

ASP.NET programming

Web services

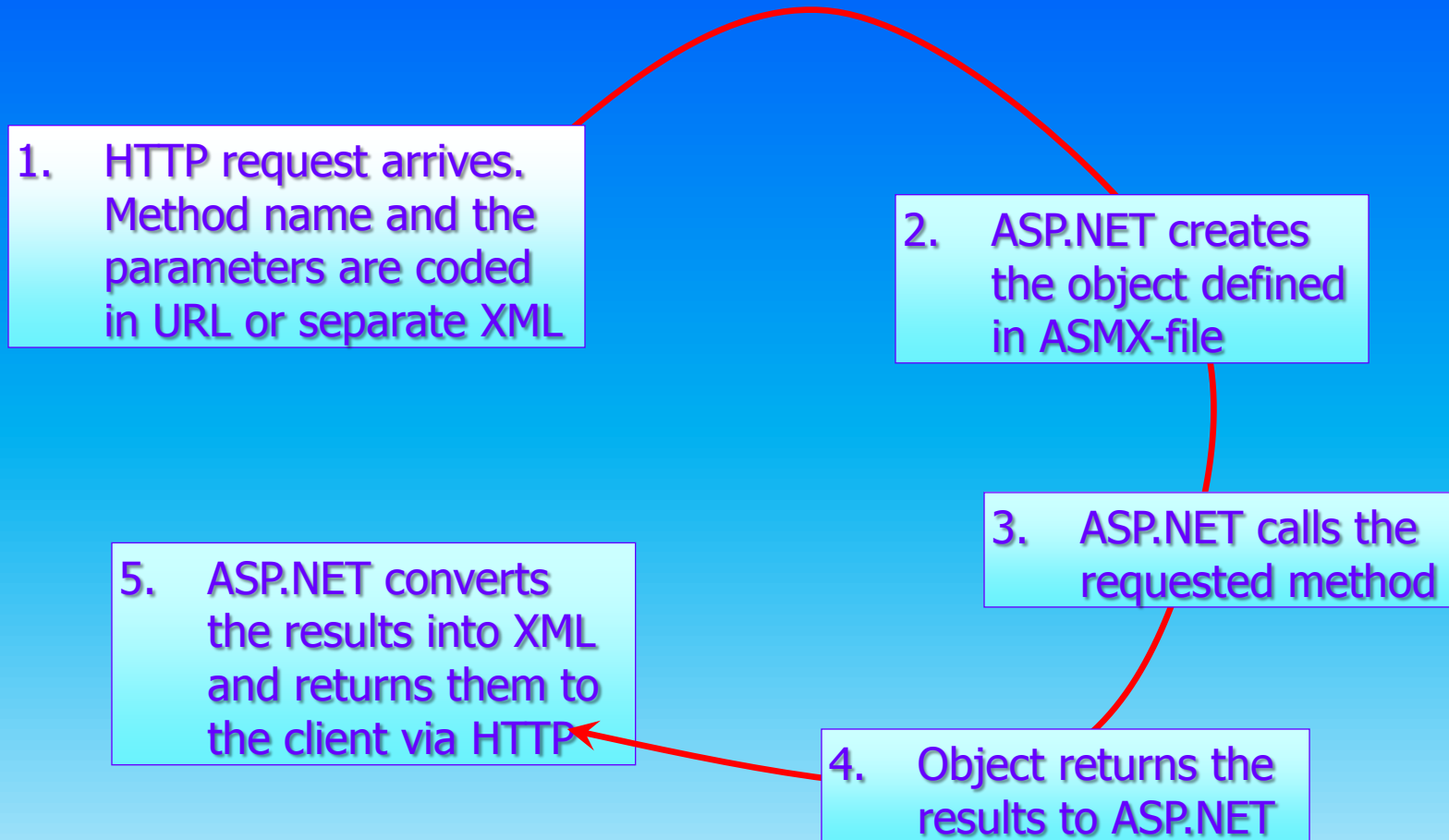
ASP.NET Web Services

What is Web Service?

- Runs on a Web server
- Exposes Web methods to interested callers (other applications)
- Listens to HTTP requests representing commands to invoke Web methods
- Executes Web methods and return the results

