HOMEWORK 2 - FALL 2020

HOMEWORK 2 - GRADING KEY

1. (17 points) Documentation and coding style:

- Name, ID number and recitation at the top of ALL java files [2 points]
- Precise and correct specifications[5 points]
- Indentation[3 points]
- Variable names[2 points]
- Javadoc Style *(see NOTE). [5 points]

NOTE 1: You only need to submit your *.java files. We will use the javadoc *.java command to create the javadoc files.

NOTE 2: YOUR ASSIGNMENT WILL NOT BE GRADED if you submit only *.class files.

NOTE 3: YOUR ASSIGNMENT WILL NOT BE GRADED if you use ArrayList, Vector or any predefined Java API Data Structures.

2. (13 Points) Source Code

- Implementation done as specified (additional methods are OK) [8 points]
- Throw an exception back to the calling method(s) if a precondition is violated. [5 points]

3. (70 Points) Program Correctness

- Program compiles without any errors. [12 points]
- Menu options work correctly:
    - Insert car into train at any position. [10 points]
    - Remove car from train at any position. [10 points]
    - Move cursor forwards/backwards. [3 points]
    - Set the car load at the cursor position. [5 points]
    - Print train manifest and string representation of train. [2 points]
    - Correctly calculate the train size, weight, length, value, and dangerousness. [5 points (1 each)]
    - O(1) complexity to calculate for train size, weight, length, value, and dangerousness. [5 points (1 each)]
    - Find a product on the train. [7 points]
    - Remove dangerous cars from the train. [5 points]
    - Quit. [1 points]
- Erroneous input handled "gracefully." (Appropriate Error messages displayed to the user.) [5 points]