REST API:  
ANY API that has communication happening through internet, is REST API.It runs on HTTP protocol.  
HTTP -> Hypertext transfer protocol - Internet--> Communication in REST API has 2 main parts.  
1) Request  
2) ResponseREST API helps establish communication between:CLIENT API SERVERApplicationA --> ApplicationB  
2 Different systems.REST API can be used to securely share data/resources with external systems.Why are we learning REST API Testing/Automation?Development process:  
We gather requirements and understand them  
-Database Development(Tables, columns)  
-Build Code on top of it that will process the Application Business logic.  
Developers BUILD API on top of DATABASES. Even before UI.Benefit of API testing is that we can start testing process EARLY.  
And the more bugs we catch in API level testing, the less bugs we will see on UI.API level of application is developed before the UI part.-> start testing early  
-> find bugs early

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REST API popular usage:1) 2 Different applications/systems communicating with each other. and Sharing data/resouces2) In Same Application: Design is broken down to 3 parts.UI -> API -> Database

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REST APIReprentational State Transfer2 Main types of APIs:1) SOAP  
- communication happens using XML only  
- request is sent to SOAP methods  
- Documentation is in WSDL (Wizdal)  
- Heavy, more secure, more stable  
- getting less popular  
2) REST API  
- communication happens using Json, XML  
- requests are sent to API methods/urls using  
- Communication happens in HTTP(Internet)  
- Lightweight, stable  
- easy to develop and automate  
- very popular

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REST API  
1) REQUEST  
2) RESPONSEWhen we send request, we need to know the API methods/endpoints that are available:  
- read documentation about api methods  
- Swagger tool, that has API methods and descriptionsTypes of Requests:GET -> Read data  
POST -> Create/insert data  
PUT -> Update data  
DELETE-> Delete dataI send GET, POST, PUT, DELETE type of API requests to API endpoint/method.

200 - successful request

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201 Created

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