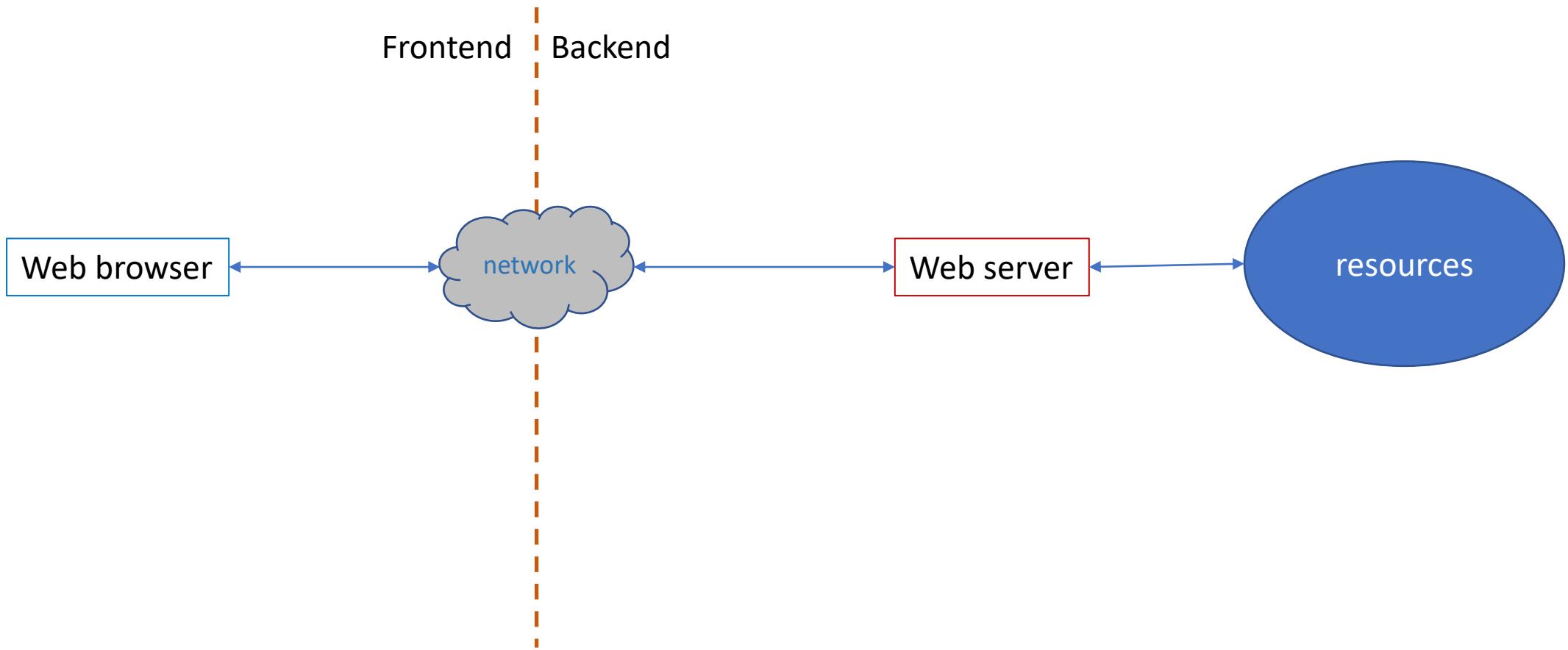


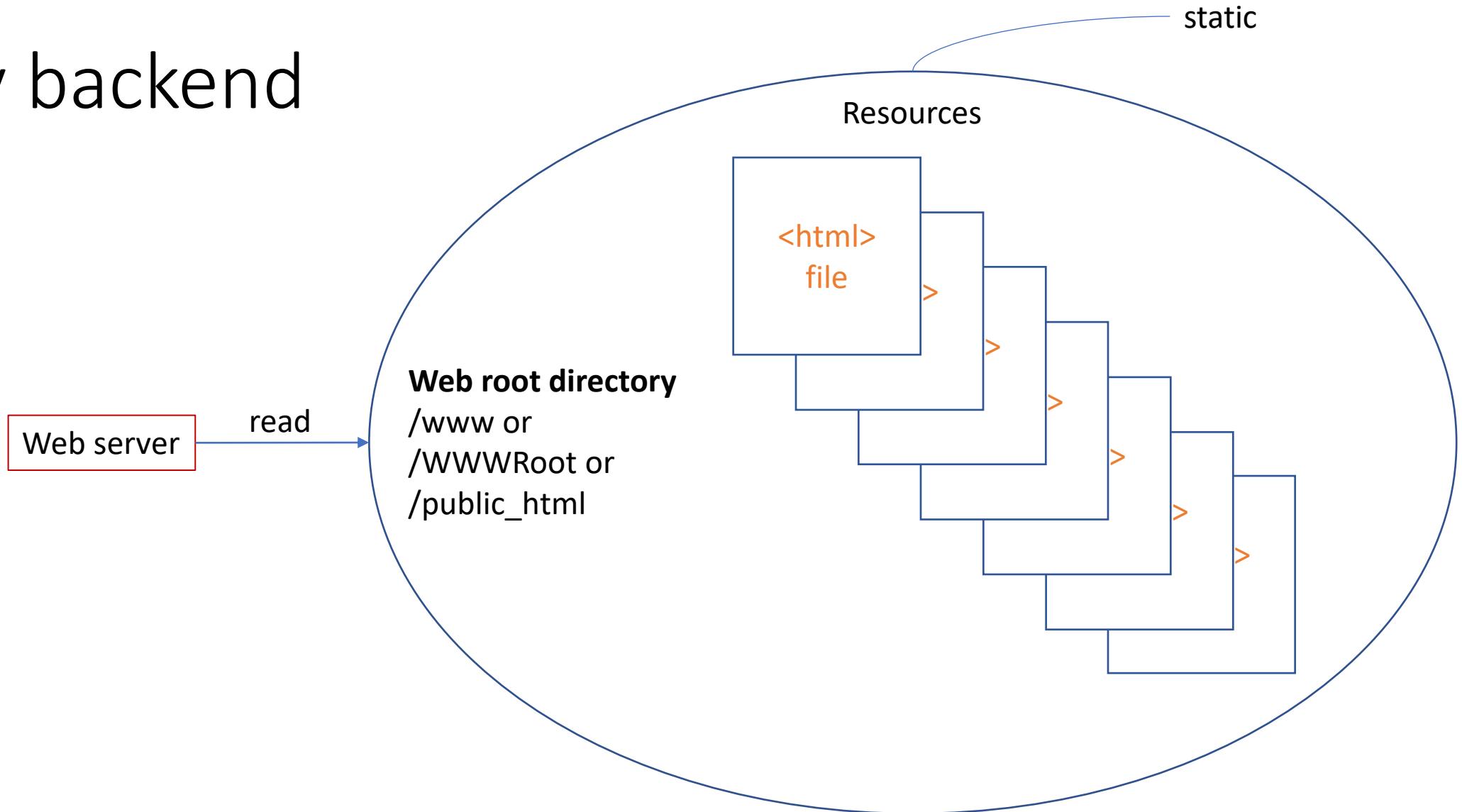
Backend

History & ASP.Net Core Introduction

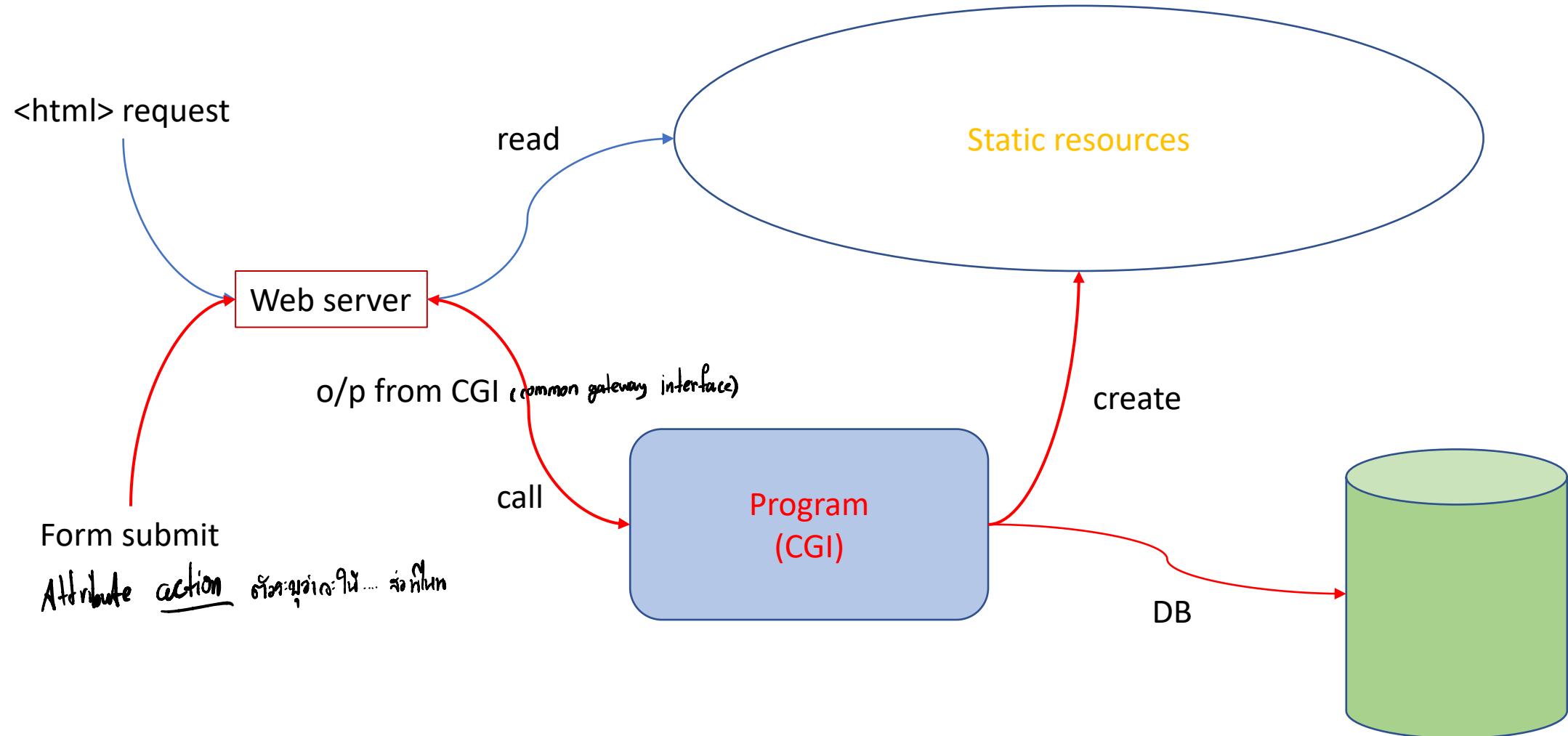
Web in general



Early backend



Early backend with data handling

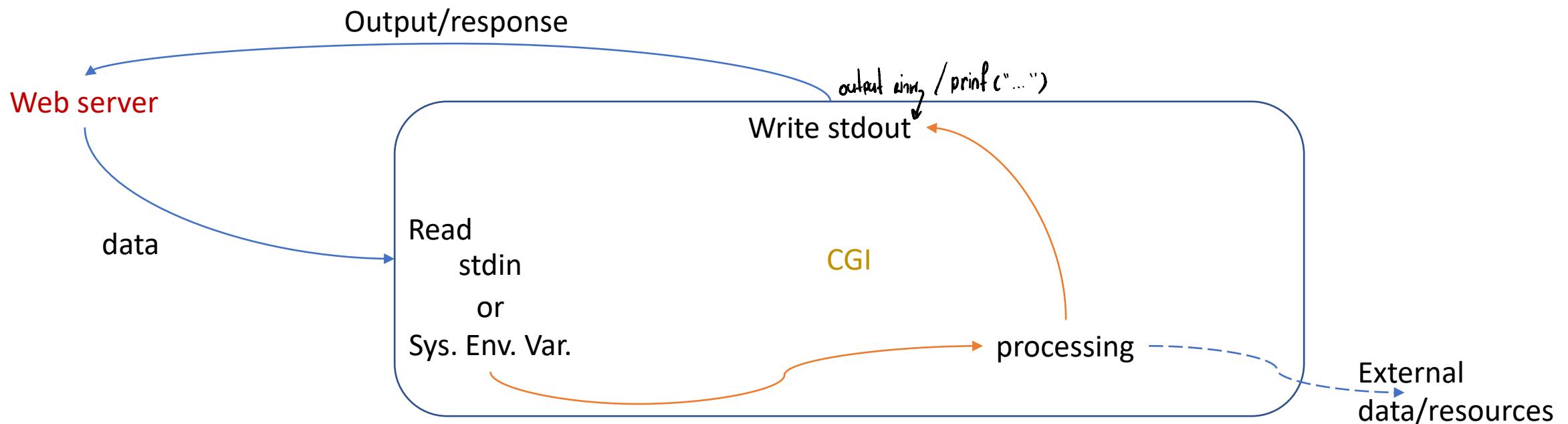


Au 1

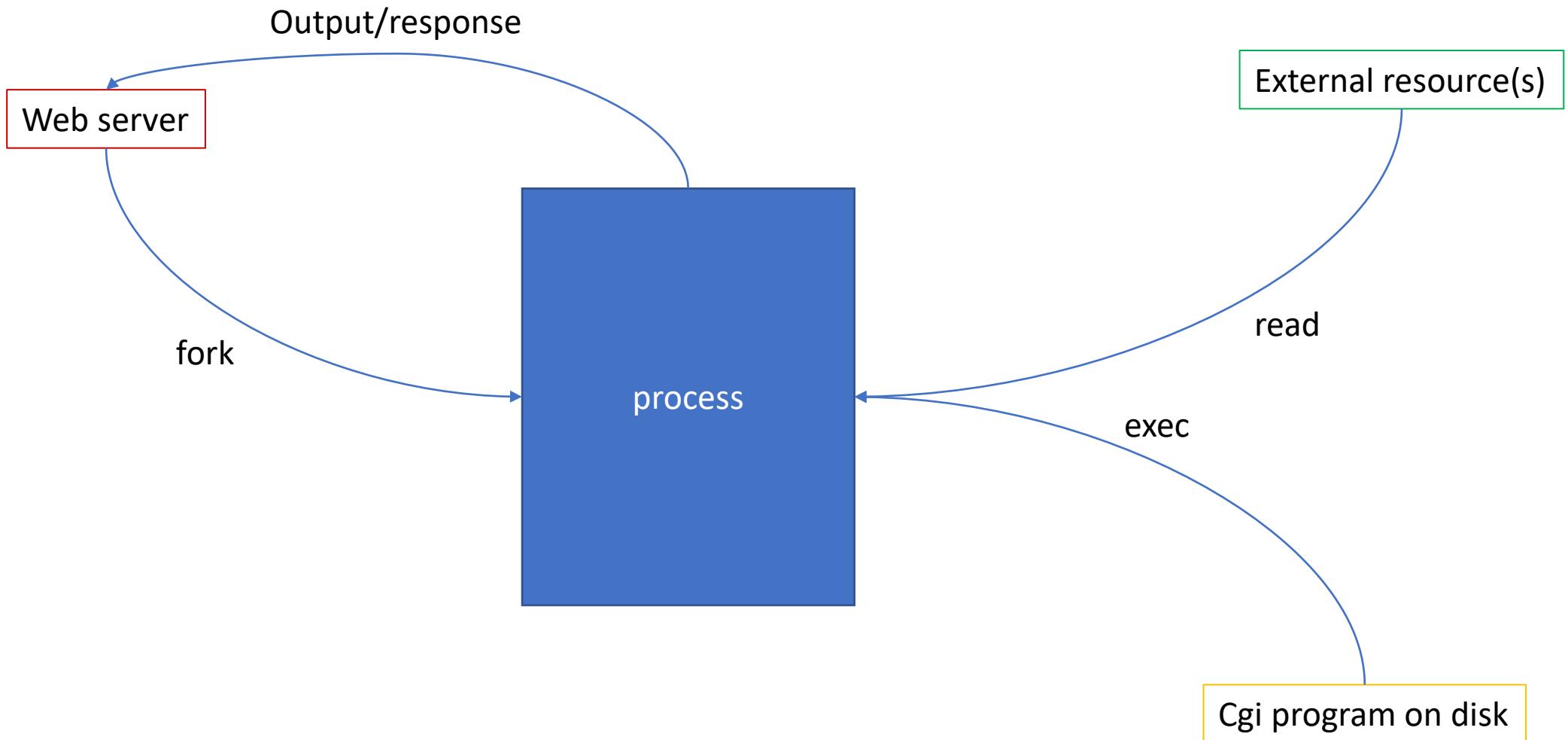
Early CGI

ສິ່ງທີ່ໄດ້ string → ດູວເຕນ

- Develop with language such as C/C++, perl, etc.
- Data transfer from web server to CGI via standard input
- Data transfer from CGI to web server via standard output



Execution



8:26 - 9:45

နှစ်မာရ်

9 နှစ်မာရ် idea

input case

for(p = querystring; *p != '\0';)

{
 p2 = strchr(p, '=');
 p3 = strchr(p, '&');
 if(p3 != NULL)
 len2 = p3 - p;
 else len2 = strlen(p);

if(p2 == NULL || p3 != NULL && p2 > p3)

{
 /* no = present in this field */
 p3 += len2;
 continue;
}

len1 = p2 - p;

if(len1 == fnamelen && strncmp(fieldname, p, len1) == 0)

