ECE155: Engineering Design with Embedded Systems Winter 2013

Lab 3 (Dead Reckoning) — Assessment

Prepared by Kirill Morozov *version 1*

You are responsible for conforming to "University of Waterloo Policy 71: Student Academic Discipline." Students complete Part I of this form. The TA conducting the demo completes Part II and Part III after performing the demo. We are entering marks based on this form, so if no form exists, you get no marks.

Part I: Student Comments

The design (check one of the following):

- ☐ Does not incorporate others' work (except materials provided by the university).
- ☐ Incorporates the work of others as indicated in the notes below.

I understand that by signing below, I confirm that we wrote the submitted lab code and that it has not been previously submitted for academic credit at this or any other academic institution except as noted above.

Lab #:

Group #:

Date and Time:

TA Name:

TA Signature:

Mark:

	Student Name	UW Userid	Signature
Student 1			
Student 2			
Student 3			

Part II: Demonstration Checklist

Software Design Checklist (0.5 marks for each checklist item satisfied)

- ☐ Solution was committed to SVN and compiles without errors
  (This item is mandatory; you get a 0 for broken or uncommitted solutions.)
- ☐ The number of steps your application has counted in two orthogonal directions is clearly displayed.
- ☐ There is a way inside the application to reset the step counter.
- ☐ walking due-north counts steps only in the north direction.
- ☐☐ Your error rate, both false positives and false negatives, is less than once in every three steps (33% error).
- ☐☐ Your error rate, both false positives and false negatives, is less than once in every ten steps (10% error)
- ☐☐ The design and implementation follow good engineering design. Examples: not over-using global variables, avoiding unnecessary code duplication, and giving variables descriptive names.

Bonus

- ☐☐ You have computed linear acceleration for the device independent of rotation and can explain how it works.

Part III: Trial Data

Raw Trial Data

	Trial 1	Trial 2	Trial 3
Steps Taken			
Steps Counted			

Notes: