

Department of Mathematics and Informatics

Course : AOP part 1

Date: February 28, 2025

Student Name:

Homework No. 1

Problem No. 1

Create the Java application as IntelliJ project with UML class diagram for the following class in package `com`

Stock	
-symbol:String	The symbol of this stock.
-name:String	The name of this stock.
-previousClosingPrice:double	The previous closing price of this stock.
-currentPrice:double	The current price of this stock.
+ Stock(symbol:String, name:String, previousClosingPrice: double, closingPrice: double)	Constructors
+ Stock()	
+ Stock(Stock stock)	
+ setSymbol(symbol:String)	
+ setName(name: String)	
+ setPreviousClosingPrice(price: double)	
+ setCurrentPrice(price: double)	Getter and Setter methods
+ getCurrentPrice() : double	
+ getPreviousClosingPrice() : double	
+ getName() : String	
+ getSymbol() : String	Returns the percentage of price change
+ changePercent() : double	

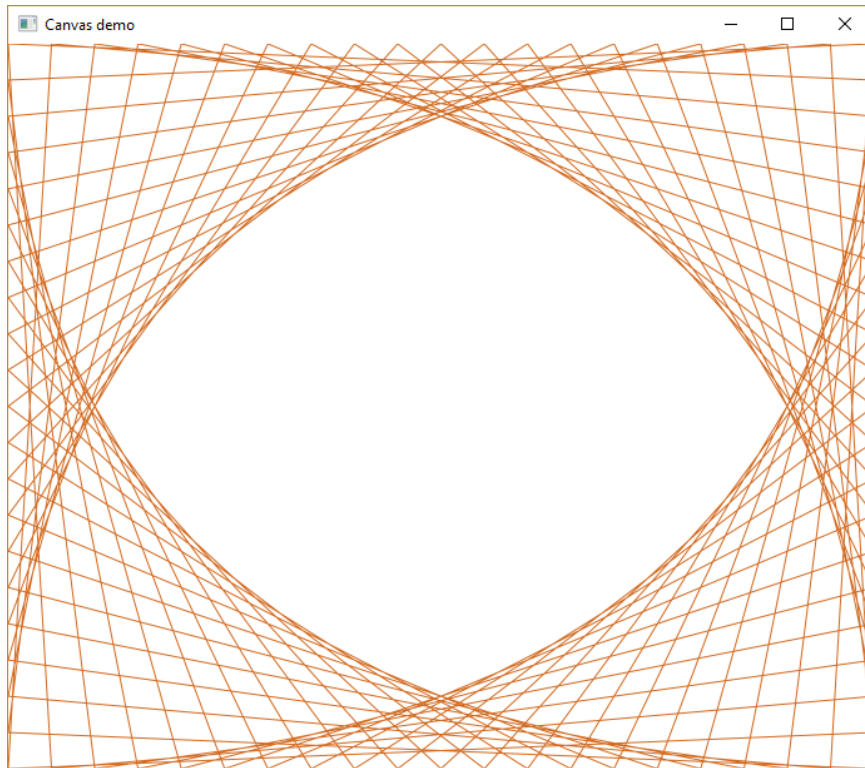
Write a `StockTest` class to test the design and code.

Use comments and good Java programming style!

Submit the solution as a **IntelliJ project**.

Problem No. 2

Write a JavaFX application in IntelliJ to reproduce the following drawing



Submit the solution as an **IntelliJ** project.

Problem 3.

Write a Console application in IntelliJ that computes the probability a five-digit number with the following properties is dividable by 12

- ✓ The first digit to be [1, 6]
- ✓ The second digit to be [4, 8]
- ✓ The third digit to be [3, 7]
- ✓ The fourth digit to be [1, 9]
- ✓ The fifth digit to be [1, 8]

In addition to the computed probability compute the count of numbers with the above properties as well as the count of numbers dividable by 12.

Note: *Make use of `String.format()`*, with appropriate format specifiers and control symbols to display the results on Standard output