**Week 8 summary:**

Lecture 8-1: Multimedia, Part II

• Graphics and StdDraw API: Functions for creating and manipulating graphical elements like circles, lines, and animations. Includes examples such as the Sierpinski triangle and bouncing ball simulation.

• Fractals: Concepts of self-replicating patterns and detailed explanations of the Sierpinski triangle algorithm.

• Animation: Implementation of physics-based animations, focusing on stop-motion techniques.

• Sound: Overview of sound concepts like pitch, tone, and notes. Includes programming examples to generate tones, notes, and chords using sine waves and Java libraries.

Lecture 8-2: Object-Oriented Programming (OOP) I

• Introduction to OOP Concepts: Basic building blocks such as objects, classes, methods, constructors, and the distinction between primitive types and object types.

• Fraction Class: A detailed example showcasing OOP principles, including methods for addition, multiplication, inversion, and object representation (toString()).

• BankAccount Class: Demonstrates OOP with real-world examples of handling banking operations (deposit, withdrawal, transfer).

• Point Class: Usage and abstraction of points in a 2D plane, including graphical and mathematical operations.

• Software Design Principles: Importance of API design, mutability vs. immutability, and domain-specific methods.