Hands-on Practice

I completed and submitted Homework.

Self-Learning

I completed Agile, Jira & Confluence.

SQL basics as from shared resources in the group – In Progress

Certification:

I started going through the pdf document of DP-900.

EOD Updates:

I have done homework as given and started reading the DP-900 question for certificate preparation, Working on to complete the Weekend Project which is assigned.

Homework | Cycle 29 | Session 9

- Create Azure Sql Database and Explore the Options
- Difference Between V Core Model and DTU Model Write Down

❖ Create Azure Sql Database and Explore the Options
Login into portal.azure.com and search for azure sql database, click on sql database and fill all the required details to create a database

All services > SQL databases

Create SQL Database
Microsoft

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ	Azure subscription 1 ▾
Resource group * ⓘ	AC29_bhavani_1 ▾
	Create new

Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name *	sqldbbhav ✓
Server * ⓘ	(new) sqlserverbhav (West US 2) ▾
	Create new
Want to use SQL elastic pool? ⓘ	◯ Yes ⦿ No
Workload environment	⦿ Development
	◯ Production

> ⓘ Default settings provided for Development workloads. Configurations can be modified as needed.

Compute + storage * ⓘ   **General Purpose - Serverless**
Standard-series (Gen5), 1 vCore, 32 GB storage
Configure database

[Review + create]   [Next : Networking >]

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portal.azure.com/#view/SqlAzureExtension/SharedCreateServer/isNewServer~/true/subscriptionId/64a82a0f-9528-4eec-80dc-c38590acfd69/resourceGroupName/AC29_bhavani_1/infoFil

All services > SQL databases > Create SQL Database >

Create SQL Database Server
Microsoft

Server details

Enter required settings for this server, including providing a name and location. This server will be created in the same subscription and resource group as your database.

Server name *	sqlserverbhav ✓
	.database.windows.net
Location *	(US) West US 2 ▾

Authentication

> ⓘ Azure Active Directory (Azure AD) is now Microsoft Entra ID. Learn more ↗

Select your preferred authentication methods for accessing this server. Create a server admin login and password to access your server with SQL authentication, select only Microsoft Entra authentication Learn more ↗ using an existing Microsoft Entra user, group, or application as Microsoft Entra admin Learn more ↗ , or select both SQL and Microsoft Entra authentication.

Authentication method   ◯ Use Microsoft Entra-only authentication
◯ Use both SQL and Microsoft Entra authentication
⦿ Use SQL authentication

Server admin login *	sqladmin ✓
Password *	••••••• ✓
Confirm password *	••••••• ✓

✓ Password and confirm password must match.

[OK]

All services > SQL databases >

Create SQL Database
Microsoft

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ⓘ [Azure subscription 1 ▾]

Resource group * ⓘ [AC29_bhavani_1 ▾]
Create new

Database details

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name * [sqldbbhav ✓]

Server * ⓘ [(new) sqlserverbhav (West US 2) ▾]
Create new

Want to use SQL elastic pool? ⓘ ○ Yes ● No

Workload environment ● Development
○ Production

ⓘ Default settings provided for Development workloads. Configurations can be modified as needed.

Compute + storage * ⓘ **General Purpose - Serverless**
Standard-series (Gen5), 1 vCore, 32 GB storage
Configure database

[Review + create] [Next : Networking >]

All services > SQL databases >

Configure ···

🗨 Feedback

Service and compute tier

Select from the available tiers based on the needs of your workload. The vCore model provides a wide range of configuration controls and offers Hyperscale and Serverless to automatically scale your database based on your workload needs. Alternately, the DTU model provides set price/performance packages to choose from for easy configuration. Learn more ⧉

🟣 SQL Database Hyperscale: Low price, high scalability, and best feature set. Learn more ⧉

Service tier
General Purpose (Most budget friendly) ▼
Compare service tiers ⧉

Compute tier
◯ **Provisioned** - Compute resources are pre-allocated. Billed per hour based on vCores configured.
🔘 **Serverless** - Compute resources are auto-scaled. Billed per second based on vCores used.

Compute Hardware

Select the hardware configuration based on your workload requirements. Availability of compute optimized, memory optimized, and confidential computing hardware depends on the region, service tier, and compute tier.