{
 /* found it */
 int retlen = len2 - len1 - 1;
 char *retbuf = malloc(retlen + 1);
 if(retbuf == NULL)
 return NULL;
 unescstring(p2 + 1, retlen, retbuf, retlen+1);
 return retbuf;
}

p += len2;
 if(*p == '&')
 p++;

}

/* never found it */

return NULL;

}

Ref:<https://www.eskimo.com/~scs/cclass/handouts/cgi.html>

Example: CGI in C

```
#include <stdlib.h>
#include <string.h>
#include <ctype.h>

char *unescstring(char *, int, char *, int);

char *cgigetval(char *fieldname)
{
int fnamelen;
char *p, *p2, *p3;
int len1, len2;
static char *querystring = NULL;
if(querystring == NULL)
{
    querystring = getenv("QUERY_STRING");
    if(querystring == NULL)
        return NULL;
}

if(fieldname == NULL)
    return NULL;

fnamelen = strlen(fieldname);
```

ဝါယံချုပ် query to



& အတွက်
(ခုမှုလုပ်မှု)

```

#include <stdio.h>          9:50 - 11:50
#include <stdlib.h>
#include <string.h>

extern char *cgigetval(char *);

main()
{
char *browser;
char *edittype;
char *text;

printf("Content-Type: text/html\n\n");

printf("<html>\n");
printf("<head>\n");
printf("<title>CGI test result</title>\n");
printf("</head>\n");
printf("<body>\n");

browser = getenv("HTTP_USER_AGENT");

printf("<p>\n");
printf("Hello, ");
if(browser != NULL && strstr(browser, "Lynx") != NULL)
    printf("Lynx");
else if(browser != NULL && strstr(browser, "Mosaic") != NULL)
    printf("Mosaic");
else if(browser != NULL && strstr(browser, "Mozilla") != NULL)
    printf("Netscape");
else
    printf("unknown browser");
printf(" user!\n");

Output case

```

```

printf("<p>\n");

printf("Here is your modified text:\n");
printf("<br>\n");

text = cgigetval("textfield");
edittype = cgigetval("edittype");

if(text == NULL)
{
    printf("You didn't enter any text!\n");
}
else if(edittype != NULL && strcmp(edittype, "reverse") == 0)
{
    reverse(text);
    printf("%s\n", text);
}
else if(edittype != NULL && strcmp(edittype, "upper") == 0)
{
    upperstring(text);
    printf("%s\n", text);
}
else if(edittype != NULL && strcmp(edittype, "lower") == 0)
{
    lowerstring(text);
    printf("%s\n", text);
}
else
{
    printf("You didn't select a transformation!\n");
}

printf("</body>\n");
printf("</html>\n");
}

```

Ref:<https://www.eskimo.com/~scs/cclass/handouts/cgi.html>

→ ยกเว้น CEG ที่มีอยู่แล้ว ไม่สามารถใช้ตัวชี้ Str ของภาษา C
ภาษา curl (curl) สำหรับ Str ตัวอื่น ห้องว่าง , ภาษาตัวอักษร , func ภายนอก

PHP (ASP)

สังเคราะห์ให้เขียนง่ายขึ้น

- Easier data input handling
 - Automatic generate `$_GET` or `$_POST`
- Easier coding
 - Coding in html file
 - `<?php ?>`
- Integrates PHP interpreter into web server (option)
 - Speed up execution

ด้วย

เพื่อให้ระบบติดต่อ interpreter
(ทำงานร่วมกัน)

PHP Example

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="css/style.css">
    <title>PHP Form</title>
</head>
<body>
    <main>
        <?php if ($_SERVER['REQUEST_METHOD'] === 'GET') : ?>
        <form action=<?php htmlspecialchars($_SERVER['PHP_SELF']) ?>" method="post">
            <div>
                <label for="name">Name:</label>
                <input type="text" name="name" required="required" placeholder="Enter your name" />
            </div>

            <div>
                <label for="email">Email:</label>
                <input type="email" name="email" required="required" placeholder="Enter your email" />
            </div>

            <button type="submit">Subscribe</button>
        </form>
        <?php else : ?>
```

*ក្នុង tag PHP
វាគារណ៍

Ref:<https://www.phptutorial.net/php-tutorial/php-form/>

PHP Example

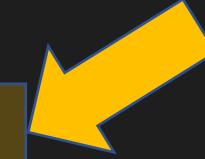
```
<?php
//-----
// WARNING: this doesn't include sanitization
// and validation      $input con form
//-----      this name & value are
if (isset($_POST['name'], $_POST['email'])) {
    $name = htmlspecialchars($_POST['name']);
    $email = htmlspecialchars($_POST['email']);

    // show the $name and $email
    echo "Thanks $name for your subscription.<br>";
    echo "Please confirm it in your inbox of the email $email.";
} else {
    echo 'You need to provide your name and email address.';
}

?>

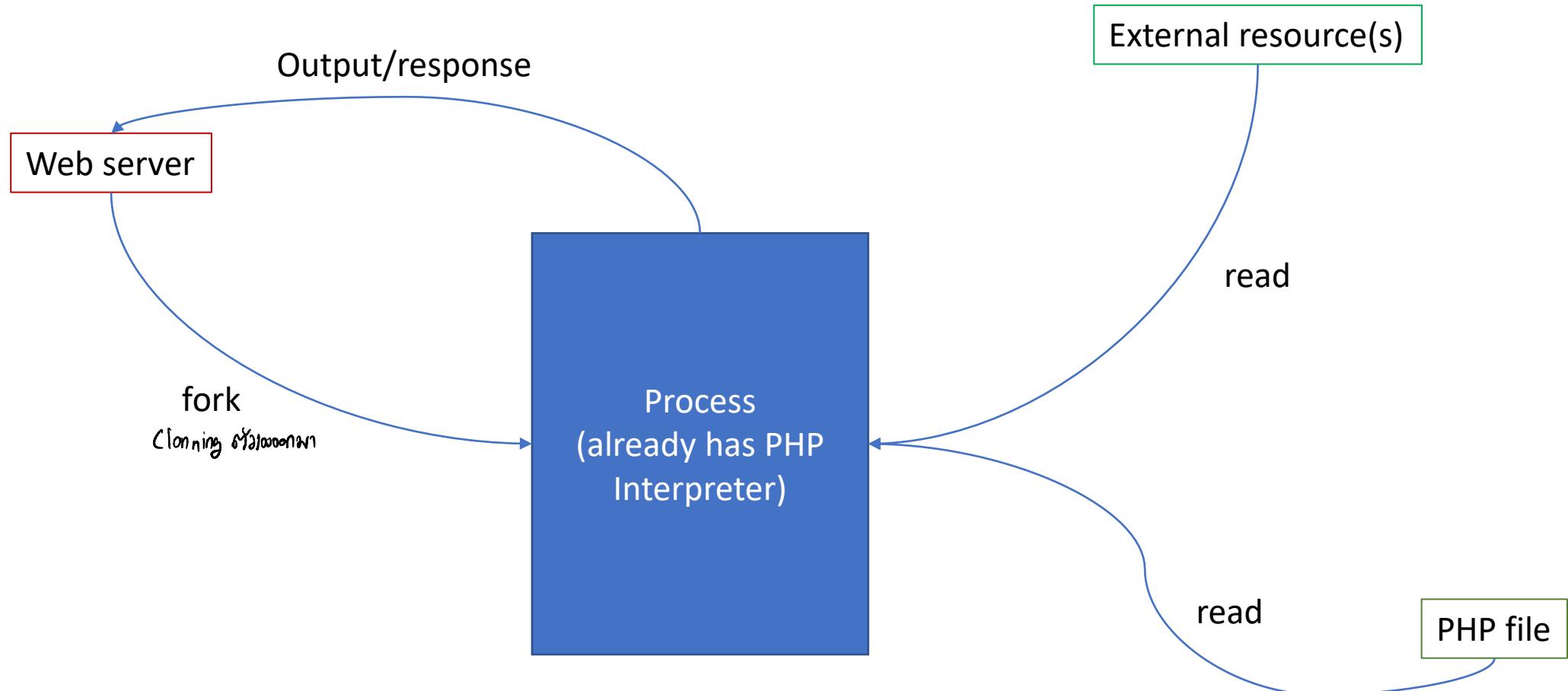
<?php endif ?>
</main>
</body>

</html>
```



The code example demonstrates a PHP script for handling a form submission. It checks if both 'name' and 'email' fields are set in the \$_POST array. If they are, it uses the htmlspecialchars function to sanitize the input before displaying a confirmation message. If either field is missing, it informs the user that they need to provide their name and email address. The code is annotated with comments explaining the purpose of each section.

Execution



ASP

மின்ஹான் பி.பி.ஏ.பி.

- Classic ASP
- Active Server Page (ASP)
- Developed by Microsoft
- Same concepts as PHP
- ASP command written within <% ... %>
- Based on VBScript syntax

எமின் டாக் <% ... %> நடவடிக்கை + மீட்டர் செயல்கள்
இல்லை → உதவுத் தகவல்களை வெளியிடுவது

Example: ASP code

