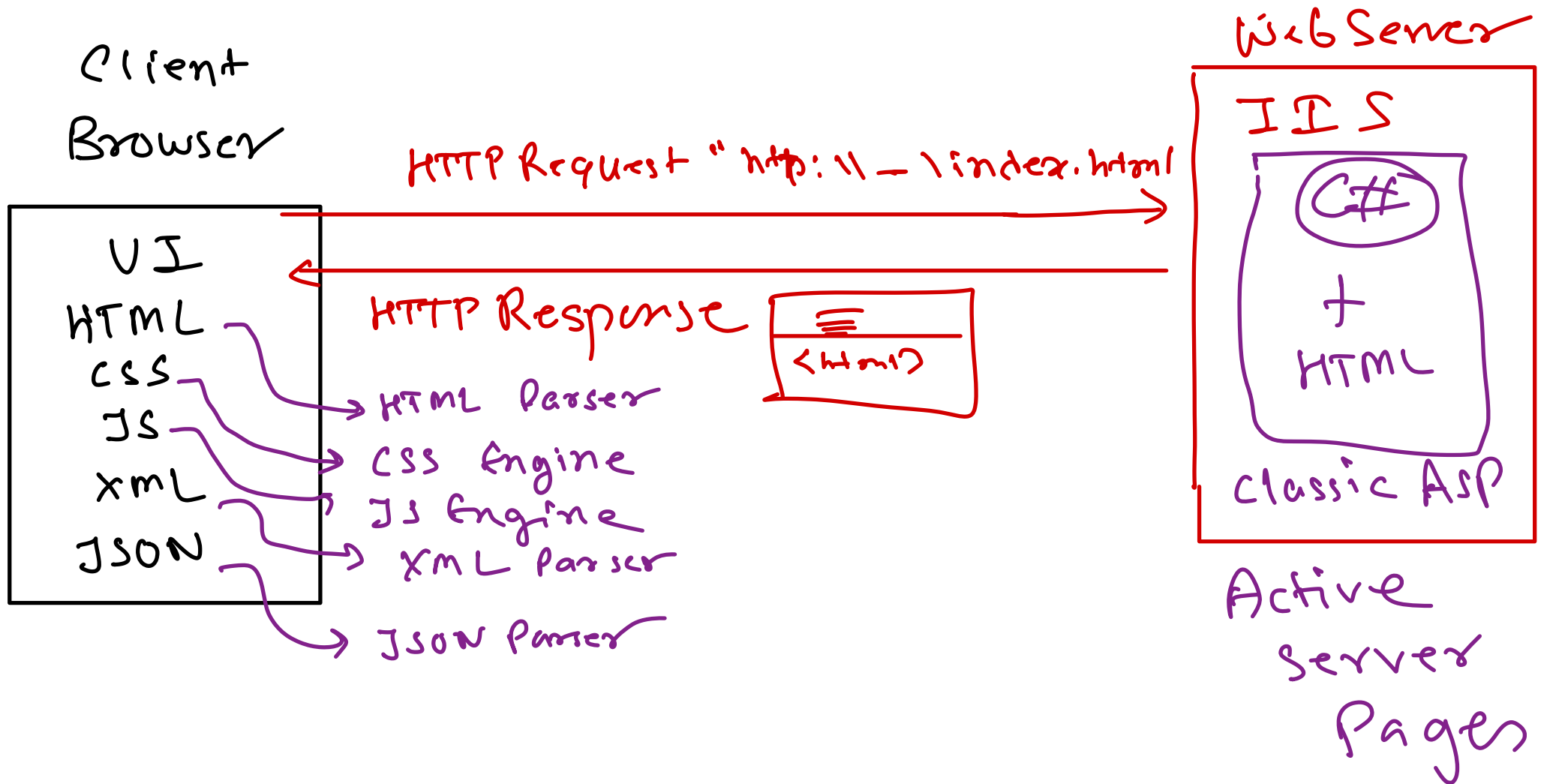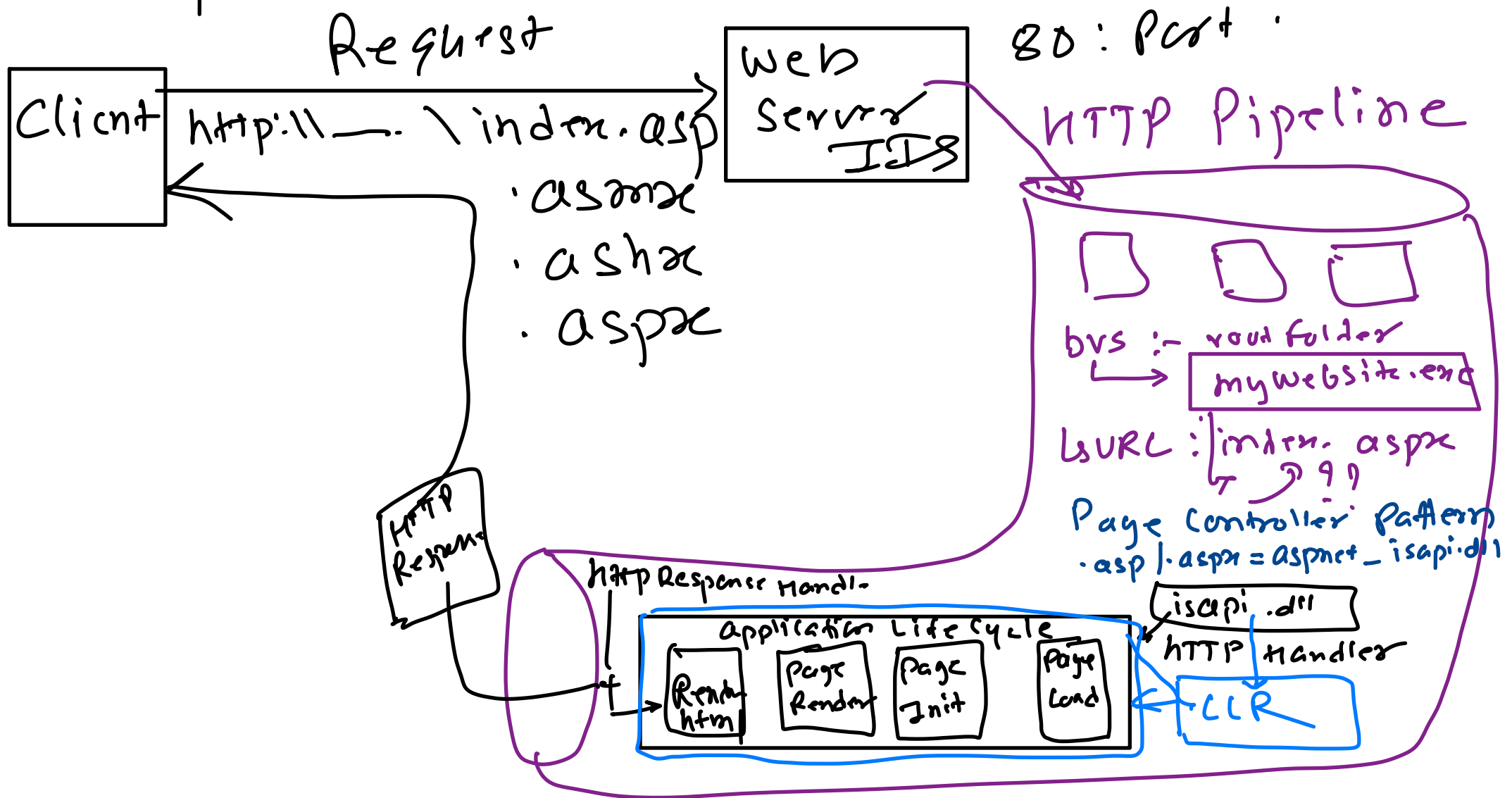1. Design Pattern, SOLID Principle : OOP
2. File IO and Serialization
3. Collection, Generic, Generic Collection.
4. Events and Delegates.
5. C Sharp features : LINQ
6. ADO. NET : Connected Architecture
                  Disconnected Architecture
                  Entity framework.
7. Custom Attributes,
8. Reflection.
9. GC, Exception Handing
10. Task Parallel Library.

