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Object Oriented Programming

Homework 2

**Features List**

* Constructor to create a simulation without the inclusion of Anti-Aircraft Units and only with Infantry Units, Artillery Units, Tank Units, Fighter Units, and Bomber Units.
* Constructor to create a simulation with Infantry Units, Artillery Units, Tank Units, Fighter Units, Bomber Units, and Anti-Aircraft Units.
* Once called these constructors run through an algorithm which calculate the win percentage for the attacking army.
* This can be done be setting “X” amount of simulations with a simulationLength() method, allowing you to run as many simulations consecutively for the percentage calculation.
* While computing the simulation the algorithm determines if it is being run with AA Units or not. The algorithm then computes the allotted shots to be fired by the AA if there are AA Units in the simulation.
* Then the algorithm proceeds to attack with the attacking army and then return fire with the defending army.
* Once the shots have been exchanged by each side, a removal algorithm begins to run determining how each casualty sustained in the exchange of fire is distributed.
* After this is completed the algorithm determines whether the attackers were victorious during the engagement. If the attackers are victorious then the simulation ceases otherwise it starts a new round of combat until there is a victor.
* Once this is done for “X” amount of simulations the algorithm calculates the win percentage of the attacking army and the program ceases.