```
<!DOCTYPE html>
<html>
<body>

<p>ASP example: output HTML tag</p>
    Browser will run tag if main window + ionishml
<%
response.write("<h1>Hello World!</h1>")
%>

</body>
</html>
```

Example: what browser receive

```
<!DOCTYPE html>
<html>
<body>

<p>ASP example: output HTML tag</p>

<h1>Hello World!</h1>

</body>
</html>
```

ASP.Net

- Release in 2002 as a successor to ASP
- Normally used c# syntax
- Uses .aspx as an extension
- Tutorial: https://www.w3schools.com/asp/webpages_intro.asp

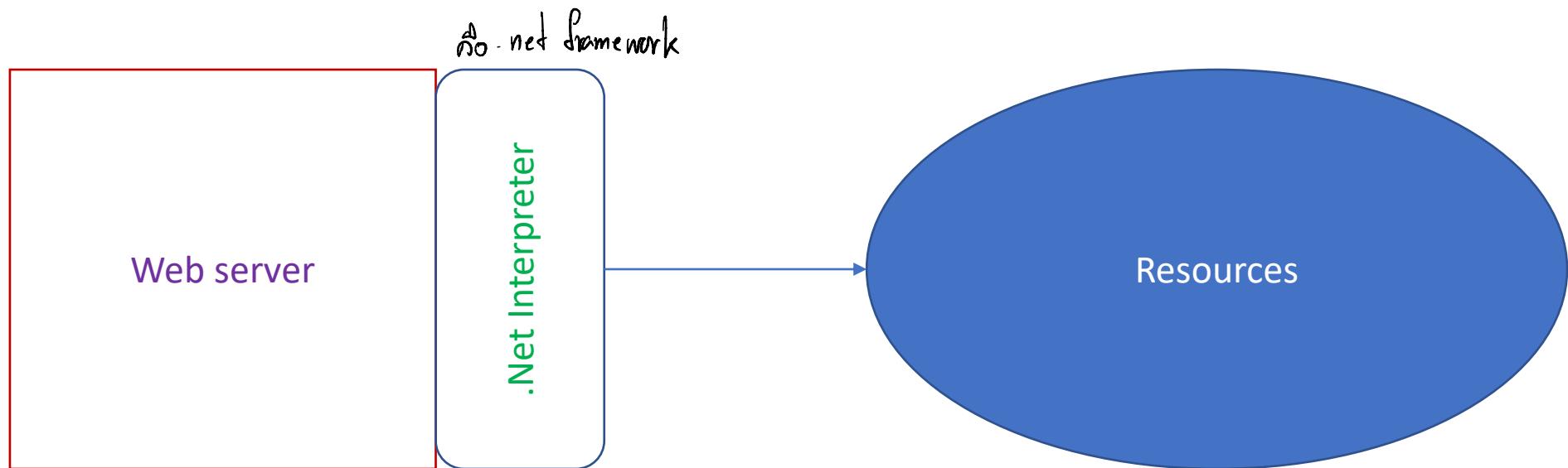
Example:

