Q1. What is an API? Give an example, where an API is used in real life.

Answer

Application programming interface is a set of rules that allows different application to communicate with each other. We use api in payment gateway like google pay which fetches data from bank.

Q2.Give advantages and disadvantages of using API.

Advantage

Increase productivity

Increases functionality

Disadvantage

Security risk

Dependency on third party to provide data

Q3.What is a Web API? Differentiate between API and Web API.

API uses TCP, SMTP, HTTP protocol while web api is subset of api which uses only HTTP protocol.

Q4. Explain REST and SOAP Architecture. Mention shortcomings of SOAP.

REST known for simplicity, flexibility and scalibility and less secure than soap and it uses http protocol.

SOAP uses TCP and SMTP protocol and highly secured, uses xml to transfer message

Q5 Differentiate between REST and SOAP.

REST

* Uses HTTP as the communication protocol.
* Lightweight and simple.
* Utilizes JSON or XML for data representation.
* Stateless and independent requests.
* Provides flexibility and easy implementation.

SOAP:

* Can use various communication protocols.
* Uses XML for message exchange.
* Supports session-based communication for maintaining state.
* More rigid and complex with a specific message structure defined by WSDL.
* Supports WS-\* standards for interoperability.
* Can be more resource-intensive and slower compared to REST.