

# 1 Lecture - CS201

## Important Subjective

1. **What is programming, and why is it important?** Answer: Programming is the process of writing computer programs that instruct a computer to perform specific tasks. It is important because it allows us to automate tasks, solve complex problems, and create innovative technologies.
2. **What are programming languages, and why are they necessary?** Answer: Programming languages are languages used to communicate with a computer and write code. They are necessary because they allow us to write instructions that a computer can understand and execute.
3. **What is a compiler, and what is its role in programming?** Answer: A compiler is a software tool that translates high-level programming code into machine code that a computer can understand and execute. Its role in programming is to convert human-readable code into machine-readable code.
4. **What are the common data types used in programming?** Answer: The common data types used in programming include integers, floating-point numbers, characters, and strings.
5. **What are the common control structures used in programming?** Answer: The common control structures used in programming include if-else statements, loops (for, while, do-while), and switch statements.
6. **What is an algorithm, and why is it important in programming?** Answer: An algorithm is a set of step-by-step instructions that solve a problem or perform a task. It is important in programming because it allows us to create efficient and optimized programs.
7. **What is object-oriented programming, and what are its advantages?** Answer: Object-oriented programming is a programming paradigm that focuses on creating objects that encapsulate data and behavior. Its advantages include code reuse, modularity, and easier maintenance.
8. **What is a function, and why is it important in programming?** Answer: A function is a block of code that performs a specific task. It is important in programming because it allows us to write reusable code and break down complex problems into smaller, more manageable parts.
9. **What is debugging, and why is it important in programming?** Answer: Debugging is the process of finding and fixing errors in code. It is important in programming because it ensures that the program works correctly and reliably.
10. **What are some ethical considerations in programming?** Answer: Some ethical considerations in programming include protecting user privacy and security, avoiding bias and discrimination, and respecting intellectual property rights.