```
<!DOCTYPE html>
<html>
<body>
@{
if (IsPost)
{
    string companyname = Request["CompanyName"];
    string contactname = Request["ContactName"];
    <p>You entered: <br>
    Company Name: @companyname <br>
    Contact Name: @contactname </p>
}
else
{
    <form method="post" action="">
        Company Name:<br>
        <input type="text" name="CompanyName" value=""><br>
        Contact Name:<br><br>
        <input type="text" name="ContactName" value=""><br><br>
        <input type="submit" value="Submit" class="submit">
    </form>
}
</body>
</html>
```

34:08 - 34:53

ASP/ASP.Net

ମୋଡ୍ଲୁଲ .net framework ASP.net ବିଜ୍ଞାନିକ



ASP.Net MVC → ASP.Net Core MVC (2016)

សំគាល់ក្នុងការអនុវត្តន៍របស់ក្រុមហ៊ុន

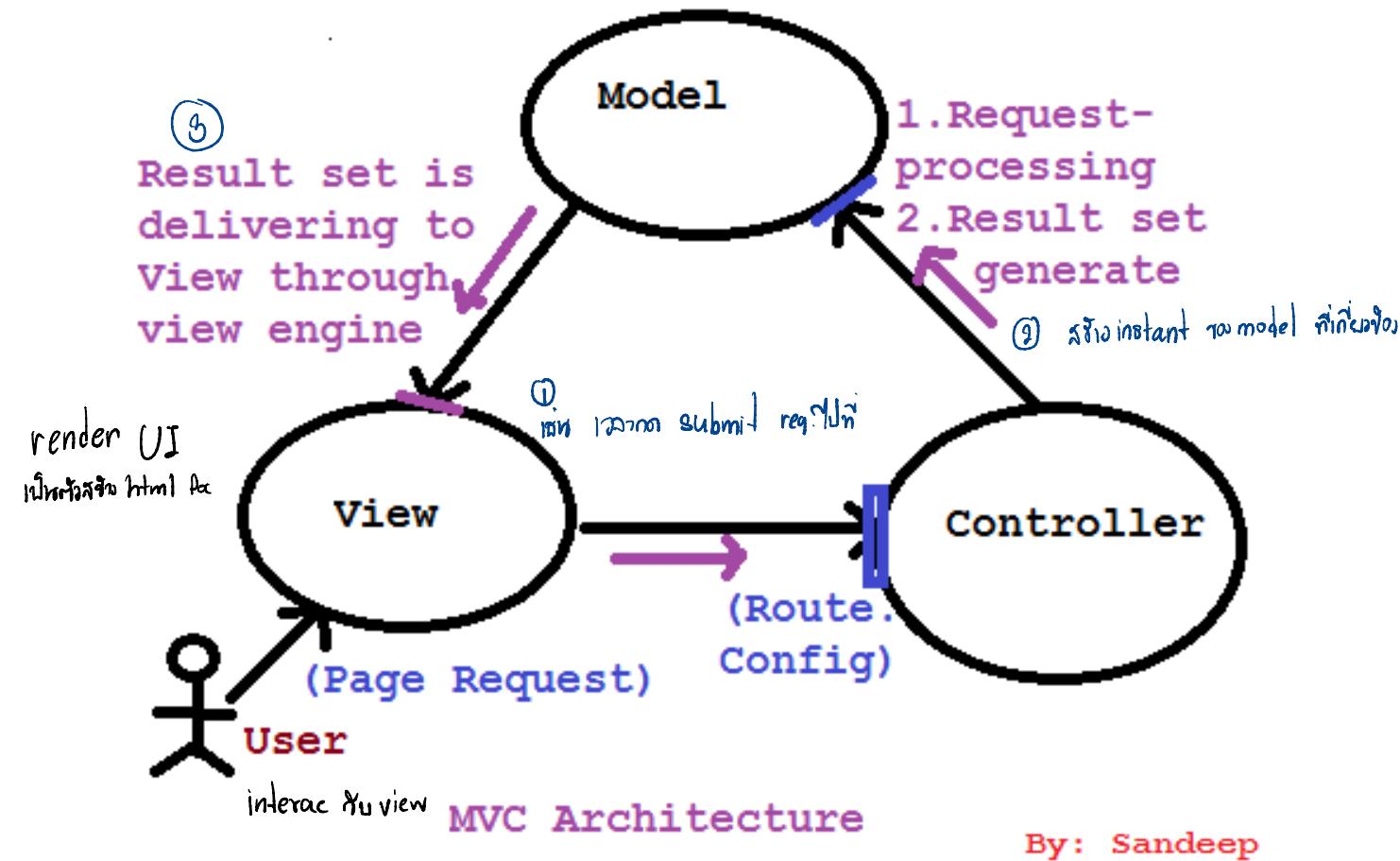
- MVC = Model View Controller

- Model represent data
- View is UI model render
- Controller is the request handler ដោយគ្រប់គ្រង view - model
 ↳ ជាមួយ virtual method