MVC 8.0 :-

Client
Browser

UI
HTML
CSS
JS
XML
JSON

HTTP Request "http:\\—\index.html

HTTP Response

<Html>

→ HTML Parser
→ CSS Engine
→ JS Engine
→ XML Parser
→ JSON Parser

Web Server

IIS

C#
+
HTML

classic ASP

Active
Server
Pages

Asp. Net Web forms

Request

Client — http://... \index.asp → Web Server IIS

80 : Port

.asmx
.ashx
.aspx

HTTP Pipeline

bvs :- root folder
→ mywebsite.exe

⌐URL : index.aspx
→ 99

Page Controller Pattern
.asp/.aspx = aspnet_isapi.dll

isapi.dll
HTTP Handler

CLR

HTTP Response

http Response Handl-

Application Life Cycle

Rend- html | Page Render | Page Init | Page Load

DrawBack of Asp.Net webform Applications:-

1. All methods either private OR protected, hence UNIT Testing was not possible.

2. less control over html generation.

3. Page state: "ViewState": This viewstate was making .Net Pages bulky.

Why viewState? : bcoz HTTP is stateless protocol and to do serverside validation/code generation entire page state getting maintained in key-value format. i.e Duplicate Page data.

4. UI and code: tightly coupled.

Asp.Net MVC :- This a framework is degined by microsoft using mvc design architectural pattern.

MVC :-

Model	View	Controller
Buissness Entity	Buissnes UI/presentation	Buissnes Logic

mvvm :-

Model	View	View Model
B.E	B.UI	Controller + ORM

MVC Pattern:—

Client Browser

HTTP Request (80)

http://brs.com\Home\Index

IIS Web Serve

HTTP Pipelin
req.
resp.
.URL = "Home\ Index"

HTTP Response Packet.

Render Response.