Hardware Configuration
Standard-series (Gen5)
up to 80 vCores, up to 240 GB memory
Change configuration

Max vCores
◯——————————————————— [1]

Min vCores
◯——————————————————— [0.5 vCores]

2.02 GB MIN MEMORY   3 GB MAX MEMORY

Cost summary

General Purpose (GP_S_Gen5_1)
Cost per GB (in USD)   0.12
Max storage selected (in GB)   x 41.6

ESTIMATED STORAGE COST / MONTH   4.78 USD
COMPUTE COST / VCORE SECOND ¹   0.000145 USD

NOTES
¹ Serverless databases are billed in vCore seconds based on a combination of CPU and memory utilization. Learn more about serverless billing

Apply

All services > SQL databases >

Configure ···

🗨 Feedback

Service and compute tier

Select from the available tiers based on the needs of your workload. The vCore model provides a wide range of configuration controls and offers Hyperscale and Serverless to automatically scale your database based on your workload needs. Alternately, the DTU model provides set price/performance packages to choose from for easy configuration. Learn more ⧉

🟣 SQL Database Hyperscale: Low price, high scalability, and best feature set. Learn more ⧉

Service tier
Basic (For less demanding workloads) ▼
Compare service tiers ⧉

DTUs Compare DTU options ⧉
5 (Basic)

Data max size (GB)
————————————————————◯ [2]

Cost summary

Basic (Basic)
Cost per DTU (in USD)   0.98
DTUs selected   x 5

ESTIMATED COST / MONTH   4.90 USD

Microsoft Azure   ⊕ Upgrade   🔍 Search resources, services, and docs (G+/)

All services > SQL databases >

Create SQL Database
Microsoft

Enter required settings for this database, including picking a logical server and configuring the compute and storage resources

Database name *	sqldbbhav ✓
Server * ⓘ	(new) sqlserverbhav (West US 2) ▾
	Create new
Want to use SQL elastic pool? ⓘ	○ Yes ● No
Workload environment	● Development
	○ Production

> ⓘ Default settings provided for Development workloads. Configurations can be modified as needed.

Compute + storage * ⓘ	**Basic**
	2 GB storage
	Configure database

Backup storage redundancy

Choose how your PITR and LTR backups are replicated. Geo restore or ability to recover from regional outage is only available when geo-redundant storage is selected.

Backup storage redundancy ⓘ
- ● Locally-redundant backup storage
- ○ Zone-redundant backup storage
- ○ Geo-redundant backup storage
- ○ Geo-Zone-redundant backup storage

[Review + create]   [Next : Networking >]

Microsoft Azure   ⊕ Upgrade   🔍 Search resources, services, and docs (G+/)

All services > SQL databases >

Create SQL Database
Microsoft

Basics   Networking   Security   **Additional settings**   Tags   Review + create

Customize additional configuration parameters including collation & sample data.

Data source

Start with a blank database, restore from a backup or select sample data to populate your new database.

Use existing data *   [None   Backup   **Sample**]

AdventureWorksLT will be created as the sample database.

Database collation

Database collation defines the rules that sort and compare data, and cannot be changed after database creation. The default database collation is SQL_Latin1_General_CP1_CI_AS. Learn more ↗

Collation ⓘ   SQL_Latin1_General_CP1_CI_AS

SQL

Cost summary	
Basic (Basic)	
Cost per **DTU** (in USD)	0.98
DTUs selected	x 5
ESTIMATED COST / MONTH	**4.90** USD

