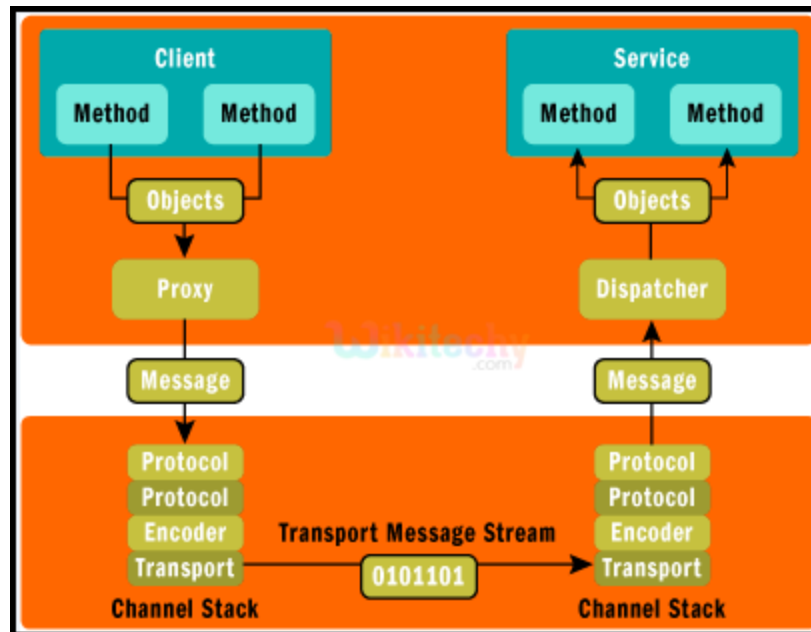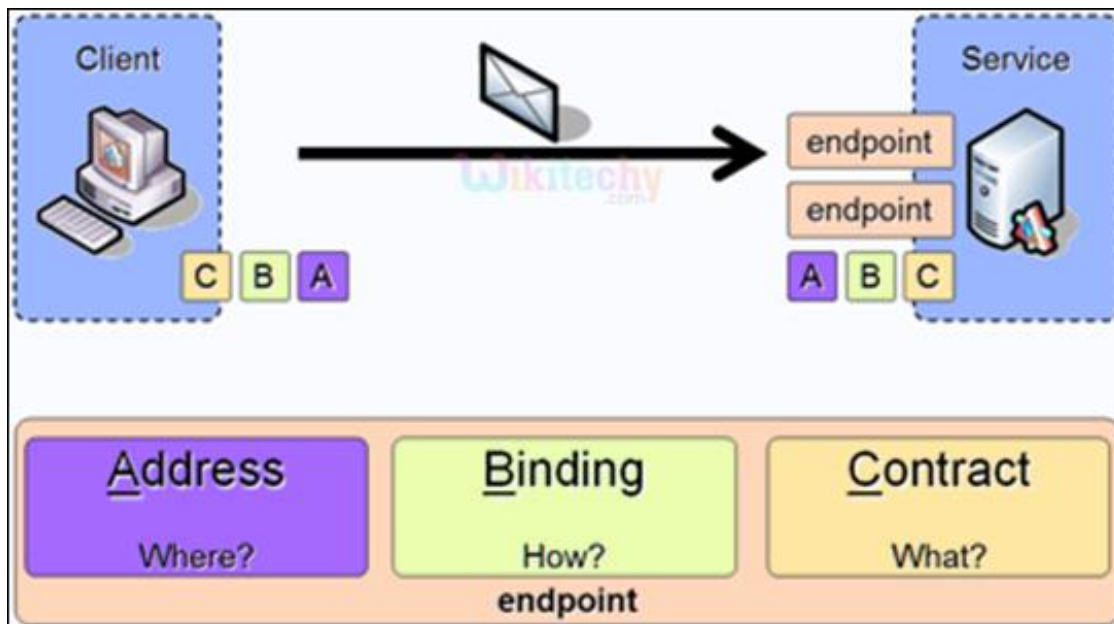# WCF-SERVICE-CONTRACT

- **Service contracts** informs about the operational tasks of that particular service.
- For instance, a Service contract is a service that can provide latitude and longitude based on the city name.
- A Service can contain one or more service contracts.
- A service must surely have one service contract to name it as a service.
- Services are created with Service and Operation Contract attributes.
- [ServiceContract] attribute is equal to [WebServcie] attribute given to a class in the WebService.
- [OpeartionContract] attribute is equal to the [WebMethod] attribute given to a method in WebService.
- The client which access the exposed service, sends a message via a proxy through the communication channel established between the service and the client.
- The request message from client is transformed into binary data and sent to the server as shown below.

