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**AP Computer Science A (Java)**

**Chapter 8: Classes Section 5: Case Study: Designing a Stock Class**

1. A stock is a type of security that signifies ownership in a corporation and represents a claim on part of the corporation's assets and earnings.
   1. If you purchased 20 shares of stock in Google at its current price of $531.83 / share, what is the value of your total purchase? 10636.6
   2. If you sold all 20 shares at a later date for $581.83 / share, what would your profit / loss be? +1000
2. Why did the designer choose a Stock class rather than a Purchases class?

So that the stocks can be interacted with using their own methods instead of the purchaser interacting with them.

1. List the 4 object-oriented design heuristics discussed in this section.

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1. Where does the prompting of user information occur? In the client method

Why? So that the stock class can be used elsewhere

1. One technique used by designers when brainstorming the design for a large objected-oriented program includes the use of CRC cards. CRC stands for Class, Responsibilities, Collaborators.
2. When designing larger programs, it is better when designing a class to start with determining the responsibilities and then determining the fields.
3. When should a program throw a NullPointerException? When a parameter is null but shouldn’t be
4. When should a program throw an IllegalArgumentException? When an illegal parameter value (such as a negative number) is given.