Prompt : You are mentor preparing a briefing for mentees, summarize the following text focusing on key areas for QA member who want to learn API testing intermediate level for interview preparation.

**🎓 Mentor Briefing: API Testing – Intermediate Interview Prep for QA Professionals**

**🧠 Core Knowledge Areas**

* **Understand API Basics**: Learn endpoints, HTTP methods (GET, POST, PUT, DELETE), payloads, headers, and status codes.
* **Functional Testing**: Validate correct behavior for valid, invalid, and edge-case inputs.
* **Security Testing**: Focus on authentication (OAuth, JWT), input sanitization, encryption, and role-based access control.
* **Performance Testing**: Measure response time, simulate load, stress, and spike scenarios using tools like JMeter.
* **Error Handling**: Know how to test and interpret 400, 401, 403, 404, 500, and 503 responses.

**🧰 Tools to Master**

* **Postman**: For manual testing, scripting, environment setup, and automation via Newman.
* **REST Assured**: For Java-based automation, fluent syntax, and CI/CD integration.
* **SoapUI**: For enterprise-grade SOAP/REST testing with Groovy scripting and data-driven tests.

**🧪 Test Design Skills**

* Use structured templates: test ID, endpoint, scenario, data, steps, expected vs actual result.
* Automate assertions for status codes, response body, headers, and performance.
* Parameterize tests using CSV/JSON for broader coverage.
* Mock APIs to simulate unavailable services or error conditions.

**🔐 Interview-Ready Scenarios**

* Validate login APIs with valid/invalid credentials and token expiry.
* Test CRUD operations: create, read, update, delete with proper assertions.
* Simulate role-based access and verify authorization logic.
* Handle error cases gracefully and log meaningful debug info.

**🚀 CI/CD Integration**

* Store scripts in Git, run tests via Jenkins or GitLab CI.
* Use Newman or REST Assured for automated execution and reporting.
* Prioritize smoke tests and use environment variables for flexibility.

**📋 Final Checklist for Interview Prep**

* ✅ Know key HTTP methods and status codes
* ✅ Practice with Postman and REST Assured
* ✅ Automate functional and security tests
* ✅ Understand schema validation and error handling
* ✅ Prepare scenario-based answers with clear test objectives and validations