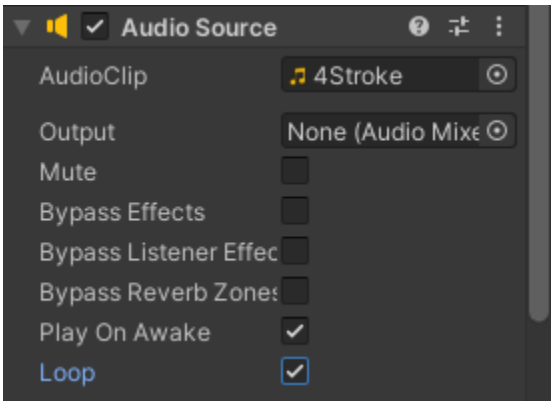


20) Now on the New_Bike Object set the Rigidbody Mass to around 500, the Drag around 0.05 and the Angular Drag between 0.5 and 2.

(Play around with these values after setup)



21) From the Sound Effects folder add one of the sound effects to the New_Bike audio source and turn Loop on.

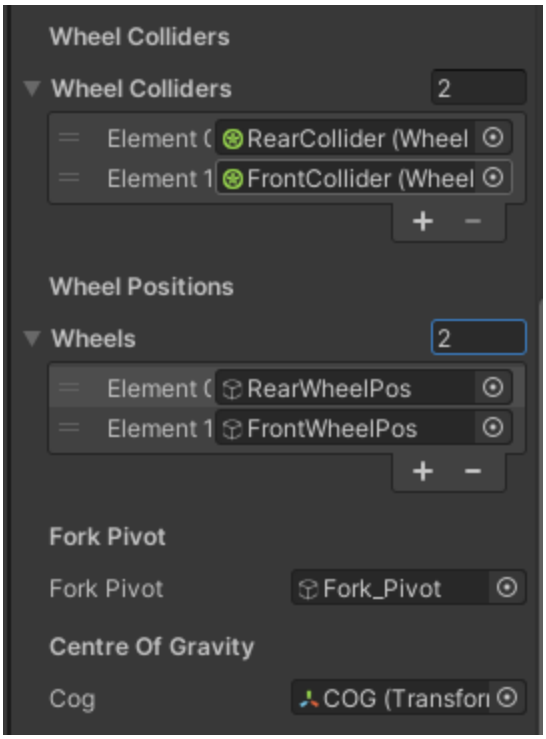


22) In the Inspector on the New_Bike, add the RearCollider to element 0 of the RB_Controller Wheel Collider array. Then add the FrontCollider into element 1.

23) Now drag in the RearWheelPos into element 0 of the Wheels array, then drag the FrontWheelPos into element 1.

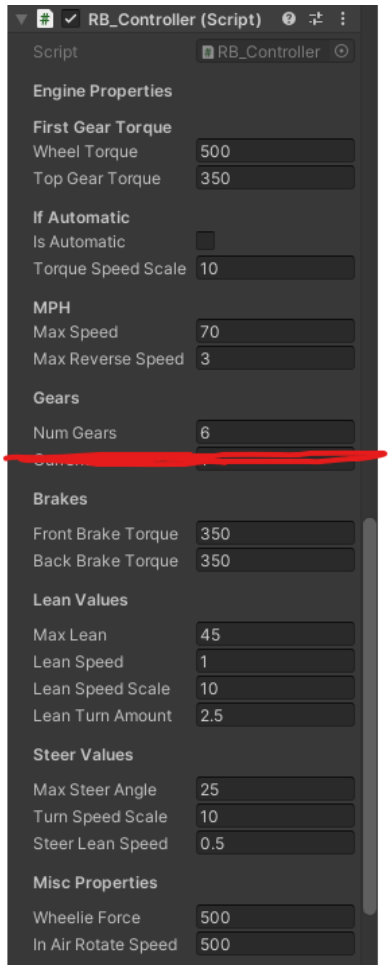
24) Drag the Fork_Pivot GameObject into the Fork Pivot variable in the RB_Controller.

25) Drag the COG GameObject into the Cog variable in the RB_Controller.



26) Run the game and drive your bike.

27) Adjust these variables to create bikes that feel different to drive.



28) Also play around with the wheel colliders suspension and friction settings. But note the prefabs have been tested with multiple bikes and changing settings may cause issues.