CSE 215L#5

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Note: If your code is similar to someone else's code or if you fail to explain any portion of your code, you will get 0. No exception and no explanation.

1. Implement the following UML:

Point
- x: int
- y: int
+ Point(x: int, y: int)
+ Point()
+ getX(): int
+ getY(): int
+ setX(x: int): void
+ setY(y: int): void
+ toString(): String

toString() will return x and y values in (x, y) format.

2. Implement the following UML:

Line
- start: Point
- end: Point
+ Line(start: Point, end: Point)
+ Line(x1: int, y1: int, x2: int, y2: int)
+ getStart(): Point
+ getEnd(): Point
+ setStart(start: Point): void
+ setEnd(end: Point): void
+ length(): double

Remember, the length of a line is distance between two points which is:

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

3. Implement the following:

Fraction
- numerator: int - denominator: int
+ Fraction(numerator: int, denominator: int) + getNumerator(): int + getDenominator(): int + setNumerator(numerator: int): void + setDenominator(denominator: int): void + toString(): String + add(fraction: Fraction): void + sub(fraction: Fraction): void + multiplication(fraction: Fraction): void + division(fraction: Fraction): void

4. Implement a Product class with id, name and price. Take a Product array and print the attributes.