ASP.NET Web Services

Server view of Web service



ASP.NET Web Services

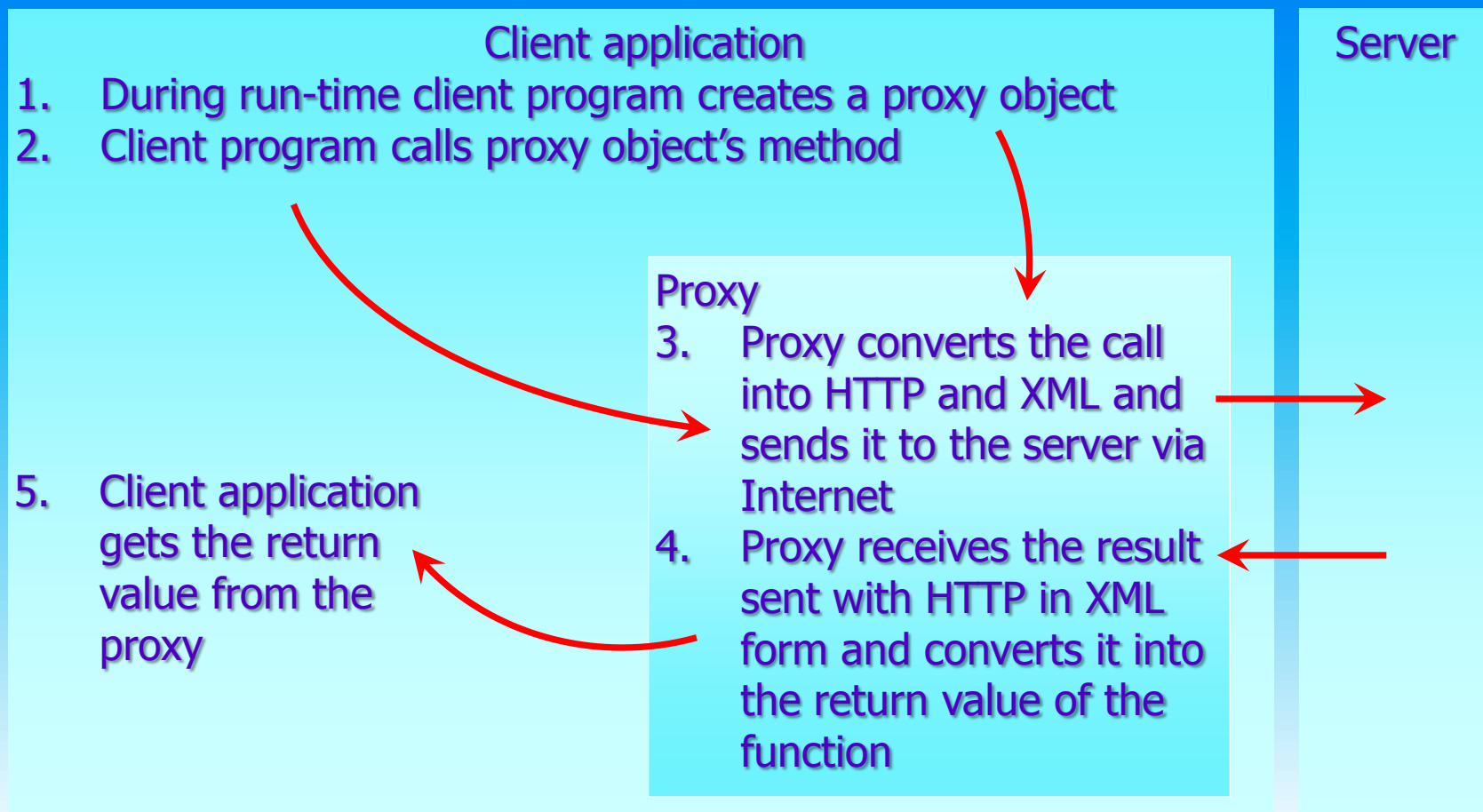
Web Service example

```
using System;
using System.Web.Services;
[WebService (Name="Calculator Web Service")]
class CalcService{
    [WebMethod]
    public int Add (int a, int b){
        return a + b;
    }
    [WebMethod]
    public int Subtract (int a, int b){
        return a - b;
    }
}
```

