CS 1301 Recitation Assignment: Robot Lists

Individual Assignment - Work alone!

Today in class you will use your robot's center light sensor (accessed via the `getLight('center')`) call to collect a series of light sensor values and then calculate some statistics about them. Write the following two functions:

1. **getValues**
   - parameters: `numSamples`- Integer
   - return values: a list of light sensor values
   
   This function will accept a single integer argument which indicates how many light values it should capture. It will capture that many light sample values and return them all in a single list. Between each light value capture, your robot should turn left at full speed for 0.25 (one quarter) of a second.

2. **printStatistics**
   - parameters: `numbers` – A List of numbers.
   - return values: None
   
   This function will accept a list of numbers and calculate the following statistics about them: 1) Their mean (average). 2) The smallest number-min. 3) The largest number-max. 4) The number of even numbers. After calculating those 4 results, the function should PRINT a small descriptive paragraph of text that describes the list of numbers it received. The format should be similar to the following:
   “You gave me a list of 5 numbers. Their average was 3246.42. The largest was 4321, the smallest was -31.5. Only 3 of them were even numbers.”

Show the functions working to your Grading TA before leaving recitation. Be sure to try out using the output of your `getValues()` function as the input to the `printStatistics()` function:

```python
printStatistics( getValues() )
```

Grading Rubric:

**getValues**:
- Successfully connects to robot, reads sensor values 1 pt
- Robot rotates between sensor reads 1 pt
- Returns list of sensor values 1 pt

**printStatistics**:
- Successfully calculates:
  - Min/Max 1 pt
  - Average 3 pts
  - Count of Evens 2 pts
- Correct printout 1 pt