Chapter 12
Configuration

Configuration are the constant key/value pairs that are set at a common location and can be read from anywhere in same application
Ex: connection string, api keys, domain names etc.
You can read configuration in program.cs file below is example

```
using Microsoft.AspNetCore.Http;

var builder = WebApplication.CreateBuilder(args);

builder.Services.AddControllersWithViews();

var app = builder.Build();

app.UseStaticFiles();
app.UseRouting();
app.UseEndpoints(endpoints => {
    endpoints.Map("/", async context =>
    {
        //await context.Response.WriteAsync(app.Configuration["MyKey"]);

        await
context.Response.WriteAsync(app.Configuration.GetValue<string>("MyKey"))
;

        await
context.Response.WriteAsync(app.Configuration.GetValue<int>("x", 10) +
"\n");
    });
});
app.MapControllers();
app.Run();
```

IConfiguration in controller

Sometimes you need to read configuration values in controller at that time you need to inject IConfiguration interface in controller.

```
using Microsoft.AspNetCore.Mvc;

namespace ConfigurationExample.Controllers
{
    public class HomeController : Controller
    {
        private readonly IConfiguration _configuration;
        public HomeController(IConfiguration configuration)
        {
            _configuration = configuration;
        }
        [Route("/")]
        public IActionResult Index()
        {
            return View();
        }
    }
}
```

HttpClient

HttpClient is class for sending HTTP request to specific HTTP resource using URL and receiving HTTP response from the same for example if you want to consume some third party api in like weather api or ChatGPT you can do that using HTTP Client class.

IHttpClientFactory

It is an interface that provides a method called CreateClient() that creates an instance of HttpClient Class and also automatically disposes of the same instance immediately after use.

HttpRequestMessage

It is class used to send http request it helps you to gain more control over Http Request
It mainly has some key properties

1. Method : you can define the type of method.
2. RequestURI : set request URL
3. Headers : Provide access to headers that needs to set while sending request
4. Content : Represent body content of httprequest

Example

```
namespace StocksApp.Services
{
    public class MyService
    {
        private IHttpClientFactory _httpClientFactory;
        public MyService(IHttpClientFactory httpClientFactory)
        {
            _httpClientFactory = httpClientFactory;
        }

        public void Method()
        {
            using (HttpClient httpClient =
_httpClientFactory.CreateClient())
            {
                HttpRequestMessage httpRequestMessage = new
HttpRequestMessage()
                {
                    RequestUri = new Uri("url"),
                    Method = HttpMethod.Get

                };

                httpClient.SendAsync(httpRequestMessage).Wait();
            }
        }
    }
}
```

1. What is the purpose of the appsettings.json file?
2. You have configuration values needed to access your application resources. Which configuration providers do you prefer for development, and which do you prefer for production?
3. How do you use Options pattern in Asp.Net Core?
4. How do you enable Secrets manager and why?