

6 Lecture - CS201

Important Subjective

1. **What is a loop in programming?**

Answer: A loop is a programming construct that allows a section of code to be executed repeatedly based on a certain condition or set of conditions.

2. **What is the difference between a while loop and a do-while loop?**

Answer: In a while loop, the loop condition is evaluated before the loop body is executed, whereas in a do-while loop, the loop body is executed at least once before the loop condition is evaluated.

3. **What is the purpose of a break statement in a loop structure?**

Answer: The break statement is used to immediately exit the loop structure, even if the loop condition has not been met.

4. **What is the purpose of a continue statement in a loop structure?**

Answer: The continue statement is used to skip the rest of the current iteration of the loop and move on to the next iteration.

5. **What is a nested loop and how does it work?**

Answer: A nested loop is a loop structure that contains another loop structure within it. The outer loop executes the inner loop multiple times, which can increase the time complexity of the program.

6. **What is the syntax for a for loop?**

Answer: The syntax for a for loop is: `for (initialization; condition; increment/decrement) { loop body }`

7. **What is an infinite loop and how is it created?**

Answer: An infinite loop is a loop structure that runs indefinitely without stopping. It can be created by using a loop condition that always evaluates to true, or by not including a break statement inside the loop body.

8. **What is the difference between a pre-test loop and a post-test loop?**

Answer: A pre-test loop (such as a for loop or a while loop) evaluates the loop condition before the loop body is executed, whereas a post-test loop (such as a do-while loop) evaluates the loop condition after the loop body is executed.

9. **What is the difference between a for loop and a foreach loop?**

Answer: A for loop is used to iterate a fixed number of times, whereas a foreach loop is used to iterate over the elements of a collection, such as an array.

10. **How can you break out of multiple nested loops in one statement?**

Answer: You can use labeled break statements to break out of multiple nested loops in one statement.