Task 9

Question:

Imagine a raspberry pi is installed in a car. Suggest how to use a pi to determine how many left turns and right turns the car has made. You do not have to develop the program but have to explain the program logic. Your description be no more than half a page.

Answer:

A Raspberry pi’s coordinate system is equivalent to coordinate system in a car as and we only use the X and Y coordinate. The program logic is using a composite while loop where the program will always be looping until the X and Y change value. The initial coordinate for the X and Y is (0.0,0.0) respectively. When I conducted a test using a program *orientation2.py,* every time I turn my pi to the left, the X value will be change to -0.0 and when I turn my pi to the right the Y coordinate change value to -0.0. thus, when I implemented it to the program, when one of the coordinate changes value the program will set a counter for about 3 to 5 seconds to assure that the car really turns right or left. When the value of one of the coordinates is still -0.0 in that duration, the while loop will stop, and it will print out the which turn does the car take and it will return false and the inner while loop will stop and the program will keep looping and it reset the X and Y’s coordinates back to (0.0,0.0) respectively.