

35 Lecture - CS504

Important Subjective

Question 1:

What is Exception Handling?

Answer: Exception Handling is a programming mechanism that deals with handling and managing unexpected errors or exceptional events that occur during the execution of a program.

Question 2: **Explain the basic components of Exception Handling.**

Answer: The basic components of Exception Handling are:

try: The block where code that might raise an exception is placed.

catch: The block where the exception is caught and handled.

throw/raise: The mechanism to manually generate and throw an exception.

finally: An optional block that always executes, regardless of whether an exception occurs or not.

Question 3: **What is the role of the "catch" block in Exception Handling?**

Answer: The "catch" block is used to handle and process exceptions that occur in the corresponding "try" block. It contains the code to be executed when a specific exception is caught.

Question 4: **Explain the purpose of the "finally" block in Exception Handling.**

Answer: The "finally" block is used to ensure that certain code statements execute, regardless of whether an exception occurs or not. It is generally used for resource cleanup or releasing operations.

Question 5: **Differentiate between checked and unchecked exceptions.**

Answer: Checked exceptions are the exceptions that need to be either caught and handled using try-catch or declared in the method signature. Unchecked exceptions, on the other hand, do not require explicit handling or declaration.

Question 6: **What are custom exceptions? How are they created and used?**

Answer: Custom exceptions (user-defined exceptions) are exceptions created by programmers to represent specific error conditions in their applications. They are derived from the base Exception class in the programming language and can be thrown using the "throw" keyword.

Question 7: **Explain the term "exception propagation."**

Answer: Exception propagation is the process where an exception that is not caught in a particular method is passed up the call stack to be caught and handled in the calling method or in higher levels of the program.

Question 8: **Why is Exception Handling important in software development?**

Answer: Exception Handling is important because it helps in creating more robust and reliable software. It prevents programs from crashing due to unexpected errors and allows developers to gracefully handle exceptional situations.

Question 9: **What happens if an exception is not caught?**

Answer: If an exception is not caught, it will result in the termination of the program, and an error message describing the exception will be displayed.

Question 10: **Explain the difference between the "throw" and "throws" keywords in Java.**

Answer: The "throw" keyword is used to manually throw an exception within the code. On the other hand, the "throws" keyword is used in a method signature to indicate that the method might throw a particular type of exception, but it is not handling the exception itself.