class Home Controller

C# code

html

front Controller Pattern.
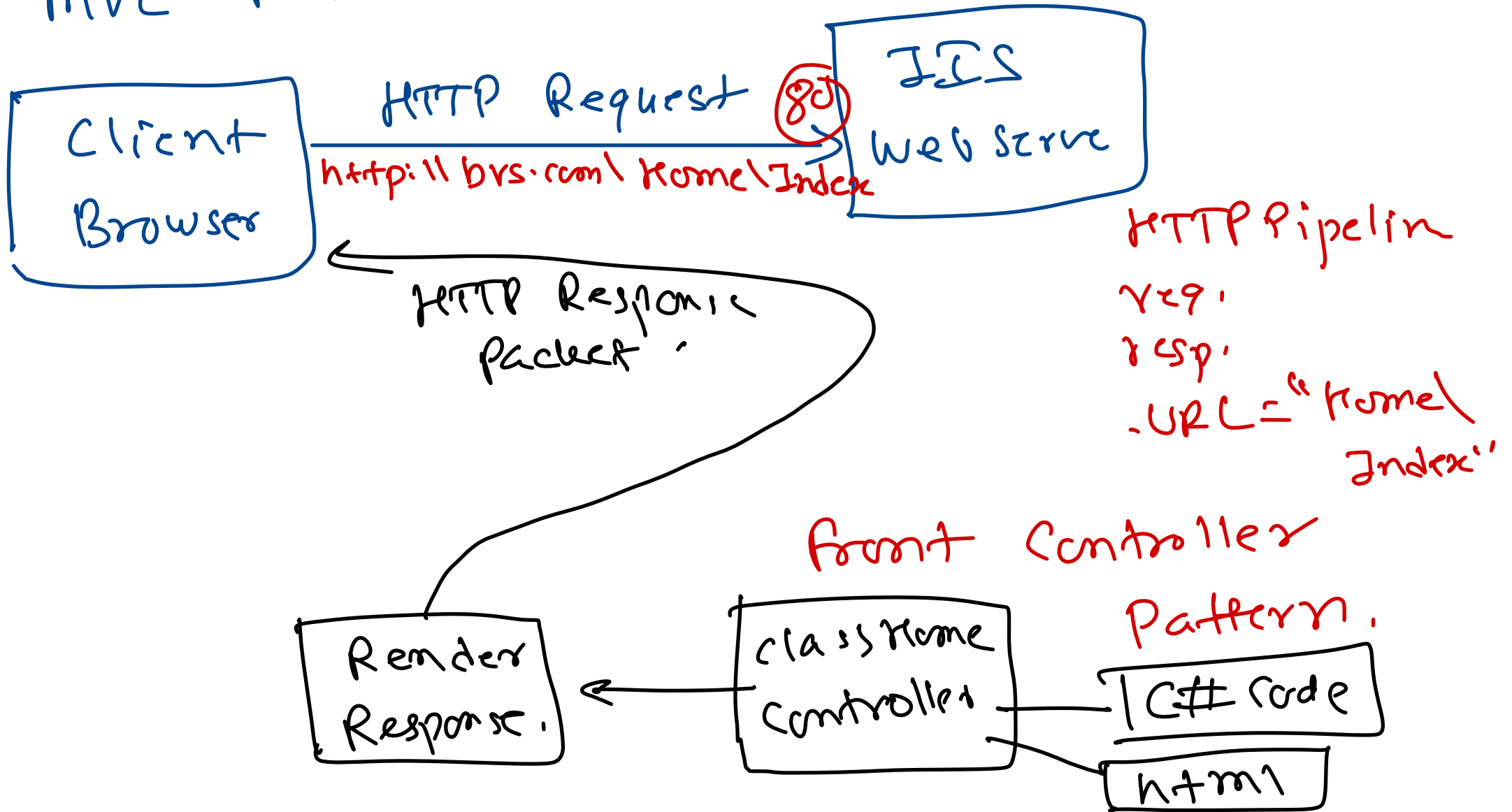
Drawback:— **only Supported for IIS Server**

