Concurrency	Describe how the synchronized keyword works in Java. What are some potential issues that could arise from improper synchronization?	Understanding of thread safety and potential concurrency issues. Candidates should mention deadlocks, giving an example like two threads waiting on each other to release locks.
Lambda Expressions	What are lambda expressions in Java, and how do they facilitate functional programming? Provide an example.	Explanation of lambda syntax and practical examples. For instance, candidates might illustrate with list.forEach(item -> System.out.println(item)).
Generics	Explain the concept of generics in Java. Why are they useful, and how do they improve type safety?	Understanding of generics and their benefits. Candidates could mention how generics prevent ClassCastException by allowing types to be checked at compile-time, e.g., using List<String>.

Event-Driven Architecture	What is event-driven architecture, and what are its benefits? How would you implement a system using Kafka or RabbitMQ to manage asynchronous communication?	Understanding of event-driven design principles, knowledge of messaging systems, and practical implementation strategies.

	problem that affected multiple teams.	coordination.
Teamwork (hard)	Share an experience where you helped resolve a systemic issue affecting team performance.	Problem-solving skills and initiative in improving team dynamics.
Flexibility (easy)	Describe a situation where you had to learn a new tool or technology quickly.	Ability to learn and apply new skills effectively.
Handling Feedback (easy)	Describe a time when feedback improved your performance.	Openness to feedback and examples of personal improvement.
Analytical Skills (easy)	Describe a time when you had to analyze competing solutions.	Critical thinking and justification of choices made.
Communication (medium)	Tell me about a time when you had to advocate for your ideas in a team meeting. How did you approach it?	Communication skills, persuasiveness, and respect for others' opinions.

Generators	What are Python generators?	produce values one at a time, generating items on the fly and being memory-efficient.
Global Interpreter Lock (GIL)	Explain the Global Interpreter Lock (GIL) in Python.	The GIL is a mutex that prevents multiple threads from executing Python bytecode simultaneously, limiting CPU-bound multi-threading but not affecting I/O-bound operations.
List Comprehension	What is list comprehension in Python?	List comprehension is a concise way to create lists using brackets containing an expression followed by a for clause, possibly with if conditions. Example: [x*x for x in range(10)].

| Type Hinting | What is type hinting in Python and why is it useful? | Type hinting specifies expected data types of function parameters and return values, aiding static type checking, improving readability, and enhancing IDE support. |

Promises	JavaScript?	its resulting value, existing in three states: pending, fulfilled, or rejected.
this Keyword	How does the this keyword work in JavaScript?	The value of this is determined by how a function is called. In a method, it refers to the object the method is called on; in a regular function, it refers to the global object (or undefined in strict mode); in an arrow function, it lexically binds to the enclosing scope.

Spread Operator	What is the purpose of the spread operator?	The spread operator (...) allows an iterable (like an array) to be expanded in places where zero or more arguments or elements are expected, such as in function calls or array literals.

| | | allowing for partial application and improved reusability. |