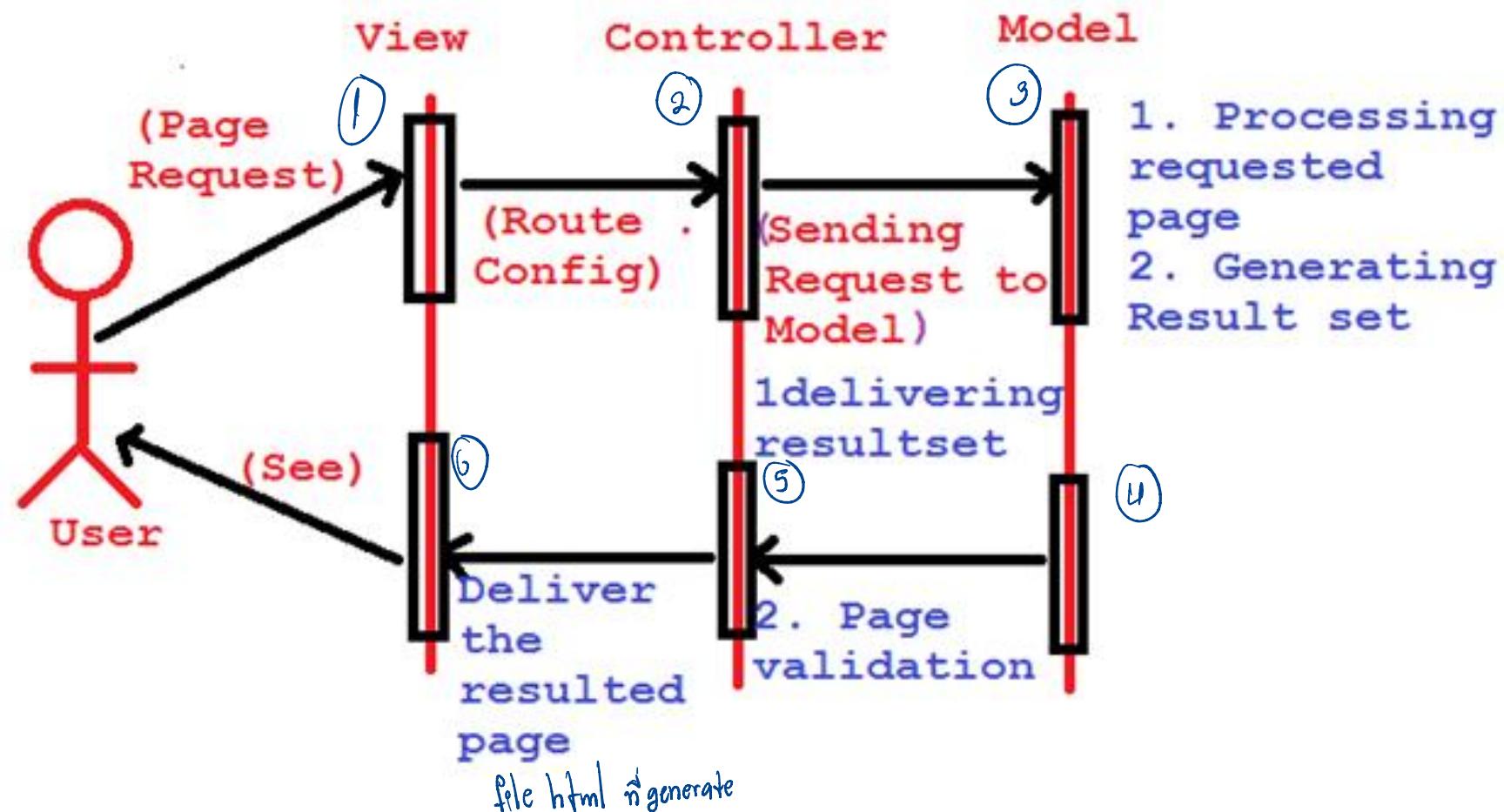
និង main nant នីតិវិធី

· security

MVC Architecture

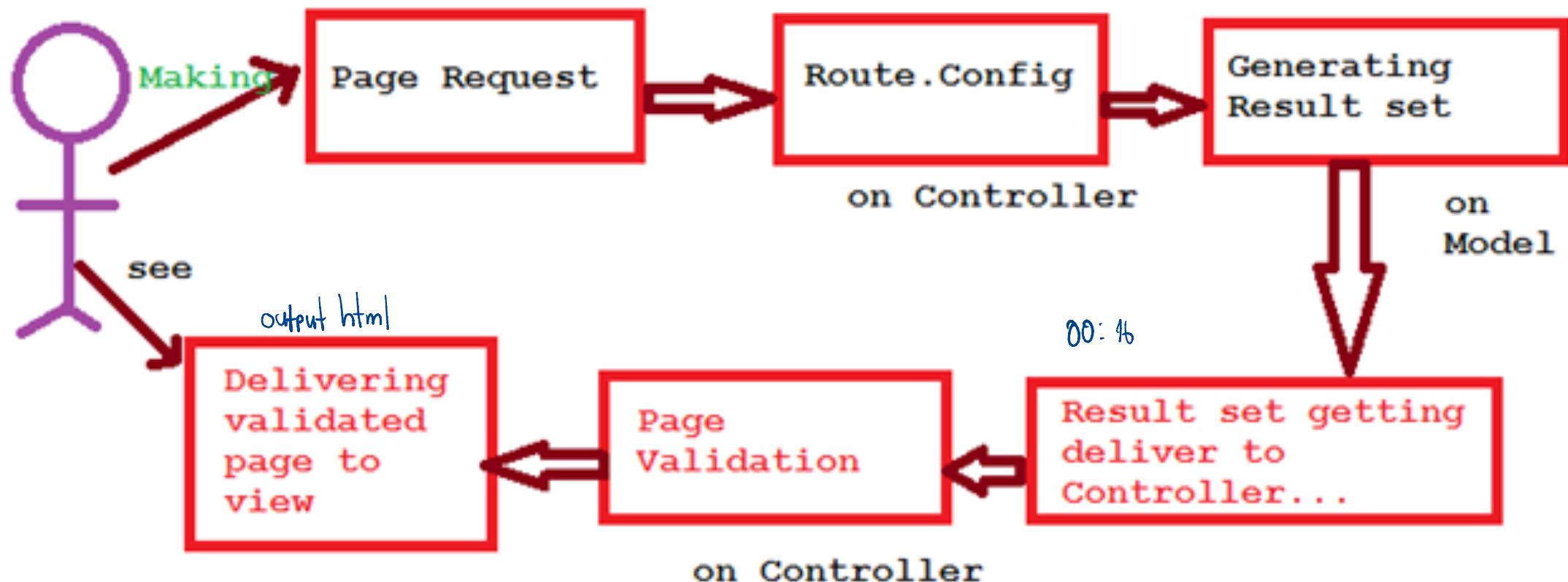


Life cycle of MVC

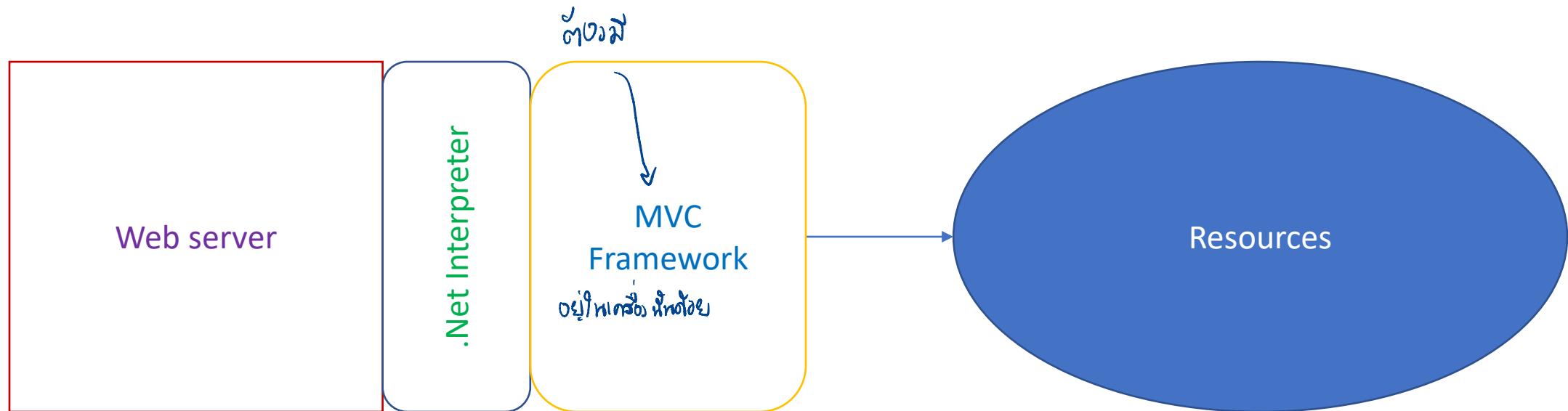


Ans 2

Live cycle of MVC



ASP.Net Core MVC

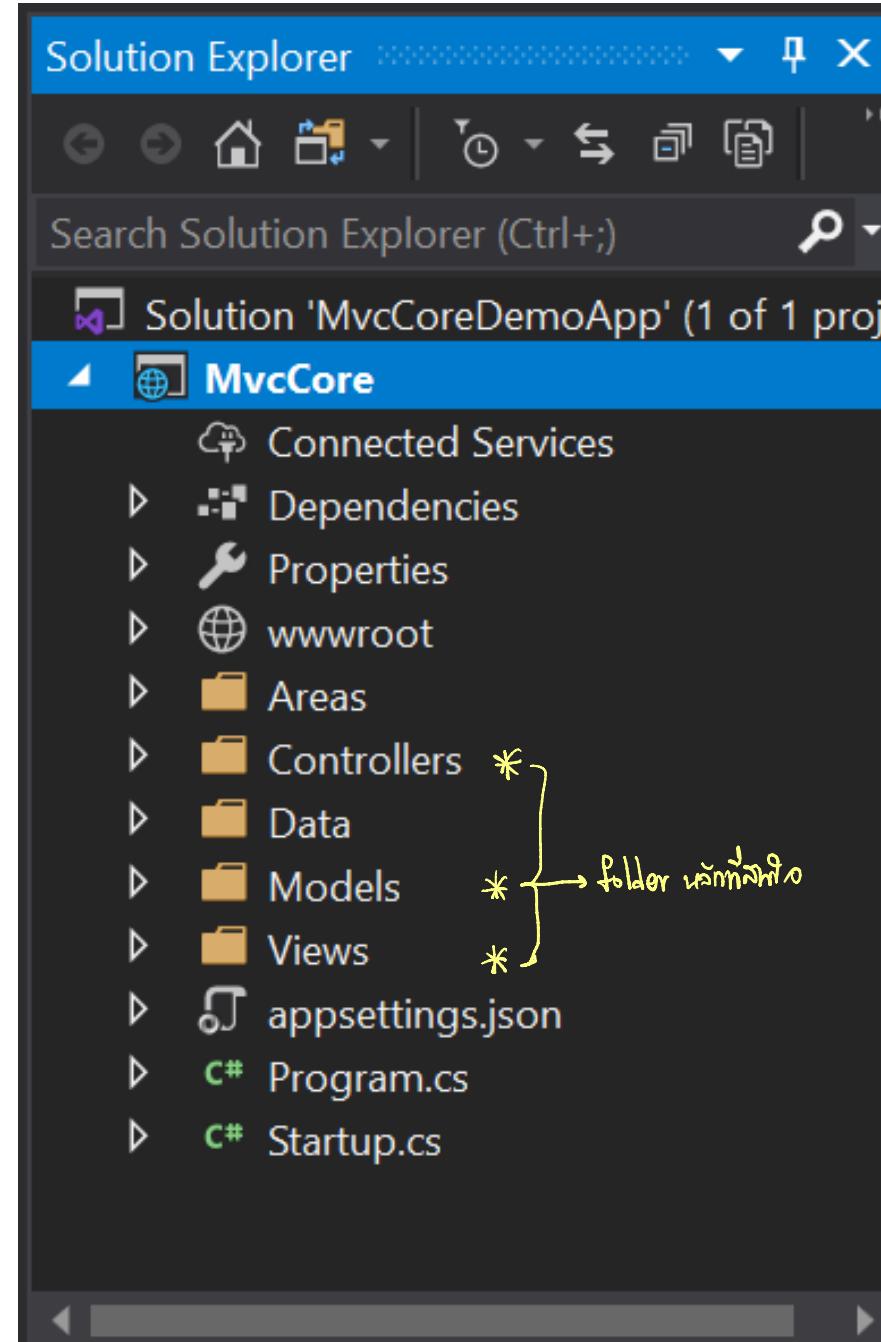


ASP.Net Core MVC Tutorial

- VDO Clip: ASP.Net Core Introduction:
<https://www.youtube.com/watch?v=1ck9LIBxO14>
- ASP.Net Core Web Tutorial:
 - <https://asp.mvc-tutorial.com/>
 - <https://www.tektutorialshub.com/asp-net-core-tutorial/>

2:34

Project Structure



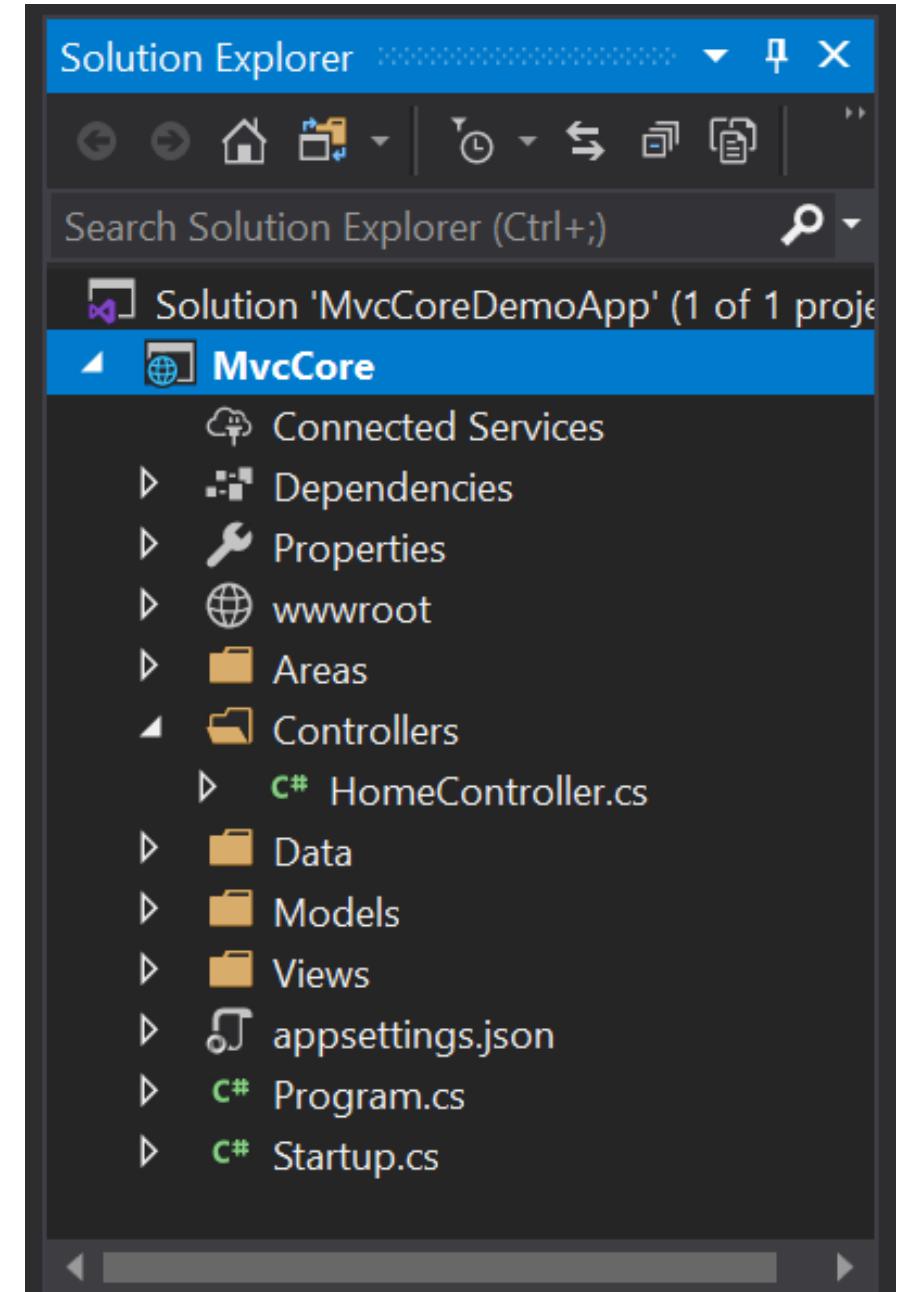
3:36 - 6:56

Controller

- Routing to resource
 - From picture there is 1 (virtual) directory in this web site
 - Named: Home
 - <http://host/home>
- In HomeController.cs contain methods for rendering pages
 - Each method correspond to 1 page

只有一个 controller

在 folder & home
里有 controller 和 file do home controller 会
自动执行



6:59 - 8:58

HomeController.cs

