Introduction to Thrombi

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1 Welcome and Introduction

The lecture begins with a warm welcome to the students attending the Thrombi course. The instructor expresses excitement about the course and encourages students to settle into their seats. The importance of participation and engagement is emphasized, especially for those who may be new to coding or have varying levels of experience.

2 Course Overview

2.1 Course Structure

The course is designed to introduce students to software engineering principles, focusing on coding practices and communication about code. It aims to develop skills in writing good code rather than just functional code. The instructor acknowledges the diverse backgrounds of students, from those with advanced programming experience to complete beginners.

2.2 Learning Objectives

The primary learning objectives include:

- Implementing object-oriented programming concepts.
- Demonstrating awareness of good coding practices.
- Communicating effectively about code.

3 Course Materials and Setup

3.1 Getting Started

Students are encouraged to complete the "Getting Started" materials available on the course website. This is crucial for setting up the necessary tools for the course. The instructor highlights the importance of attending lab sessions for additional support.

3.2 Course Websites

The course utilizes two main websites:

- **Open Course**: Contains most of the course materials.
- **Learn**: Used primarily for assessments and technical information.

4 Assessment and Quizzes

4.1 Assessment Structure

The course includes weekly quizzes and assessments, with the first assessment released in week three. Quizzes are designed to be lightweight and are worth a total of 20% of the final grade. Students are encouraged to participate actively to earn marks easily.

4.2 Piazza for Communication

Students are urged to join Piazza, a platform for asking questions and sharing information. The instructor emphasizes the importance of community support and encourages students to help each other.

5 Course Logistics

5.1 Lectures and Tutorials

The course consists of two lectures per week and one tutorial. Attendance is compulsory, and participation in tutorials is crucial for success. The instructor stresses the importance of engaging with peers during these sessions.

5.2 Lab Sessions

Lab sessions are available for students to practice coding and seek help. The instructor encourages students to take advantage of these sessions for personalized support.

6 Introduction to Object-Oriented Programming

6.1 Concepts of OOP

The lecture introduces the fundamental concepts of object-oriented programming (OOP):

- **Objects**: Instances that carry state and behavior.
- **Classes**: Blueprints for creating objects.
- **State, Behavior, and Identity**: Key characteristics of objects.

6.2 Java as a Learning Language

Java is introduced as the primary programming language for the course. The instructor explains the structure of a Java program, including the creation of classes and methods.

7 Practical Coding Example

7.1 Hello World Program

The instructor demonstrates creating a simple "Hello World" program in Java. The process includes:

- Writing the class definition.
- Implementing the main method.
- Using the `System.out.println` function to print output.

7.2 Compiling and Running Java Code

The lecture covers the compilation process of Java code, explaining the difference between human-readable code and machine-readable bytecode. The instructor emphasizes the importance of frequent saving and running of code during development.

8 Conclusion and Next Steps

The lecture concludes with a reminder for students to reach out with any questions and to utilize Piazza for support. The instructor expresses enthusiasm for the upcoming sessions and encourages students to engage with the course materials actively.