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| Request> What Front End Sends |
| Response> What Front End Receive |
| Part of Request(EndPoints) :  Headers(URI, Resources, Parameters)  Payload(Body) |
| Part of Response()  Headers  Body  Status |
| Header -> Header contains information about the request and response.  Sometimes you may have to authenticate to the website and show that you are authorized to access the resource  Some resources on the application may be secured and may not be accessible directly That information is contained in headers  Also content-type -> This information also exist in headers |
| URIs -> This is the essentially the endpoint (Address of the resource where to contact) Unique Resource Identifier  https://letskodeit.teachable.com/ |
| Resources -> Which specific thing we want - navigate to a page and then show  <https://sso.teachable.com/secure/42299/users/sign_in?clean_login=true&reset_purchase_session=1> |
| Parameters - Used to filter the resources. When we want to get specific data from the resource  <https://sso.teachable.com/secure/42299/users/sign_in?clean_login=true&reset_purchase_session=1> |
| Payload -> Data that we send to Rest with the request |
| Status |
| Body |
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| There are 4 important types of HTTP request:  GET  PUT  POST  DELETE |
| GET -> It is used to retrieve the information from the server/app Parameters can be provided as part of the URI |
| POST -> It is used to create new information on the server/app Request should be provided as JSON/XML request as Payload |
| PUT -> It is used to update/modify the existing information on the server/app Request should be provided as JSON/XML request as Payload |
| Delete -> It is used to delete the information from the server/app Request should be provided as JSON/XML request as Payload |
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| What to verify?   1. Response code / Status code 2. Response message / Error Message 3. Few other response |
| http statuses codes:   * **1×× Informational** * [**100** Continue](https://httpstatuses.com/100) * [**101** Switching Protocols](https://httpstatuses.com/101) * [**102** Processing](https://httpstatuses.com/102) * **2×× Success** * [**200 OK**](https://httpstatuses.com/200) * [**201 Created**](https://httpstatuses.com/201) * [**202** Accepted](https://httpstatuses.com/202) * [**203** Non-authoritative Information](https://httpstatuses.com/203) * [**204** No Content](https://httpstatuses.com/204) * [**205** Reset Content](https://httpstatuses.com/205) * [**206** Partial Content](https://httpstatuses.com/206) * [**207** Multi-Status](https://httpstatuses.com/207) * [**208** Already Reported](https://httpstatuses.com/208) * [**226** IM Used](https://httpstatuses.com/226) * **3×× Redirection** * [**300** Multiple Choices](https://httpstatuses.com/300) * [**301** Moved Permanently](https://httpstatuses.com/301) * [**302** Found](https://httpstatuses.com/302) * [**303** See Other](https://httpstatuses.com/303) * [**304** Not Modified](https://httpstatuses.com/304) * [**305** Use Proxy](https://httpstatuses.com/305) * [**307** Temporary Redirect](https://httpstatuses.com/307) * [**308** Permanent Redirect](https://httpstatuses.com/308) * **4×× Client Error** * [**400 Bad Request**](https://httpstatuses.com/400) * [**401 Unauthorized**](https://httpstatuses.com/401) * [**402** Payment Required](https://httpstatuses.com/402) * [**403** Forbidden](https://httpstatuses.com/403) * [**404** Not Found](https://httpstatuses.com/404) * [**405** Method Not Allowed](https://httpstatuses.com/405) * [**406** Not Acceptable](https://httpstatuses.com/406) * [**407** Proxy Authentication Required](https://httpstatuses.com/407) * [**408** Request Timeout](https://httpstatuses.com/408) * [**409** Conflict](https://httpstatuses.com/409) * [**410** Gone](https://httpstatuses.com/410) * [**411** Length Required](https://httpstatuses.com/411) * [**412** Precondition Failed](https://httpstatuses.com/412) * [**413** Payload Too Large](https://httpstatuses.com/413) * [**414** Request-URI Too Long](https://httpstatuses.com/414) * [**415** Unsupported Media Type](https://httpstatuses.com/415) * [**416** Requested Range Not Satisfiable](https://httpstatuses.com/416) * [**417** Expectation Failed](https://httpstatuses.com/417) * [**418** I'm a teapot](https://httpstatuses.com/418) * [**421** Misdirected Request](https://httpstatuses.com/421) * [**422** Unprocessable Entity](https://httpstatuses.com/422) * [**423** Locked](https://httpstatuses.com/423) * [**424** Failed Dependency](https://httpstatuses.com/424) * [**426** Upgrade Required](https://httpstatuses.com/426) * [**428** Precondition Required](https://httpstatuses.com/428) * [**429** Too Many Requests](https://httpstatuses.com/429) * [**431** Request Header Fields Too Large](https://httpstatuses.com/431) * [**444** Connection Closed Without Response](https://httpstatuses.com/444) * [**451** Unavailable For Legal Reasons](https://httpstatuses.com/451) * [**499** Client Closed Request](https://httpstatuses.com/499) * **5×× Server Error** * [**500 Internal Server Error**](https://httpstatuses.com/500) * [**501** Not Implemented](https://httpstatuses.com/501) * [**502** Bad Gateway](https://httpstatuses.com/502) * [**503** Service Unavailable](https://httpstatuses.com/503) * [**504** Gateway Timeout](https://httpstatuses.com/504) * [**505** HTTP Version Not Supported](https://httpstatuses.com/505) * [**506** Variant Also Negotiates](https://httpstatuses.com/506) * [**507** Insufficient Storage](https://httpstatuses.com/507) * [**508** Loop Detected](https://httpstatuses.com/508) * [**510** Not Extended](https://httpstatuses.com/510) * [**511** Network Authentication Required](https://httpstatuses.com/511) * [**599** Network Connect Timeout Error](https://httpstatuses.com/599) |
| For Soap API documentation: Popular format is WSDL file.  WSDL stands for **Web Services Description Language** |
| For REST API documentation: Popular format is WADL file.  WSDL stands for **Web Application Description Language** |
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| Most popular way to write Rest Assured Test Cases: BDD (Behaviour Driven Testing) |
| BDD(Behaviour Driven Testing) common items:  given()-> Given I have this information  Initialization  when()-> When I perform this information  Resources  then()-> Then this should be the output  Validation |
| given()-> Given I have this information  Initialization  Auth  Login to application  Request Header  Parameters  Cookies  Body |
| when()-> When I perform this information  Resources  Get (resource path)  Post (resource path)  Put (resource path)  Delete (resource path) |
| then()-> Then this should be the output  Validation  Validate status code  Assert status code  Extract the response  Extract the header |
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