AIPLAYER: RANDOM PATH

Exercise Files

Starter – "Kit/gpgt/server/scripts/gpgt/chapter7/exercise004.cs"
Answers – "Kit/gpgt/server/scripts/gpgt/chapter7/answers/exercise004_f.cs"

Exercise Mission

Chapter 7: "004 AIPlayer: Random path following"

Synopsis

In this exercise, we will refresh our memories regarding AIPlayers' datablocks and then we will learn how to make an AIPlayer move back-and-forth between two-points.

Prerequisites

1. *ch1_001.pdf "Using The Kit"*
2. *ch7_001.pdf "AIPlayer: Basic Creation"*
3. *ch7_002.pdf "AIPlayer: Point-to-Point"*

Exercises

AIPlayer: Random Path

1 Reinforcing Skills and Random Node Selection

Goal: Reinforce your skills regarding path and bot creation, and bot movement. Add a small twist to the node selection logic.

Starter Code: You are provided with a fully defined datablock definition (randomPathFollower) and a starter function (exercisePackage_004.)

```
datablock PlayerData( randomPathFollower : BlueGuy )
{
   category = "gpgt";
};

package exercisePackage_004
{

function startexercise004()
{
   // 1
   // ?????

   // 2
   // ?????

   // 3
   // ?????

   // 4
   // ?????

   // 5
   %pathNode = %theBot.myPath.getObject( %theBot.currentPathNodeNum );
   // ?????

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

Steps:

1. Create a path for our AIPlayer to follow.
2. Create an AI player using the supplied datablock.
3. Assign the path to the AIPlayer.
4. Assign a random first node to the bot.
5. Start the AI player moving towards the initial node.

AIPlayer: Random Path

Hints:

1. Torque supplies a function called getRandom(min , max) for getting random numbers, where the returned random number is in the range [min,max].

Output Goal:

If you run the mission after editing this code, the AIPlayer will walk to a random node (in the path) and then stop moving.

2 Random Navigation

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

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

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

   // 1
   %theBot.currentPathNodeNum = getRandom( 0 , 7 );

   // 2
   %pathNode = %theBot.myPath.getObject( %theBot.currentPathNodeNum );
   // ?????

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

Steps:

1. Select a new node from the path as the bot's next navigation point. (Remember, it should be randomly selected.)
2. Tell the bot to move to this new navigation point.

Output Goal:

If you run the mission after editing this code, the AIPlayer will walk to a random node, select a new random node, walk to it, and so on and so forth.

Questions:

1. What other namespaces would have worked for the onReachDestination callback?

Hints:

1. Remember, the path only has eight nodes.

3 Bonus

Goal: Learn how to write AIPlayer creation code on your own.

Steps:

1. Go back and remove the spawn code and then replace it with your own AIPlayer creation code.

Hint:

1. There is no answer in for this in the answer key, but you can verify your work against the spawning code. However, please try to get it working without referring to the utility code first.