```
0 references
public IActionResult Index() ←
{
    return View();  ↪ On template នៃការបង្កើត
                    index និង view render
}
```

http://host/Home or http://host/Home/index

```
0 references
public IActionResult Test() ←
{
    return View();
}
```

http://host/Home/Test

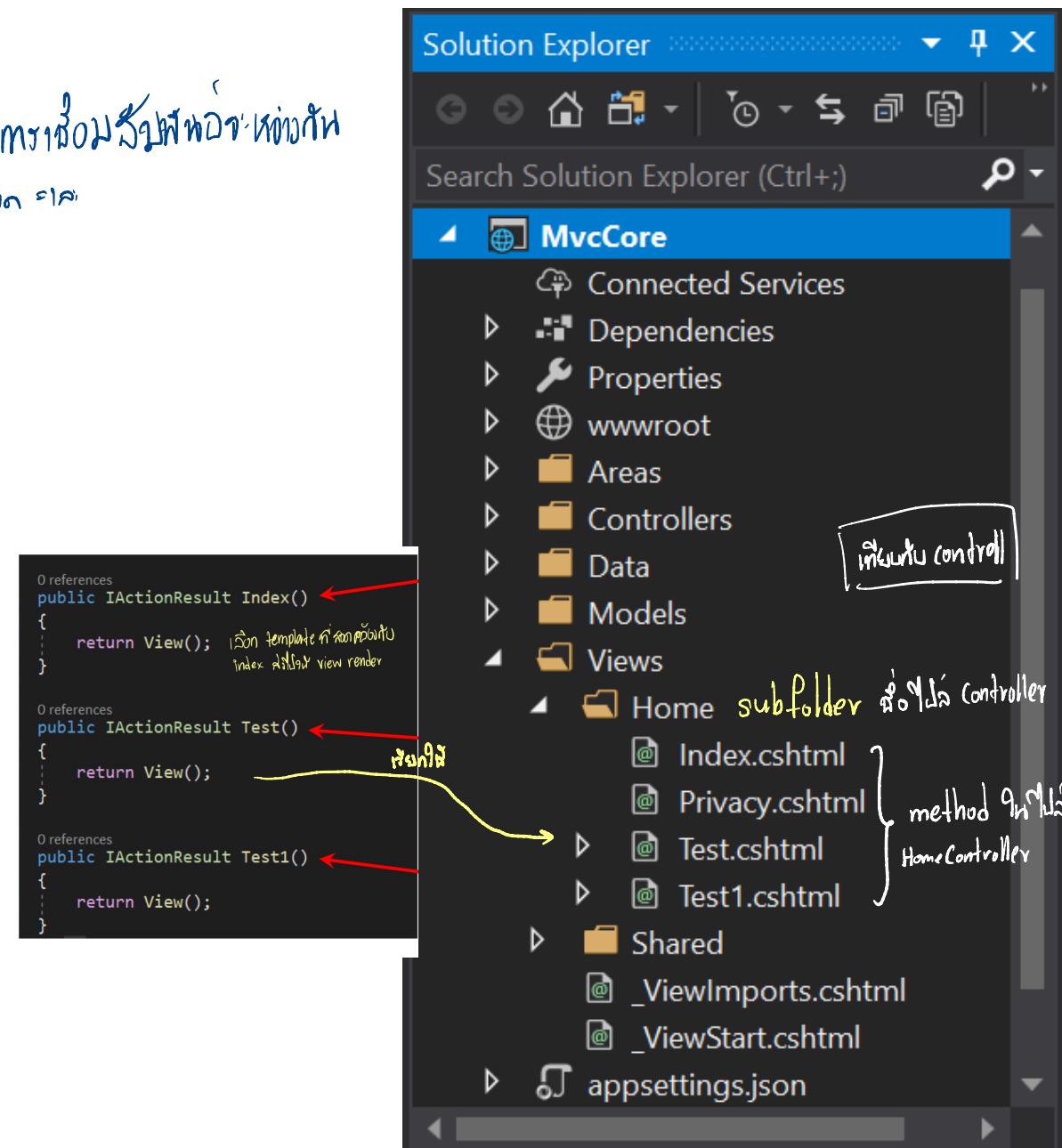
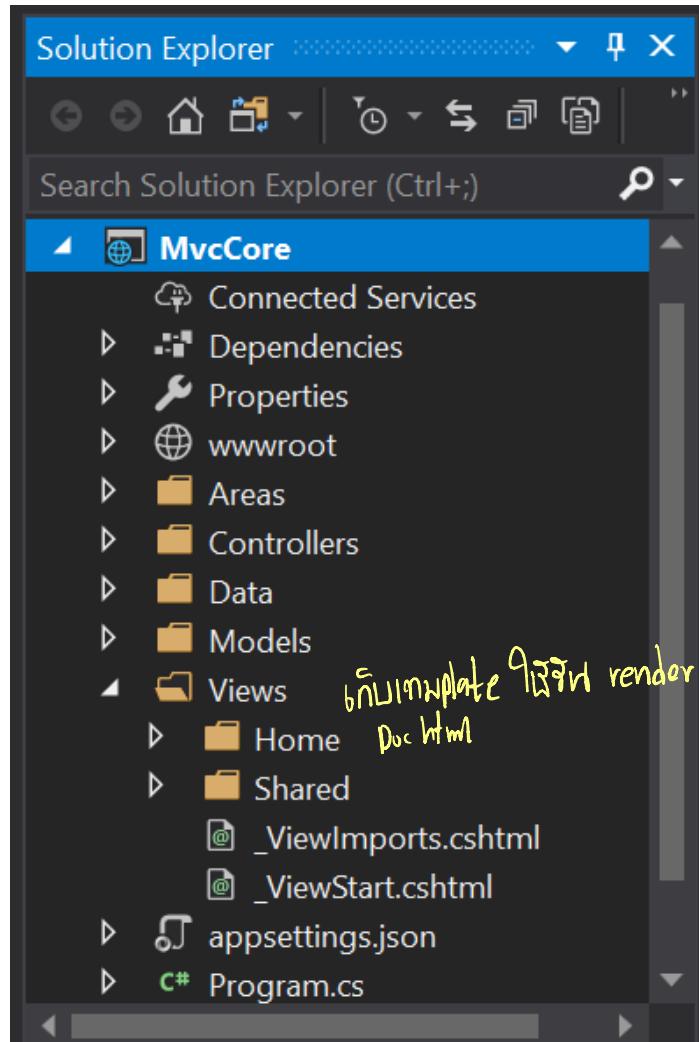
```
0 references
public IActionResult Test1() ←
{
    return View();
}
```

http://host/Home/Test1

9:00 - B. 35

View

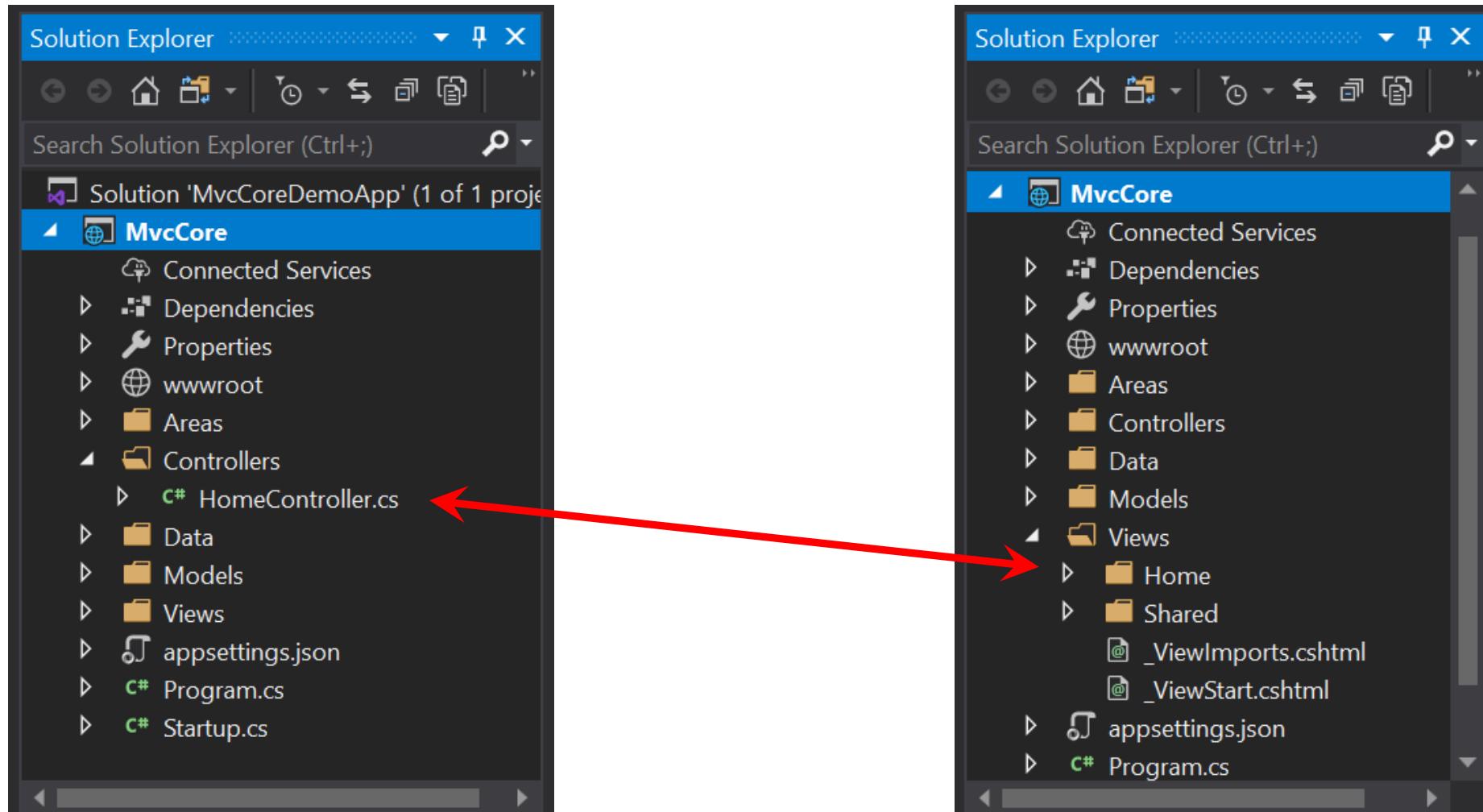
ក្នុង controller នឹងមាន view ដែរ
តើអ្វីដែលនឹងការបង្កើត view ឡើង



controller

15-39 - 1850

Controller - View



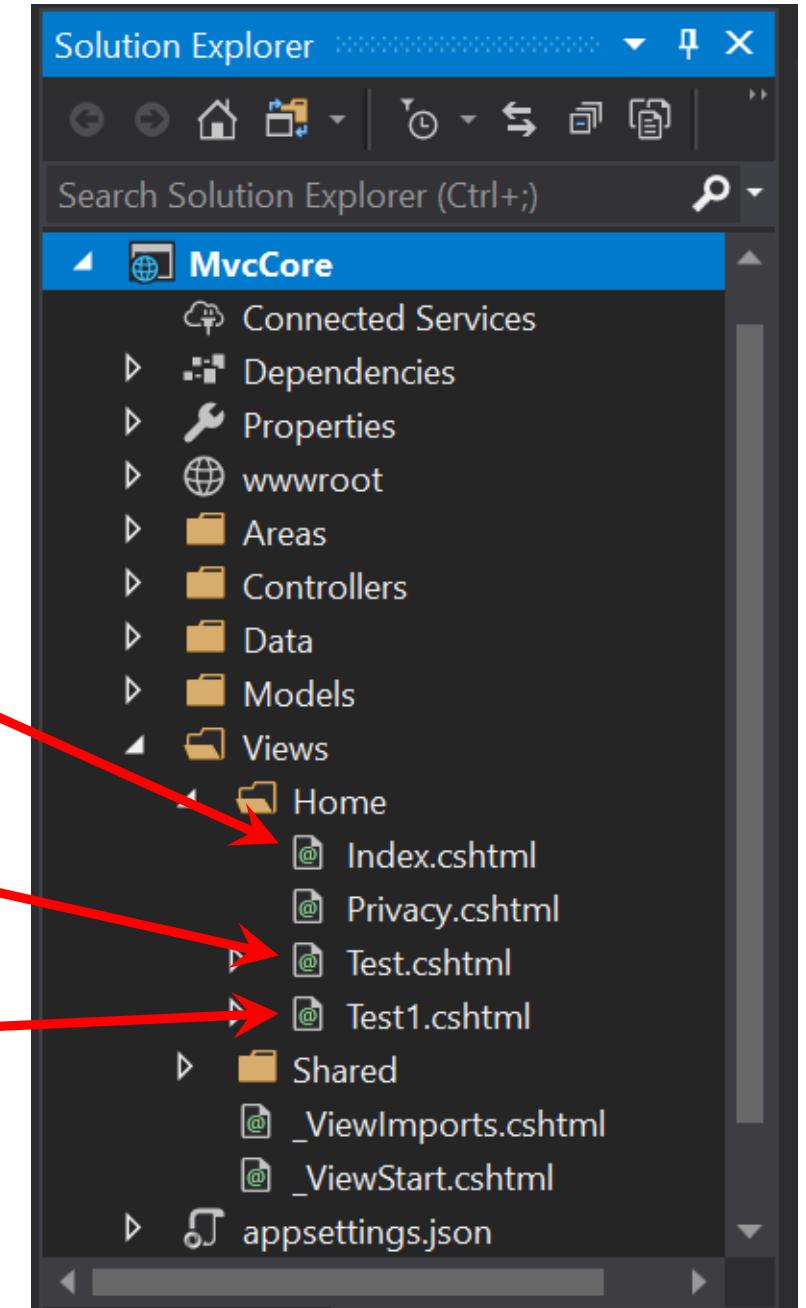
13:59 - 14:26

Controller - View

