classification OF API’S

1. UNSECURED APIs 🡪 These APIs are not protected by any means of security such as authorization i.e., any user can access these APIs ; these are not recommended in the enterprise industry
2. SECURED APIs 🡪 These APIs are protected by a means of security such as authorization i.e., all users cannot access these APIs ; only the users with valid credentials can access these protected APIs; these are recommended in the enterprise industry
3. PUBLIC APIs 🡪 These APIs are accessible from public facing internet ; these are not recommended in the enterprise industry
4. PRIVATE APIs 🡪 These APIs are not accessible from public facing internet ; these APIs are accessible from private internet or company network/intranet ; these are recommended in the enterprise industry

Model of APIs:

* Public API + Secured API 🡪 these APIs are accessible over public internet via authorization mechanism
* Public API + Unsecured API 🡪 these APIs are accessible over public internet without authorization mechanism
* Private API + Secured API 🡪 these APIs are accessible over company network/VPN only via authorization mechanism ; this is the recommended option to develop APIs for enterprise projects
* Private API + Unsecured API 🡪 these APIs are accessible over company network/VPN without authorization mechanism

TYPES OF API’S

1. XML RPC APIs 🡪 These are the above type of APIs developed using XML RPC design principles
2. SOAP APIs 🡪 These are the above type of APIs developed using SOAP design principles
   1. It stands for Simple object access protocol
   2. This is a protocol that defines how APIs can be developed
   3. 90% deprecated/outdated as of today
   4. 10% is the usage of this protocol to develop APIs
   5. The http method allowed is only POST method, using which SOAP APIs can perform all actions with the server side application
   6. The request body from client to server is always sent in XML format ; other formats such as JSON, TEXT, HTML, YAML are not allowed using SOAP protocol
   7. The response body from server to client is always sent in XML format ; other formats such as JSON, TEXT, HTML, YAML are not allowed using SOAP protocol
3. REST APIs 🡪 These are the above type of APIs developed using REST design principles
   1. It stands for Representational state transfer
   2. This is an architectural style that defines how APIs can be developed
   3. 100% is the usage of this protocol today to develop APIs
   4. The http methods allowed are only GET, POST, PUT, PATCH, DELETE, OPTIONS, HEAD, TAIL, ECHO, TRACE etc, using which REST APIs can perform all actions with the server side application
   5. The request body from client to server can be sent in any descriptive format such as XML, JSON, HTML, TEXT, YAML etc
   6. The response body from server to client can be sent in any descriptive format such as XML, JSON, HTML, TEXT, YAML etc
   7. REST APIs are initially developed at Google Inc and later made open source for other companies to consume this technology to develop APIs
   8. REST APIs are more advanced & secured as compared to SOAP APIs