

Copilot

Certainly! Let's dive into some essential API testing interview questions and answers. Whether you're a beginner or an experienced professional, understanding these concepts will help you prepare for your interview:

API Testing Interview Questions For Freshers:

1. What is an API?

- An **Application Programming Interface (API)** acts as an interface between different software systems.
- It allows two applications to communicate with each other by providing a collection of functions.
- APIs handle requests from users and respond without exposing internal details.

2. What is API Testing?

- **API testing** directly tests APIs and includes them as part of integration testing.
- It ensures that APIs meet expectations for functionality, performance, and security.
- API testing analyzes endpoints such as databases, web services, etc.

3. Differences Between API and Web Service:

Parameter	API	Web Service
Definition	Acts as an interface between apps.	A type of API accessed via network.
Protocols Support	Supports HTTP/s protocol.	Supports HTTP protocol.
XML Support	Supports XML and JSON.	Supports XML.
Hosting Platform	Can be hosted on IIS and self.	Can be hosted on IIS.
Usage	Used for communication between apps.	Used for REST, SOAP, and XML-RPC.

API Testing Interview Questions for Intermediate and Experienced Professionals:

1. Difference Between SOAP and RESTful APIs:

- **SOAP (Simple Object Access Protocol):**
 - Uses XML for communication.
 - Requires a predefined contract (WSDL).
 - Supports security features like WS-Security.
- **RESTful APIs (Representational State Transfer):**
 - Uses lightweight formats (JSON, XML).
 - Stateless and doesn't require a contract.
 - Simpler and widely used for web services.

2. Handling Authentication in API Testing:

- Common methods include:
 - **Basic Authentication:** Sending credentials (username/password) in headers.
 - **OAuth:** Token-based authentication.
 - **API Keys:** Passing an API key in headers.
 - **Bearer Tokens:** Used for authorization.

3. Key Components of an API Request:

- **URL:** Endpoint to access the API.
- **HTTP Method:** GET, POST, PUT, DELETE, etc.
- **Headers:** Custom headers (e.g., content-type, authorization).
- **Body:** Data (e.g., JSON, form data).

4. Purpose of Status Codes in API Responses:

- Status codes indicate the outcome of an API request:
 - **2xx:** Success (e.g., 200 OK).
 - **4xx:** Client errors (e.g., 404 Not Found).
 - **5xx:** Server errors (e.g., 500 Internal Server Error).

Remember to practice these concepts using tools like **Postman** and understand practical examples. Good luck with your interview! 🌟🔗

For more detailed answers and practical examples, you can explore resources like GeeksforGeeks' [API Testing Interview Questions](#) and other guides available online. 😊