**1)What is an API? Give an example, where an API is used in real life.**

Ans- Sharing flight information between airlines and travel sites. Using Google Maps in a rideshare app. Building chatbots in a messaging service.

**2) Give advantages and disadvantages of using API.**

Ans-

Advantage

Efficiency: When you have content that is automatically published and made available on different channels simultaneously, APIs allow for more efficient data distribution. Adaptability: One of the greatest benefits of APIs is the ability it has to adapt to changes through data migration and flexibility of services.

Disadvantage

As a single point of entry, an API is a gateway and can become a hacker's primary target. Once the API is compromised, all other applications and systems become vulnerable

**3) What is a Web API? Differentiate between API and Web API.**

Ans- API stands for Application Programming Interface. A Web API is an application programming interface for the Web. A Browser API can extend the functionality of a web browser. A Server API can extend the functionality of a web server.

API is an interface that exposes an application's data to outside software, whereas web applications are one type of API with stricter requirements. These requirements include network communication, SOAP as the primary protocol, and less accessibility for the public.

**4) Explain REST and SOAP Architecture. Mention shortcomings of SOAP.**

Ans- SOAP requires more bandwidth and resource than REST. REST requires less bandwidth and resource than SOAP. SOAP defines its own security. RESTful web services inherits security measures from the underlying transport.

**5) Differentiate between REST and SOAP.**

Ans- While SOAP and REST share similarities over the HTTP protocol, SOAP is a more rigid set of messaging patterns than REST. The rules in SOAP are important because we can't achieve any level of standardization without them. REST as an architecture style does not require processing and is naturally more flexible.