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| Azure DevOps Lab  **Microsoft Azure** |
| Module 6. Azure SQL Database  Home task |

TASK

1. Look at the Azure SQL Database demo first and try to deploy solution manually step-by-step as it described in demo;
2. Create initial ARM template that will be used for linked templates deployment;
3. Create independent linked templates that will create Azure SQL Server with database and Web App with App Service plan;
4. Run deployment of the initial ARM template and deploy required resources;
5. Final Web App should contain connection string to Azure SQL Database in its settings;
6. Use Azure Resource Manager template functions to concise your code and follow task requirements (at least one);
7. Clear sensitive data (e.g. credentials) is not presented in templates;
8. App Service Plan should be equal to Standard S2;
9. SQL DB should be based on DTU service model and Basic tier;
10. Connection string to SQL database must be added automatically during deployment.

Result: Running Azure Web App with Azure SQL database as a backend.

REQUIREMENTS

1. One JSON file for describing all Azure resources is forbidden. **Please use linked templates.**

2. Linked templates **must be called from the initial deployment template** (main.json).

3. Main and parameters templates must be named as **main.json** and **parameters.json** accordingly.

4. Maximum **number of parameters** in Main.json is 7.

5. Main.json and parameters.json must be **executed from local folder**. Using **-TemplateParameterUri** and **-TemplateUri** options in PS script is forbidden.

6. All artifacts (JSONs and PS files) must be stored in **Azure Storage Account**. Using any GitHubs or other public repos is forbidden.  
7. Create a PowerShell/Bash (using Azure CLI) deployment script, which will be used for running all your deployments. The script should have the following functionality:

                a. Create resource group.

b. Create storage account and container within for artifacts (For example: JSONs, PS file(s), ZIP files).

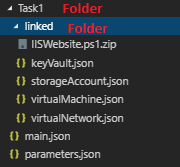
c. Upload the linked templates and other task-related artifacts to the created Storage Account.

d. Execute main.json file for deploy Azure resources.

8. Each ARM json file must have at least **1 output**.

9. All homework **artifacts must be executable** (e.g. if Mentor starts your script execution and it fails - all homework artifacts will be sent back for fixing)

10. All **resources must be deleted** after homework completion.

11. Use the next **folder structure** for storing artifacts. **Subfolder** with resources JSONs must be named **“linked”:**  


Useful links

[Azure Resource Manager template functions](https://docs.microsoft.com/en-us/azure/azure-resource-manager/resource-group-template-functions)

[Azure SQL Database purchasing models](https://docs.microsoft.com/en-us/azure/sql-database/sql-database-service-tiers)

# [Best Practices For Using Azure Resource Manager Templates](https://blogs.msdn.microsoft.com/mvpawardprogram/2018/05/01/azure-resource-manager/)