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In [ ]: """
Que 1-What is an API? Give an example, where an API is used in real life.

Ans 1-An application programming interface is a way for two or more computer
programs to communicate with each other. It is a type of software interface

he weather bureau's software system contains daily weather data. The weather
app on your phone "talks" to this system via APIs and shows you daily weather
updates on your phone.

Api is used in the reallife like signup with different application through the
gmail this system is also work with api

Que 2-Give advantages and disadvantages of using API.
Ans 2-

Advantages-

1) Quicker Release.
2) Better Test Coverage.
3) Ease to Shift Left.
4) Lower Maintenance to Do.
5) Faster Bug Fixes.
6) Reduced Testing Costs.
7) Universal Language Understanding.

Disadvantages-

1) Creating API is a very time-consuming process.
2) A fixed scale is necessary.
3) Imprecise boundary delineation.
4) To create API, programming knowledge is necessary.
5) Maintenance cost is very high.
6) It can crash when testing API.

Que 3-What is a Web API? Differentiate between API and Web API.

Ans 3-A web API is an application programming interface for
either a web server or a web browser. It is a web development concept, and it
is use HTTP protocol for the transfer Data

API-

1)all api's are not webservises

2)Response are the formatted using web api's media type formatter into xml
json or any other given formate

3)api has a lightweight architecture

4)it can be used by a client who understand json or xml

5)api can be used for any style of communication

webservice-

1) all webservice are api

2) it support xml

3)you need a soap protocol to send or recived and data over the network.therefore
it does not have light-weight architecture

4)it can be used by any client who understands xml

5)web service use three style Rest ,soap and xml-rpc for the communication

Que 4-Explain REST and SOAP Architecture. Mention shortcomings of SOAP.

Ans 4- Representational State Transfer (REST) is a software architecture style
for building scalable web services. REST services typically communicate via
HTTP and are built using XML and JSON

Simple Object Access Protocol (SOAP) is a protocol specification for exchanging
structured information to implement web services.

Mention shortcomings of SOAP
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As SOAP can only transfer messages as XML files, your SOAP API will be less performant,

Que 5-Differentiate between REST and SOAP.

Ans 5-

Rest-

- 1) an architectural style protocol
- 2) use xml or json to send and receive data
- 3) simply calls services via url path
- 4) Result is readable which is just plain xml or json
- 5) Transfer is over Http only

Soap-

- 1) a xml-based message protocol
- 2) used wsdl for the communication between consumer and provider
- 3) invoke services by calling Rpc method
- 4) Does not return human readable result
- 5) Transfer is over HTTP. also uses other protocols such as smtp, ftp etc

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