Message exchange between a Client and a Service

Service exposed via endpoints

Sample Code:

```
[ServiceContract]
  public interface IService1
  {
      [OperationContract]
      string GetData(int value);

      [OperationContract]
       CompositeType GetDataUsingDataContract(CompositeType
       composite);
  }
```
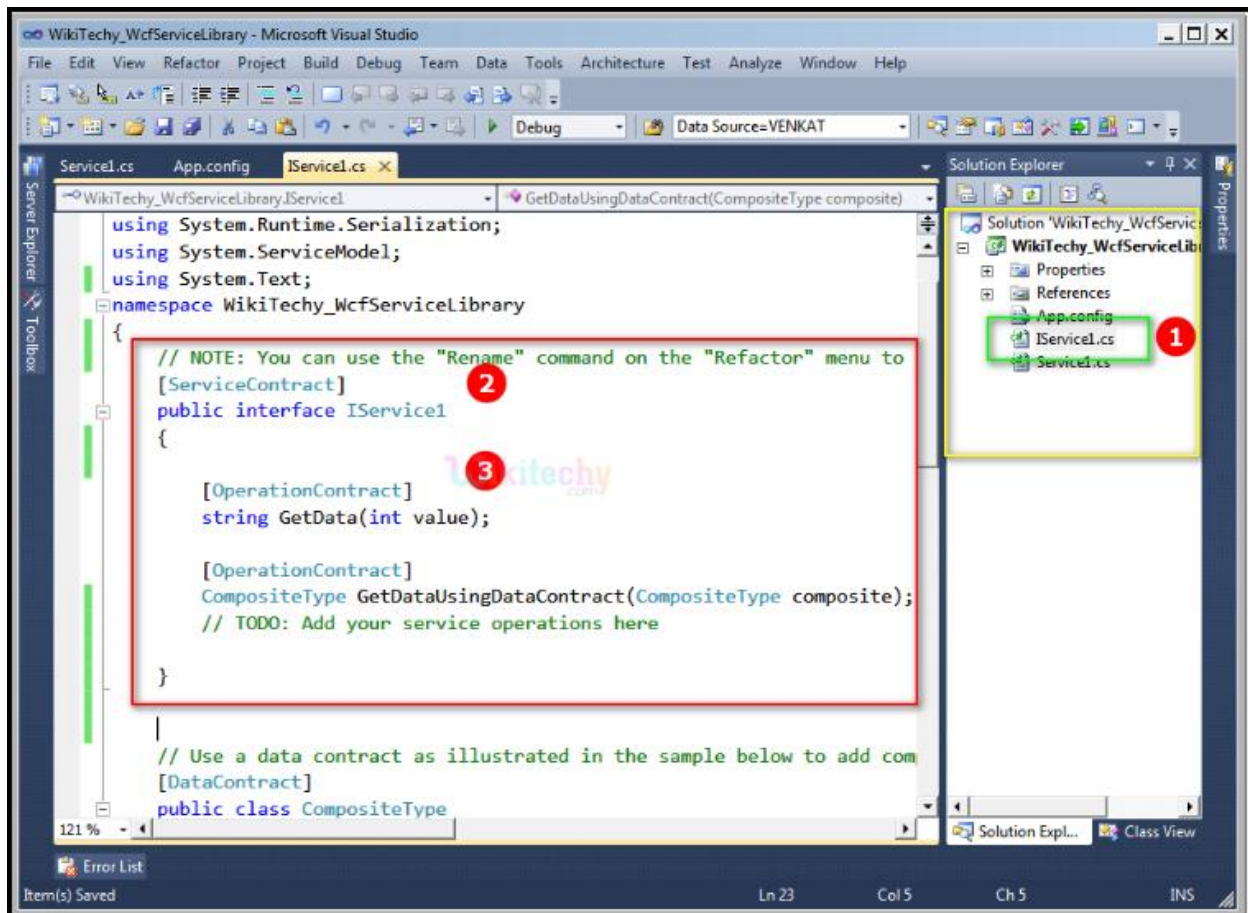
♦ More on Service Contract:
♦ Records the interface and methods of the service through platform-independent narration.
♦ Informs about the message exchange patterns of a service as either it is one-way or two-way with a request-reply methodology.

Code Explanation:

1 The WCF Library application automatically creates a Service Interface IService1.cs file on opting a new project.

2 The file IService1.cs contains an interface service indicated by the [ServiceContract] attribute.

3 The operations exposed by the service are presented with the [OperationContract] attribute.