❖ Difference Between V Core Model and DTU Model Write Down
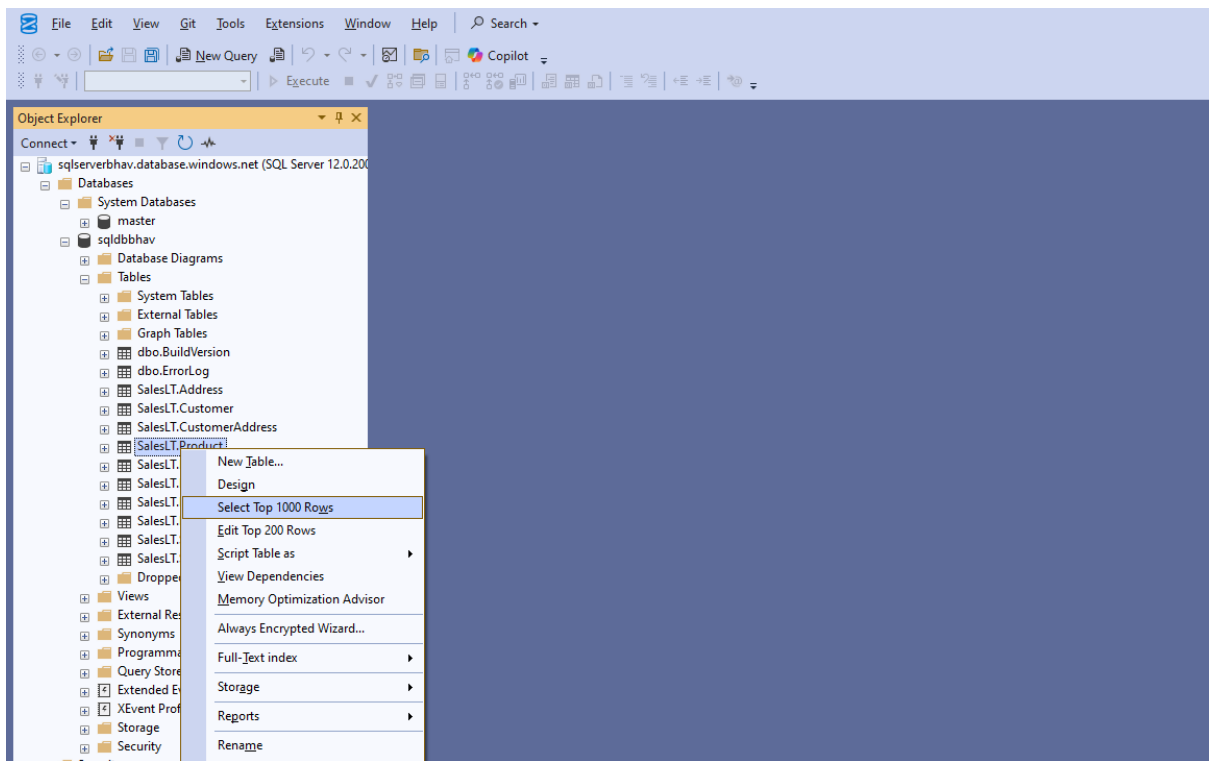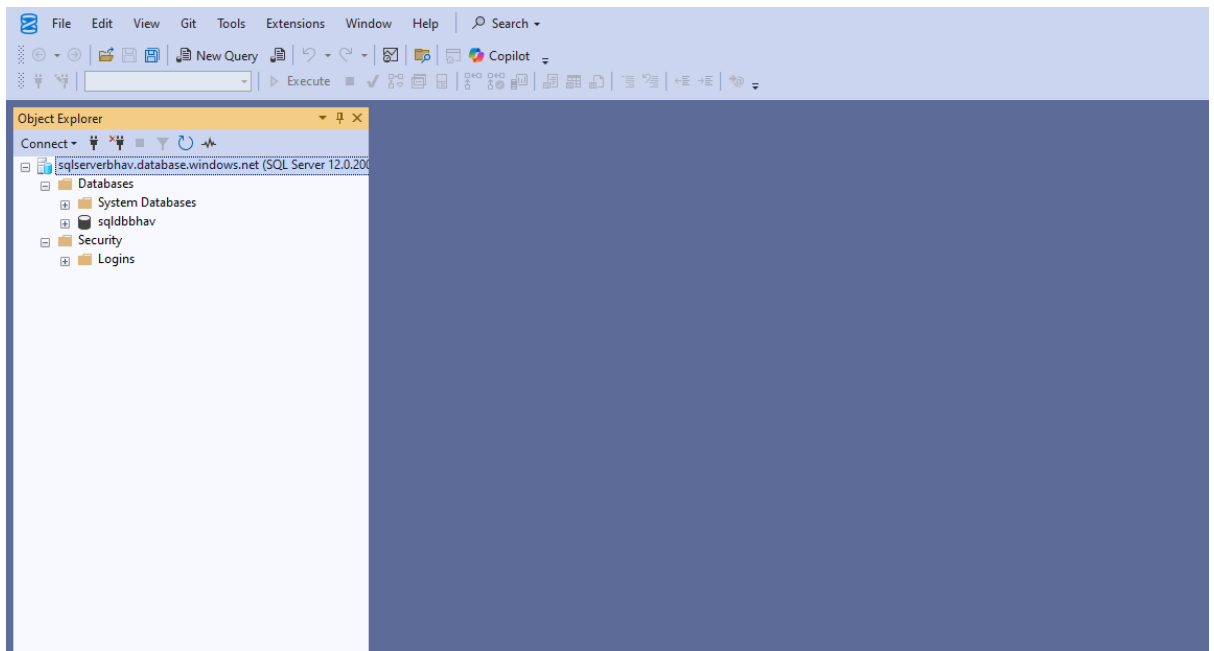
V Core	DTU Model
The vCore (Virtual Core) model is a virtual core-based model that provides flexibility to scale computing resources and memory independently.	DTUs are only available for Azure SQL Database and NOT for Azure SQL MI.
Allows users to choose the amount of CPU, memory and IOPS (Input/Output Operations Per Second) they need. This provides greater control over resources and cost optimization.	DTU is the "old" option Resources are provisioned as a package, with predefined levels that offer a balanced combination of CPU, memory, and IOPS.
In the vCore model, you have separate charges for compute (specifying the type of node or compute power) and storage, giving you greater cost management flexibility.	With the DTU model, you pay a fixed price covering compute (or IO/memory), data storage, and backup retention.
Provides flexibility and transparency into your costs, making it advantageous if you want more control over your resources.	Offers simplicity with fewer options and a single fixed price that includes everything. Ideal for those seeking straightforward pricing.