```
0 references
public IActionResult Index()
{
    return View();
}

0 references
public IActionResult Test()
{
    return View();
}

0 references
public IActionResult Test1()
{
    return View();
}
```



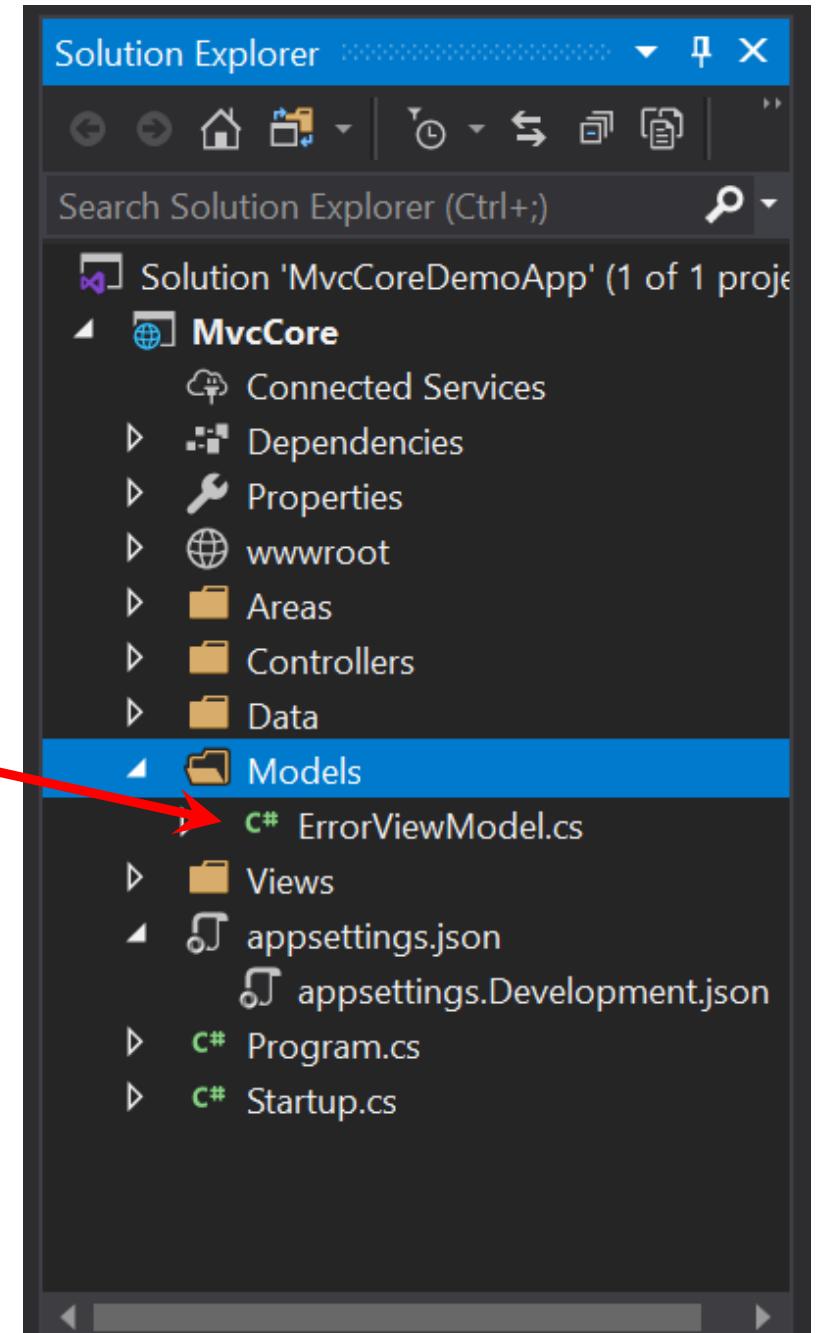
14.29 14:32

Model

អាជីវកម្មដែលត្រូវបានសម្រេចក្នុងក្រុងក្រុង

```
namespace MvcCore.Models
{
    4 references
    public class ErrorViewModel
    {
        3 references
        public string RequestId { get; set; }

        1 reference
        public bool ShowRequestId => !string.IsNullOrEmpty(RequestId);
    }
}
```



W:39 - 22:48

Controller-Model-View

```
public IActionResult Error()
{
    return View(new ErrorViewModel { RequestId = Activity.Current?.Id ?? HttpContext.TraceIdentifier });
}
```

HomeController.cs (Controller)

```
<h1 class="text-danger">Error.</h1>
<h2 class="text-danger">An error occurred while processing your request.</h2>

@if (Model.ShowRequestId)
{
    <p>
        <strong>Request ID:</strong> <code>@Model.RequestId</code>
    </p>
}
```

Error.cshtml (View)

```
namespace MvcCore.Models
{
    public class ErrorViewModel
    {
        public string RequestId { get; set; }

        public bool ShowRequestId => !string.IsNullOrEmpty(RequestId);
    }
}
```

ErrorViewModel.cs (Model)