CH9_103

EXERCISE

BOX EMPTY TEST

Exercise Files

Starter – "Kit/gpgt/server/scripts/gpgt/chapter9/exercise_103.cs"
Answers – "Kit/gpgt/server/scripts/gpgt/chapter9/answers/exercise_103_f.cs"

Exercise Mission

Chapter 9: "103_ContainerRaycasting: Box Empty Test"

Synopsis

In this exercise, we will test your ability to write the code needed to search for an empty box (cuboid), using the built-in box empty search feature discussed in chapter 9.

Prerequisites

1. *ch1_001.pdf "Using The Kit"*

Exercises

1. *Is This Box Empty? (pg 2)*

BOX EMPTY TEST

1 Is This Box Empty?

Goal: Given the provided code, implement a basic box empty search and feed the results into code that will visually demonstrate whether the search cuboid was empty or not.

Starter Code: For this example, all of the functional code, except for the search, has been implemented. Your only job is to modify some marked segments of this code to do the box empty search.

The code you need to modify is located between two markers "// EXERCISE BEGINS HERE" and "// EXERCISE ENDS HERE".

```
// EXERCISE BEGINS HERE

   //%isEmpty = ?????

// EXERCISE ENDS HERE
```

Steps:

Please uncomment the highlighted code and implement a box empty test with the following parameters:

- Only test for the presence of Player objects.
- Search in an area centered on the the current marker. The current marker is updated regularly and the ID of that marker is stored in "%currentMarker".
- Search a 10 x 10 x 10 cube.

Output Goal:

When you run the mission associated with this exercise, you should see a single path with eight markers. On or near these markers there will be one Player object (blue guy) per marker. Starting at marker 0, the Player object will be zero world-units away from the marker. At marker 1 the distance away is one world-unit, at marker 2, two world-units, and so on, up to marker seven which is 7 world-units away from the Player object.

As the example runs, the code will select a new marker to examine every two seconds. To show which marker is selected, four temporary markers are placed in around the selected markers, showing the outline of the search cube (in 2D).

If a search finds no Player objects, the current marker is turned green. If a Player is found, the marker is turned red. (See figures 1 and 2 on next page for examples.)

BOX EMPTY TEST

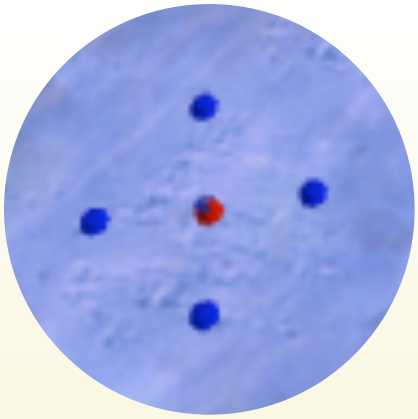

Figure 1. Zero World Units

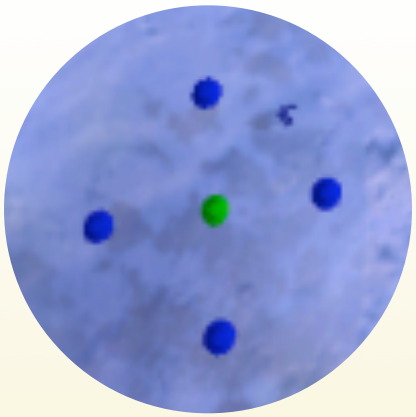

Figure 2. Seven World Units

