

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

Answer

API stands for application programming interface. With the help of some rules and protocols API helps us to communicate between homogenous (same framework, same platform, same programming language) and heterogenous (different framework, different platform, different programming language) applications and web applications. For example : when we use google pay to transfer some money to any shopkeeper or any of our friend. API is used there coz google pay do not store money on its own. it communicate with our bank and after passing all the arguments. Transaction gets successful.

If we want to access the code of an application from another application. API is used there. In today's world not a single application can be created without API

Q2. Give advantages and disadvantages of using API.

Answer

Advantages :

1. It helps us to communicate between different software systems regardless of their programming language, framework and etc
2. APIs reduce the development time and cost by reusing the existing data and resources

Disadvantages :

1. API can become a hacker's primary target as a single point of entry can compromise all the other applications and systems
2. APIs can require constant updates and testings to ensure performance and compatibility

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

As the name suggests, a web API is an API over the web, which can be accessed using hypertext transfer protocol.

Difference Between API and Web API :

Web API is a subset of API

API is an Application Programming Protocol, with the help of some rules and protocols API enables the software system to communicate with other software systems. On the other hand, Web API is an API over the web, which can be accessed using HTTP

Q5. Differentiate between REST and SOAP.

Answer

The main difference between REST AND SOAP Architecture is that SOAP is a protocol, and REST is not

REST

REST architecture is based on web architecture/web transaction/web API. To communicate over web, REST API uses HTTP

It permits ,any different data formats like a plain text, html, http, XML and etc

It is stateless (it does not keep past record of communication b/w client and server)

SOAP

SOAP uses only XML (extended markup language) to write commands and instructions

It permits only XML file as data format

It is not stateless

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

Answer :

SOAP - SOAP is a protocol used to transfer structured information in the implementation of web services

REST - REST is representational state transfer is a software architectural style to guide the design and development of the architecture of world wide web

Shortcoming's of SOAP Architecture :

1. it is more complex then REST
2. As it uses XML data type, which uses high bandwidth usage and slower the performance
3. SOAP is much less adaptable then REST