# **React – JSON-server and Firebase Real Time Database**

**Question 1:** What do you mean by RESTful web services?

**Ans.** **RESTful web services** are APIs (Application Programming Interfaces) that adhere to the principles of **REST (Representational State Transfer)**, an architectural style for designing networked applications. These services allow systems to communicate over the web using standard HTTP methods and are designed to be lightweight, scalable, and easy to use.

**Key Characteristics of RESTful Web Services:**

1. **Stateless**:
   * Each request from a client to the server must contain all the information needed to process it. The server does not store any client-specific state between requests.
2. **Client-Server Architecture**:
   * The client and server are separate entities. The client requests resources, and the server processes those requests and returns the data.
3. **Resource-Based**:
   * Everything is considered a resource (e.g., user, product, order), and each resource is identified by a **URI (Uniform Resource Identifier)**.
4. **HTTP Methods**:
   * RESTful services use standard HTTP methods for interaction:
     + **GET**: Retrieve data.
     + **POST**: Create a new resource.
     + **PUT**: Update an existing resource.
     + **DELETE**: Remove a resource.
5. **Representation of Resources**:
   * Resources can be represented in various formats, such as **JSON**, **XML**, or plain text, with **JSON** being the most commonly used.
6. **Stateless Communication**:
   * RESTful APIs do not maintain client state between requests, making them scalable and simple.
7. **Uniform Interface**:
   * REST enforces a uniform interface between components, simplifying the architecture.