Asp. Net mvc :- 1.0
2.0
3.0
4.0
5.0 → Asp.net core mvc
1.0 → open-source
.Net
2.0   IIS / kestrel
3.0   windows / mae /
        linux.
6.0   cross-platform
8.0   web app".
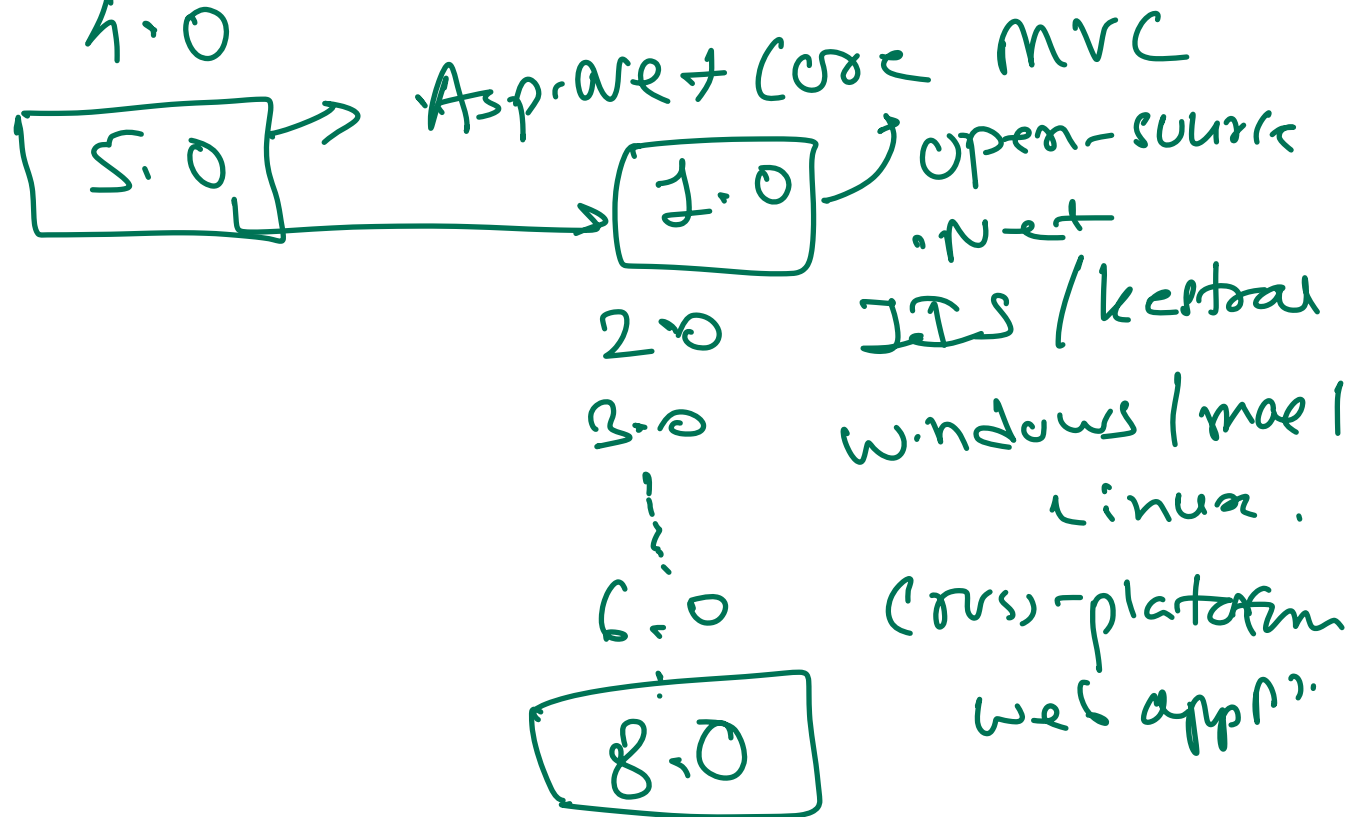
IIS

Kestral Web
                Server

↓

host.exer
+
C#code.dll
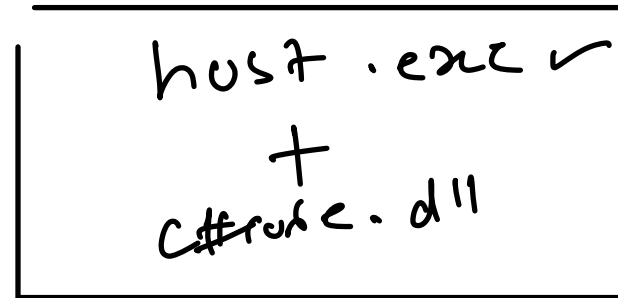
Kestral.exe

↓
+ Web Server

Editor

- VS Code

- Visual Studio 2022

- CLI ~ Command line Interface

Client
Browser

... \Home\Index

IIS / Kestral

(80)

[req]

↳.URL = "Home\Index"

URL.Split()
  ↳ (["Home", "Index"])
      ↑"controller"
  ↳ ["controller" : "HomeController",
     "action" : "Index"]

ControllerFactory factory = new
ControllerFactory()

T??

Controller ctrlobj = factory.GetController(
                        "HomeController")

.InvokeMember("action",
              ctrlobj);

Http
Response

View
Render