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Lab Report – Exercise 01a

First I got used to the Greenfoot environment. I had no problems finding out how to inspect, drag or create new objects or save the world.

I then started with the exercises. The members of our group did these mostly on our own, because all three of us have programming experience. I personally did not have any trouble with the exercises, so tried to go for the shortest and most elegant solution. I also wanted to make use of the run button, instead of using loops.

Exercise 1:

This required just one move() method. Kara stops if isAtEdge() is true.

Exercise 2:

The tricky part here was stopping Kara at the right edge of the screen. This required to not only stop when isAtEdge() is true, but also skip the second move that step, so I put the second move in the else block of the edge-detection-if. In retrospect, this wasn't probably required for the exercise.

Exercise 3:

In this scenario I wrote my own move(int steps) function, so I could write move(4); instead of four times move();. In the end it was really the same number of lines of code. I also didn't let Kara stop in this one.

Exercise 4:

This one was very similar to exercise 3. I added a putLeaf(); and also had to check if a leaf is already there to avoid errors on the second loop.

Exercise 5:

In this one every step if treeFront() is true Kara performs a whole set of moves to avoid the tree, otherwise just one move().

Exercise 6:

In this example the algorithm stays the same, but I moved the tree-avoiding-routine to a separate method. I also check for a leaf every step and on success call the party() method, which lets Kara perform a celebratory dance, before picking it up.

Exercise 7:

Here I noticed that I basically already solved this exercise in 6. So I copied over my code and increased the amount of partying to 2.

Exercise 8:

Same as above. Party level is now at 3.