

CH7_102

EXERCISE

AIWHEELEDVEHICLE: LOOPING PATH

Exercise Files

Starter – "Kit/gpgt/server/scripts/gpgt/chapter7/exercise102.cs"

Answers – "Kit/gpgt/server/scripts/gpgt/chapter7/answers/exercise102_f.cs"

Exercise Mission

Chapter 7: "102 AIWheeledVehicle: Looping path following"

Synopsis

In this exercise, we double-check that you are clear on how to create an AIWheeledVehicle and how to create a path for that bot to follow. Additionally, we'll check to see that you know how to cause the bot to navigate to an initial point on the path, and then to follow that path in a loop.

Prerequisites

1. *ch1_001.pdf "Using The Kit"*
2. *ch7_101.pdf "AIWheeledVehicle: Basic Creation"*

Exercises

1. *Create Path + Wheeled Bot and Start Moving (pg 2)*
2. *Navigating (pg 4)*

AIWHEELEDVEHICLE: LOOPING PATH

1 Create Path + Wheeled and Start Moving

Goal: Make sure you understand how to create a path, how to create a new AIWheeledVehicle (using the tools in the kit), and lastly, how to start that bot moving towards a destination.

Starter Code: You are provided with a fully-defined datablock definition (wheeledPathFollower) and a starter function (startexercise102).

```
datablock WheeledVehicleData( wheeledPathFollower : DefaultCar )
{
    category = "gpgt";

    maxSteeringAngle = 0.785; // Better than original car
    maxAISpeed = 0.8;
    moveTol      = 5.0;
};

package exercisePackage_102
{

function startexercise102()
{
    // 1
    // ?????

    // 2
    // ?????

    // 3
    // ?????

    // 4
    // ?????

    // 5
    // ?????
    // ?????

    %pathNode.visibleMarker.setSkinName("green");
}
```



AIWHEELEDVEHICLE: LOOPING PATH

Steps:

1. Create a path for our AIWheeledVehicle to follow.
2. Create an AIWheeledVehicle using the supplied datablock.
3. Assign the path to the AIWheeledVehicle.
4. Tell the AIWheeledVehicle to start at node 0.
5. Start the AIWheeledVehicle moving towards the initial node.

Output Goal:

If you run the mission after editing this code, the AIWheeledVehicle will drive to node 0 (in the path) and then stop moving.

AIWHEELEDVEHICLE: LOOPING PATH

2 Looping Navigation

Goal: Learn how to make a bot follow a path in a loop.

Starter Code: You are provided with a partially defined method (onReachDestination).

```
function wheeledPathFollower::onReachDestination( %DB , %theBot )
{
    %pathNode = %theBot.myPath.getObject( %theBot.currentPathNodeNum );
    %pathNode.visibleMarker.setSkinName("red");

    // 1
    // ?????
    // ?????

    // 2
    // ?????
    // ?????

    %pathNode.visibleMarker.setSkinName("green");
}
```

Steps:

1. Select a new node from the path as the bot's next navigation point.
2. Tell the bot to move to this new navigation point.

Output Goal:

If you run the mission after editing this code, the AIWheeledVehicle will drive to node 0, and then start driving in a loop from node 0, to 1, to 2, ..., to 7, to 8, ad infinitum.

Hints:

1. Remember, the path only has eight nodes.