**Creating a Web App MVC Project, Deploying to Azure VM and Web App**

**Introduction**

In this project, we'll will be creating an MVC (Model-View-Controller) web application project, adding model classes (Student, Teacher, Subject), creating controllers and views for these models, and finally deploying the application to both an Azure Virtual Machine (VM) and an Azure Web App and accessing the created web app in Azure Virtual Machine.

**Step 1: Create a Web App MVC Project**

1. Launch Visual Studio.

2. Create a new project by selecting "File" > "New" > "Project..." and choose "ASP.NET Web Application" under the "Web" category.

3. Choose the "MVC" template and click "Create."

**Step 2: Model Classes**

1. In the newly created MVC project, add model classes for `Student`, `Teacher`, and `Subject`. These classes will represent the data structure for your application.

**Step 3: Empty Controllers**

1. Create empty controllers for each model class. You can right-click on the "Controllers" folder, select "Add," and then choose "Controller." Repeat this process for each model.

**Step 4: Controller Code**

1. Inside each controller, add code to create and view lists of the respective model class. Implement methods for listing, creating, and viewing details of records.

**Step 5: Views**

1. Create views for creating and listing data. You can scaffold these views using Visual Studio's built-in tools, or create them manually if needed.

**Step 6: Azure Virtual Machine (VM)**

1. Go to the Azure Portal (https://portal.azure.com/).

2. Click "Create a resource" and search for "Virtual Machine."

3. Fill in the required details such as resource group, VM size, and hard drive type.

4. Provide administrator details like the administrator’s name and password.

5. Click "Review + create" and, after validation succeeds, click "Create."

6. After the deployment succeeds, click "Go to resource," and then click "Connect." Download the RDP file and choose a file path for the download.

**Step 7: Azure Web App**

1. In the Azure Portal, create a Web App by selecting "Create a resource" and searching for "Web App."

2. Choose a resource group, provide the web app name, select the runtime stack, and choose the appropriate pricing plan for your subscription.

3. Click "Review and create," and then click "Create."

4. After the web app is created, click "Go to resource" and download the publish profile. Choose a path to save the file.

**Step 8: Publishing**

1. Back in Visual Studio, right-click on your project in the Solution Explorer and select "Publish."

2. Click "Import profile," browse for the publish profile file you downloaded in step 7, and click "Finish."

3. Click "Publish." This will publish the project to both the Azure VM and the Azure Web App.

**Step 9: Accessing the Web App**

1. Locate the downloaded RDP file for the Azure VM, open it, and provide the admin name and password.

2. Click "Yes" on the next dialog box, and it will load the Windows 10 VM.

3. In the VM's browser, copy the HTTP link from the publish page and paste it in the VM's browser. This will open the web app you created.

**Conclusion**

In conclusion, this process of creating an ASP.NET MVC web application, including defining model classes, controllers, and views. It further explained how to deploy the application to both an Azure Virtual Machine (VM) and an Azure Web App. This multi-step approach allows for flexibility in hosting and testing the application, whether it's within the controlled environment of a VM or accessible globally through a web app. By following these steps, developers can efficiently build, deploy, and access their web applications, streamlining the development and deployment process.

**GitHub Link**

<https://github.com/NikithS1/phase4_section10.git>