N4/5 Computing Science – Software Design and Development

Due Date: Thurs 16th Nov

Name

Homework 5

Read the pseudocode program below and answer the questions that follow.

SET Lap\_Times TO [38.54, 38.51, 39.01, 38.12, 37.79]

FOR EACH Lap FROM Lap\_Times DO

SET Total\_Time TO Total\_Time + Lap

END FOR EACH

SET Qualifying\_Time TO Round(Total\_Time / 5, 1)

SEND [“GoKart Qualifying: “, Qualifying\_Time, “seconds”] TO DISPLAY

IF Qualifying\_Time <= 38.5 THEN

SET Final\_Race TO 1

ELSE

SET Final\_Race TO 0

END IF

1.

2.

3.

4.

6.

5.

7.

9.

8.

10

11

1. Name the Data Structures, the Type of Structures and their Data Types.

Name of Structure Type of Structure Data Type

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1. What does Line 1 of the program do?

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1. In Lines 2 – 4 name the iteration type and describe the purpose of the loop.

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1. What is the purpose of Line 5? What do you think Round( x , y ) function does?

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1. Explain the code for Line 6.

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1. Describe the purpose of code section Lines 7 – 11.

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1. Explain the 2 assignments in Lines 8 and 10, in particular referring to the reasoning of choice of data type.

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1. Briefly describe in your own words an overview of what the program does.

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1. Using the exact program and given data dry run through to explain what happens step by step. Make sure to clearly make reference to variables with their actual values and what the final result would mean.

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