

2. SOA- Web Service - Restful Service - HTTP methods kavramlarını örneklerle açıklayınız. (15 Puan)

SOA (Service-Oriented Architecture) allows different services to interact and cooperate over a network. Services come together to support business processes. They're modular and reusable. For example, an e-commerce system could use a payment service for transactions, a CRM service for customer info, and an inventory service for product data.

A web service lets different platforms and languages communicate over a network, usually the internet. It exchanges data via XML messages over SOAP (Simple Object Access Protocol). Say, a weather web service could provide weather data to various apps through SOAP messages.

Web services that follow Representational State Transfer principles are called RESTful. They transfer data using the HTTP protocol. Usually, they exchange data in XML or JSON formats. RESTful services offer a straightforward and lightweight approach. It forms the foundation of the web. For example, a social media platform could provide RESTful APIs. These APIs allow getting, updating, or deleting user information.

HTTP methods are ways to perform operations on resources in RESTful services. The most common HTTP methods are:

GET: Used to get data from a source. For example, it can be used to retrieve a user's profile information.

POST: Used to create new data in the source. For example, it can be used to create a new user record.

PUT: Used to update data in the source. For example, it can be used to update the user's profile information.

DELETE: Used to delete data in the source. For example, it can be used to delete a user from the system.

These methods form the basis of RESTful services and provide standard ways to interact with resources on the web.