Essence and the Basics of Software Engineering

Idaho State University | Computer Science

Dr. Isaac Griffith

CS 2263
Department of Computer Science
Idaho State University

ROAR

Daily Quiz

- Starting at 14:02
  - You will have 5 minutes
  - You may not use your notes, books, lectures, or the internet
  - You may not help each other

Passcode

4816

ROAR

Individual Practicum

- A consumer group tests products. Create a class named `Product` with the following fields:
  - Model name
  - Manufacturer's name
  - Retail price
  - An overall rating ('A', 'B', 'C', 'D', 'F')
  - A reliability rating (based on a consumer survey) that is a double value between 0 and 5
  - The number of customers who contributed to the survey on reliability rating
- The class must have two constructors:
  - ❶ Accepts the model name, the manufacturer name, and the retail price in that order
  - ❷ Accepts the model name and the manufacturer name in that order, and this constructor must effectively use the first constructor

- Methods
  - Getters for every field.
  - Setters for retail price and overall rating.
  - `rateReliability` - inputs the reliability rating of a customer.
    - Has a single parameter that takes in the reliability of the product as viewed by a customer.
    - Increment the number of customers who rated the product and update the reliability rating using the following formula:
      ```
      New value of reliability rating = (prior
      reliability rating * prior number of
      customers + Reliability rating by this
      customer) / New value of number of customers
      ```
    - For example, suppose that the old value of reliability was 4.5 based on the input from 100 customers. If a new customer gives a reliability rating of 1.0, then the new value of reliability would be (4.5 * 100 +1.0) / 101 = 4.465347

ROAR