MENU

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Unity Physics Tools (index.php)

Documentation

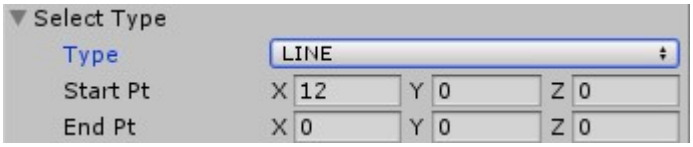
One can create from a very simple to very complex trajectory using this trajectory editor in just few minutes.

Creation

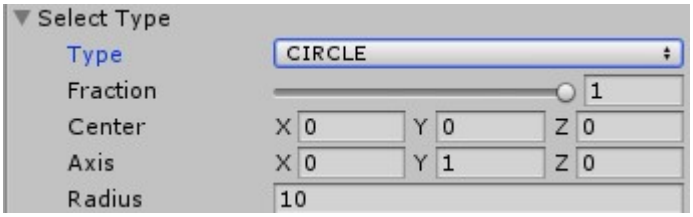
- Adding the trajectory to your scene is very simple. just follow the 3 simple steps.
    1. Create an empty game object.
    2. Attach the Trajectory behavior to it.
    3. Attach the Trajectory drawer to actually see the trajectory
    4. Attach the Trajectory creator to create the trajectory from predefined templates
    5. Setup the behavior according to the need.

Trajectory Setup

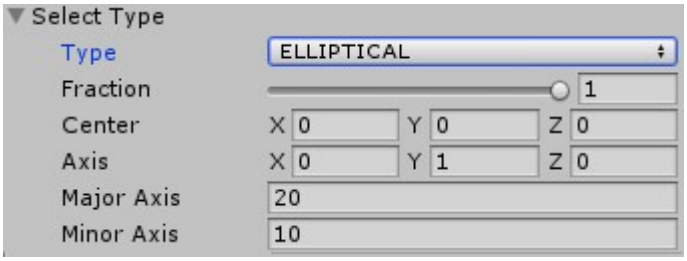
- From Predefined Path
  1. Num Way Pts: Number of way points to have in the trajectory
  2. Line



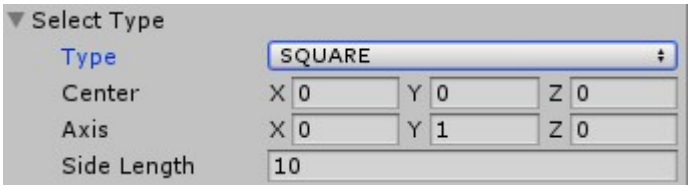
     - Start Point: Trajectory start point
     - End Point: Trajectory end point
  3. Circle



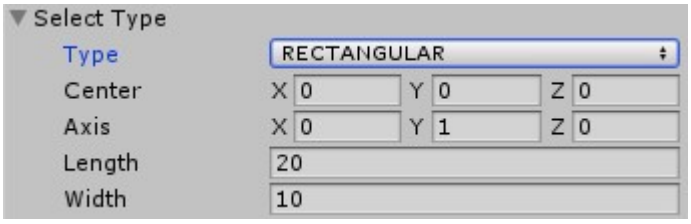
     - Fraction: Fraction of the circle to be used for making the trajectory.
     - Center: The perpendicular axis of the circle
     - Axis: The circle axis
     - Radius: The radius of the circle
  4. Ellipse



     - Fraction: Fraction of the ellipse to be used for making the trajectory.
     - Center: The center of the ellipse
     - Axis: The perpendicular axis of the ellipse
     - Major Axis: The length of the major axis
     - Minor Axis: The length of the minor axis
  5. Square

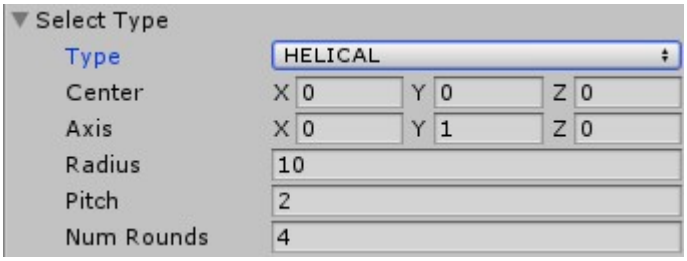


     - Center: The center of the ellipse
     - Axis: The perpendicular axis of the square
     - Side Length: The length of the side of the square
  6. Rectangle



- Center: The center of the ellipse
- Axis: The perpendicular axis of the rectangle
- Length: The length of the rectangle
- Width: The width of the rectangle

7. Helical



- Fraction: Fraction of the helix to be used for making the trajectory.
- Center: The center of the helix
- Axis: The axis of the helix
- Radius: The radius of the helix
- Pitch: The pitch of the helix
- Num Rounds: The number of rounds in helix

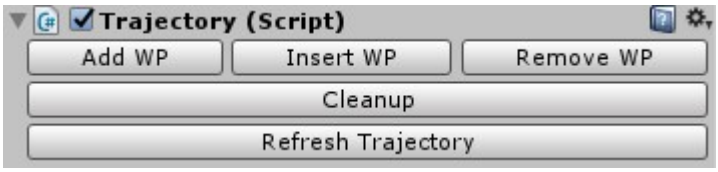
From Scratch

1. Create an empty game object
2. Add TrajectoryDrawer Component to it

   This will also add Trajectory component to the game object also if not already present.

   TrajectoryDrawer component is need only when you want to show the trajectory as well.

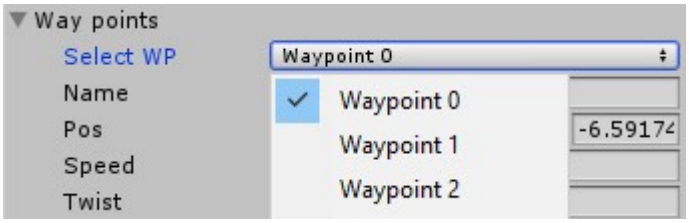
3. Use Add WP button to add way points



   We need atleast 2 points to create a trajectory. So atleast add two way points.

   As you add way points to the trajectory then by default get added in the direction from second last way point to last way point.

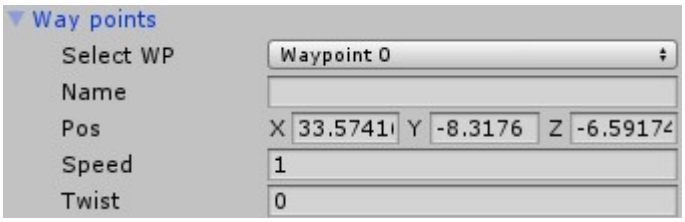
4. You can then move the way points from the Scene window or from by selecting the way point from the inspector window.



   You can also insert a way point before the selected way point or remove the selected way point. The trajectory will be updated automatically.

5. Way Point settings

Unlike other trajectory editors the way points in our trajectory editors are real game objects. Some of the setting like name, position, speed and twist can be modified from the inspector UI as well as the scene ui.



- Name: Name of the way point
- Pos: Position of the way point
- Speed: Speed of the way point
- Twist: Twist of the way point

6. Other settings

- Loop: If selected the trajectory will be closed loop automatically connecting last and the first way point
- AutoUpdate: If selected the trajectory will be updated automatically when some of the waypoints get changed in position
- ShowWayPts: If selected the waypoints will be visible in scene and the game ui.

7. Clean Up button will delete the trajectory