ASP.NET Web Services

Client view of Web service

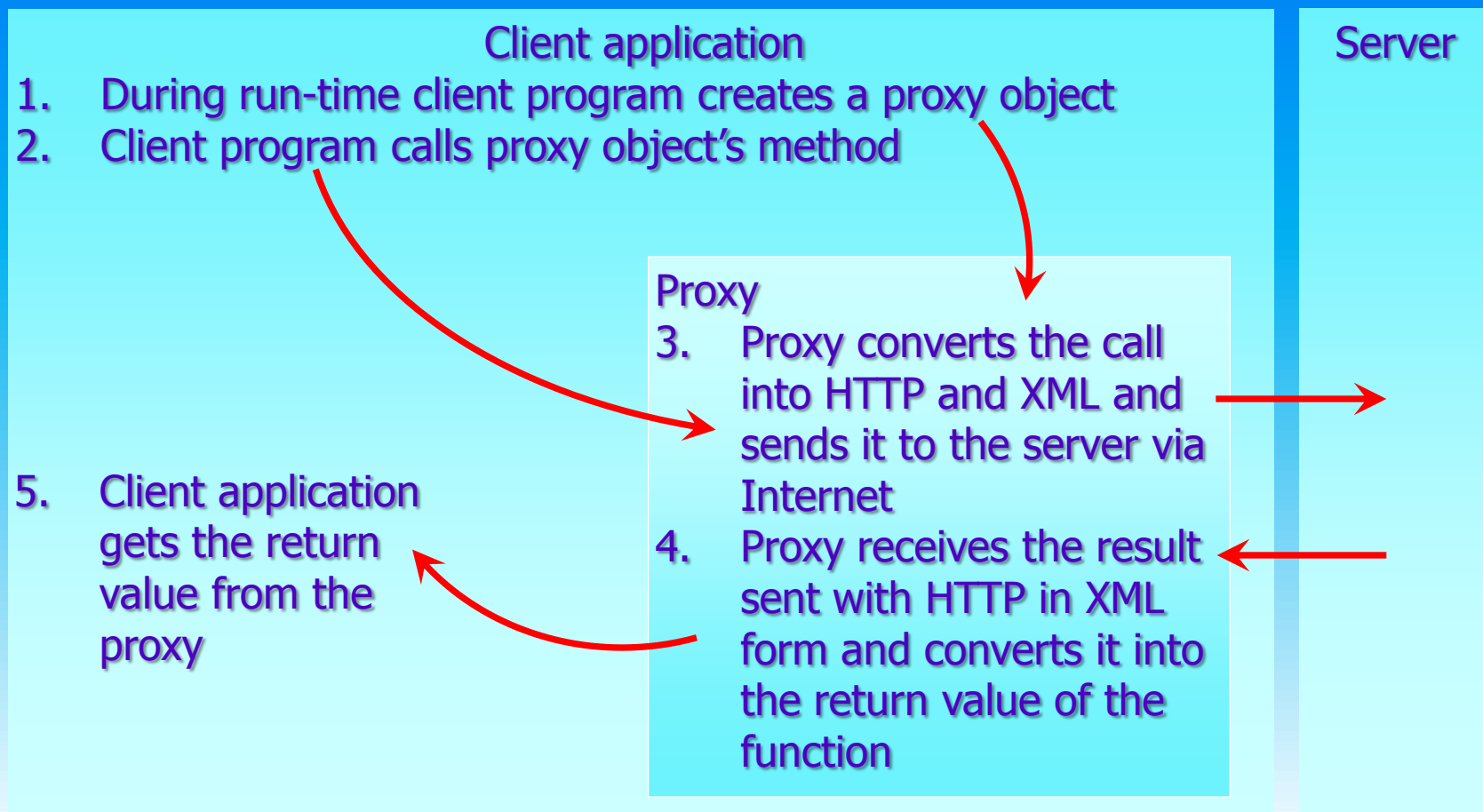
0. At design-time the programmer generates the code of proxy-object from the description of Web service



ASP.NET Web Services

Client view of Web service

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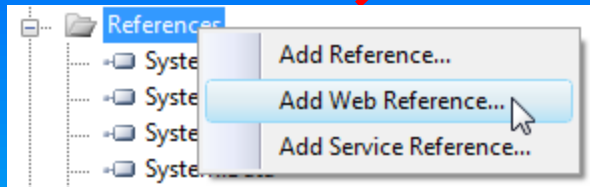
ASP.NET Web Services

Simple console client

```
class TestAddSubtract{
    public static void Main(){
        CalculatorWebService myCalc =
            new CalculatorWebService(); //Web reference needed
        Console.WriteLine("Anna kaksi kokonaislukua: ");
        string luku1 = Console.ReadLine();
        string luku2 = Console.ReadLine();
        int summa =
            myCalc.Add(int.Parse(luku1), int.Parse(luku2));
        Console.WriteLine("Lukujen summa on " + summa);
        int erotus =
            myCalc.Subtract(int.Parse(luku1),
int.Parse(luku2));
        Console.WriteLine("Lukujen erotus on " + erotus);
    }
}
```

ASP.NET Web Services

Setting web reference in Visual Studio

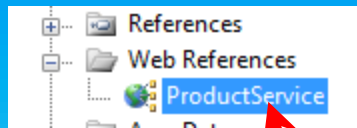


Start Browsing for Web Services

Use this page as a starting point to find Web services. You can click the links below, or type a known URL into the address bar.

Browse to:

- [Web services in this solution](#)
- [Web services on the local machine](#)
- [Browse UDDI Servers on the local network](#)
Query your local network for UDDI servers.



Web reference name:

Add Reference

Web Services in this Solution

The Web services available in this solution are listed below. Click the service link to browse that service.

Services	Project	URL
Service1	WebServiceDemo	Service1.asmx

Web reference name:

Add Reference

DEMO

Data query / Web Services