



API Testing Cheatsheet

API Terminologies

Term	Definition
API	Interface that allows different software systems to communicate
Endpoint	A specific URL where an API resource is accessed
Resource	An object or data entity exposed by an API
HTTP Method	Operation performed on a resource (GET, POST, etc.)
GET	Retrieves data from the server
POST	Sends data to create a new resource
PUT	Replaces an entire existing resource
PATCH	Updates part of an existing resource
DELETE	Removes a resource from the server
Request	Data sent from client to server
Response	Data returned from server to client
Header	Metadata sent with request or response
Body	Payload containing actual request or response data
Query Parameter	Key-value data passed in the URL
Path Parameter	Variable embedded in the endpoint path
Status Code	Numeric code indicating request result
Content-Type	Format of request or response data
Accept	Format expected in response
JSON	Lightweight data exchange format
XML	Markup-based data exchange format
REST	Stateless API architectural style
SOAP	Protocol-based API standard
Stateless	Server does not store client session
Idempotent	Same request produces same result
Payload	Actual data sent in request or response
Authentication	Process of verifying user identity
Authorization	Process of validating access rights
API Key	Unique identifier for API access
Bearer Token	Token-based authentication mechanism
JWT	Encoded token containing user claims
OAuth 2.0	Authorization framework for secure access
Rate Limiting	Restriction on number of API requests
Throttling	Controlled slowing of API traffic
CORS	Browser security rule for cross-origin calls
HTTPS	Secure communication protocol
Encryption	Protection of data using cryptography
Schema	Defined structure of API data
Contract	Agreement on request and response structure
Swagger	Tool for API documentation and testing
OpenAPI	Standard specification for REST APIs
Mock Server	Simulated API for testing
Stubbing	Providing fake API responses
API Versioning	Managing changes across API versions
Pagination	Splitting large data into pages
Filtering	Limiting response data based on criteria
Sorting	Ordering response data
Timeout	Maximum wait time for response
Retry	Reattempting failed API requests
Circuit Breaker	Prevents repeated calls to failing service
Logging	Recording API request and response data
Monitoring	Tracking API performance and health
SLA	Guaranteed service availability
API Gateway	Central entry point for API requests
Microservices	Architecture with independent services

Status Codes and Meaning

Status Code	Meaning
100 Continue	Request received, continue sending body
101 Switching Protocols	Server is changing protocol
102 Processing	Request is being processed
200 OK	Request successful
201 Created	Resource created successfully
202 Accepted	Request accepted for processing
204 No Content	Success with no response body
206 Partial Content	Partial response returned
300 Multiple Choices	Multiple response options available
301 Moved Permanently	Resource permanently moved
302 Found	Resource temporarily moved
304 Not Modified	Cached response is still valid
307 Temporary Redirect	Temporary redirect, method unchanged
308 Permanent Redirect	Permanent redirect, method unchanged
400 Bad Request	Invalid request data
401 Unauthorized	Authentication required or failed
403 Forbidden	Access denied
404 Not Found	Resource not found
405 Method Not Allowed	HTTP method not supported
408 Request Timeout	Client took too long
409 Conflict	Request conflicts with current state
410 Gone	Resource permanently removed
415 Unsupported Media Type	Invalid content type
422 Unprocessable Entity	Valid request but semantic error
429 Too Many Requests	Rate limit exceeded
500 Internal Server Error	Generic server failure
501 Not Implemented	Feature not supported
502 Bad Gateway	Invalid response from upstream
503 Service Unavailable	Server temporarily down
504 Gateway Timeout	Upstream service timeout

Rest Assured Commands

Command	Single-Line Code Example	Purpose / What it Does
given()	given()	Starts building the request
when()	when()	Specifies the HTTP action
then()	then()	Validates the response
baseURI	RestAssured.baseURI = "https://api.example.com";	Sets the base URL
basePath	RestAssured.basePath = "/users";	Sets the base path
header()	given().header("Authorization","Bearer token")	Adds a request header
headers()	given().headers("k1","v1","k2","v2")	Adds multiple headers
queryParam()	given().queryParam("page",1)	Adds query parameter
pathParam()	given().pathParam("id",10)	Adds path parameter
body()	given().body(payload)	Sets request payload
contentType()	given().contentType(ContentType.JSON)	Sets request content type
accept()	given().accept(ContentType.JSON)	Sets expected response type
get()	when().get("/users")	Sends GET request
post()	when().post("/users")	Sends POST request
put()	when().put("/users/1")	Sends PUT request
patch()	when().patch("/users/1")	Sends PATCH request
delete()	when().delete("/users/1")	Sends DELETE request
statusCode()	then().statusCode(200)	Validates status code
body() (assert)	then().body("id", equalTo(1))	Validates response body
extract()	then().extract().response()	Extracts response values
jsonPath()	response.jsonPath().get("name")	Reads JSON response
log().all()	given().log().all()	Logs full request/response
log().body()	then().log().body()	Logs request or response body
auth().basic()	given().auth().basic("user","pwd")	Basic authentication
auth().oauth2()	given().auth().oauth2(token)	OAuth2 authentication
time()	then().time(lessThan(2000L))	Gets response time

