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| **Type** | **Coding Assessment** |
| **Topic** | **1.Explain process of Azure Devops cicd pipeline**  **2.Explain azure sql server pool integration with azure synapse** |

**Q1. Explain process of Azure DevOps CI CD pipeline**

**Ans:**

**Azure Devops:**

* It provides set of services and tools to manage our software projects, from planning and development through testing and deployment.
* It delivers services through a client / server model.

**Azure CI CD pipeline:**

* CI 🡪 Continuous Integration
* CD 🡪 Continuous Deployment
* CI/CD pipelines are used to deliver a new version of software performed with various steps.
* By automating CI / CD for development, testing, production and monitoring in software development lifecycle.

**Creating CI/CD pipeline:**

Step1🡺 Need to create one azure devops organization.

Step2🡺Go to Build Pipelines

Step3🡺 If pipeline already available means click on Edit or else click on New pipeline.

Step4🡺click on Test.

Step5🡺On triggers tab select Enable Continuous Integration option.

Step6🡺Under pipeline tab click on Release.

Step7🡺After releasing pipeline click on Edit.

Step8🡺Under Artifacts tab click on Drop.

Step9🡺Now click on Continuous Deployment Trigger.

Step10🡺Now select Tasks.

Step11🡺Now check View Release option.

Step12🡺Now we easily see log of the CI/CD pipeline.

**Q2. Explain azure sql server pool integration with azure synapse**

**Ans:**

**Azure SQL:**

* It is a combination of managed, secure and intelligent products that use the SQL server database engine in the Azure cloud.
* It is built upon the familiar SQL server engine, so we can migrate applications with ease and continue to use the tools, languages and resources we’re familiar with.
* Azure automatically handles patching, backups, replication, failure detection, underlying potential hardware, software or network failure, deploying bug fixes, failovers, database upgrades, and other maintenance tasks.

**Azure SQL server pool:**

* It is simple, cost-effective solution for managing and scaling multiple databases with varying and unpredictable usage demands.
* It enables software-as-a-service (SaaS) developers to optimize the price-performance ratio for a group of databases within a prescribed budget while delivering performance elasticity for each database.

**Azure Synapse:**

* It is an enterprise analytics service that accelerates time to insight across data warehouses and big data systems.
* It brings together the best of SQL technologies used in enterprise data warehousing, Apache Spark technologies for big data, and Azure Data Explorer for log and time series analytics.

**Advantages of Azure Synapse:**

1. Improve analytics & reporting speed
2. More effective BI and data visualization
3. Increases IT productivity
4. Limitless scaling

**Azure SQL Server pool integration with Azure Synapse:**

Step1🡺Go to Azure portal search bar. Search Azure Synapse Analytics.

Step2🡺Create New workspace with all needed details.

Step3🡺Now launch workspace.

Step4🡺Click on Manage.

Step5🡺Click on SQL pools.

Step6🡺click on New.

Step7🡺On Basic tab give SQL pool name and performance level.

Step8🡺In additional settings click on None.

Step9🡺Now review and create.

Step10🡺Now SQL pool successfully integrated with synapse workspace.