Assignment 3: Default and Custom Routing

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COMP 2084: Server-side Scripting Using ASP.NET

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**To understand about default routing and custom routing, follow the below steps...**

1. First, Open the Visual studio code 2022. If you have not downloaded yet, you can refer to below link:

<https://visualstudio.microsoft.com/vs/community/>

1. Click on the **Open a Project or solution** as shown below.

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1. Then, it will pop up below window. Here, selects the folder you want to select and Click on **Open.**

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1. So, after this the below folder structure will open of the project.

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5.Here, click on the **program.cs** file like below. When you open the code and then head to the **MapControllerRoute ()** function. In this, you can see the default controller is set to **Home** and default action is set to the **Index** with the optional Id which means when you run the application, it will show you the home controller and index method page.

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1. Now open the **HomeContoller.cs** file which is inside the Controller folder. There are two index methods inside this file one is Index and other is Privacy.

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1. **Index ()** action method is displaying the text Home on the output screen.

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1. **Privacy ()** action method is displaying the text as Privacy when you run the application as shown below:

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1. When you start your browser, it will show the below URL with the default port number as well and display the text as home. This is basically because of default routing which I explained earlier as well.

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1. So, when you enter the **home/index** in the last of the URL it will show you the same page as above because of the default routing as controller is set to the home and action is set to the index.

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1. And, when you enter the **home/ privacy** in the last of URL as shown below, you will get home controller and privacy method.

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1. Now, we will focus on the **Display ()** method in the HomeController.cs file. It is having the parameter of String type named as **id.** Inside the method, we are implementing the if condition to check if the id is null and showing the output according to that.

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1. When you run the application again and now enter the home/display in the last of URL, it will show you the below page.

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1. Basically, we have four segments in which first comes controller then, action and third is id and last is page{num}. Here, we are going to enter third segment (id). So, we will enter id of our choice but of string type and it will show you in the output as well like below.

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1. In the next step, we are going to add **Countdown ()** action method as per the instructions with the parameter of id but this time with int type.

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1. Now, we are going to enter the URL which calls the countdown method as **home/countdown.**  According to method, it will display the below output the id of 0 as we have initialized the id with the default value of 0.

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1. Here, we will pass the third segment that is id with the value as 10. It will display the countdown start at 10 and counts down to zero.

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1. Now, we are going to add route attribute above the countdown method like below.

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1. Now, we will enter a URL that calls the countdown method **(/countdown/10).** And we will not enter the name of controller just we will enter the countdown method and id as 10.

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1. When you will enter the **home/countdown/10** then it will give you an error which is because the routing attribute for the countdown method overrides the default route.

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1. Now, change the name of the parameter from id to num as shown below and don’t change it in the route attribute.

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1. So, when you run the application without id, it will work correctly as you can see below.

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1. When you pass the id as 10, it will only display the default value of 0 because the segment name in the route attribute is not matching with the parameter name in the method.

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1. Now, change the second segment of route attribute from **id?** to **num?**  like below.

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1. Now, again run the application and pass the id as 10. It will display the countdown from 10 to 0.

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1. Now, we will pass three parameters to the countdown method and segments to the route attribute as below and we will modify the code so that it starts counting down at the start parameter, ends at the end parameter and displays the message parameter when the countdown is done.

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1. And run the application and enter the URL as **countdown/3/1/Liftoff.** It will show you below output.

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1. If you enter only URL as /**countdown/.** The browser will not be able to find the web page because second segment is now necessary to enter as you mentioned above.

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1. Now, just enter the **countdown/5** as URL. It will use the default parameters of the countdown method to display a countdown from 5 to 0 with no message.

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