

EXAM #1 - Consuming Web Services (C# and .NET)

Using C#, create an [ASP.NET](#) Core or Console Application project to accomplish the following:

- Integrate with the OpenWeatherMap API:
- Visit OpenWeatherMap API to get the API details and register for a free API key.
- Implement two integrations:
- Fetch and process weather data in **JSON format**.
- Fetch and process weather data in **XML format**.

Example API endpoints:

- **JSON:**
https://api.openweathermap.org/data/2.5/weather?q=London&appid=YOUR_API_KEY
- **XML:**
https://api.openweathermap.org/data/2.5/weather?q=London&mode=xml&appid=YOUR_API_KEY
- Deserialize the JSON and XML responses into C# objects using libraries like **Newtonsoft.Json**, **System.Text.Json**, or **System.Xml.Serialization**.
- Follow the API documentation to understand request parameters and how to handle responses.
- Ensure that the application can handle errors gracefully, such as invalid API keys or missing data.

EXAM #2 - Windows Services (C# and .NET)

Create a Windows Service using C# and .NET to fulfill the following requirements:

- Set up a **Windows Service project** in Visual Studio.
- Create two directories on your local system:
- C:\Folder1
- C:\Folder2
- Use the **FileSystemWatcher** class to monitor C:\Folder1 for new files. When a file is created:
- Move the file to C:\Folder2.
- Log the event (e.g., file name and timestamp).
- Implement logging such that:
- Logs are recorded in the **Windows Event Viewer**.
- Logs are also written to a rolling file using **NLog** or **Serilog**.
- Build an installer for the service using tools like **InstallUtil.exe** or create a setup project.
- Run the service under the **Local Service** account and verify its functionality.