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| SOAP | REST |
| Stands for | Simple Object Access Protocol | Representational State Transfer |
| What is it? | SOAP is a protocol for communication between applications | REST is an architecture style for designing communication interfaces. |
| Design | SOAP API exposes the operation. | REST API exposes the data. |
| Transport Protocol | SOAP is independent and can work with any transport protocol. | REST works only with HTTPS. |
| Data format | SOAP supports only XML data exchange. | REST supports XML, JSON, plain text, HTML. |
| Performance | SOAP messages are larger, which makes communication slower. | REST has faster performance due to smaller messages and caching support. |
| Scalability | SOAP is difficult to scale. The server maintains state by storing all previous messages exchanged with a client. | REST is easy to scale. It’s stateless, so every message is processed independently of previous messages. |
| Security | SOAP supports encryption with additional overheads. | REST supports encryption without affecting performance. |
| Use case | SOAP is useful in legacy applications and private APIs. | REST is useful in modern applications and public APIs |