

Semester	T.E. Semester VI – Computer Engineering
Subject	Cloud Computing
Subject Professor In-charge	Prof. Divya Nimbalkar
Assisting Teachers	Prof. Divya Nimbalkar

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Roll Number	21102A0014
TE Division	A

**Title: To study and Implement Storage as a Service using Own Cloud/ AWS S3, Glaciers/ Azure Storage.**

## Implementation:

### 1) Azure sql

The screenshot shows the 'Create SQL Database' page in the Microsoft Azure portal. The page is titled 'Create SQL Database' and includes a warning message: 'Changing Basic options may reset selections you have made. Review all options prior to creating the resource.' Below this, the 'Database details' section is visible, which includes the following configuration options:

- Database name:** SQLDB (with a green checkmark indicating it is valid).
- Server:** (new) sqlserverdeep (East US) (with a dropdown arrow and a 'Create new' link).
- Want to use SQL elastic pool?:** No (selected with a radio button).
- Workload environment:** Development (selected with a radio button).

At the bottom of the page, there is a 'Review + create' button and a 'Next : Networking >' button. The URL in the browser's address bar is 'https://portal.azure.com/#'.

Microsoft Azure | Search resources, services, and docs (G+)

Home > SQL databases >

## Create SQL Database

Microsoft

**Microsoft Defender for SQL**

Protect your data using Microsoft Defender for SQL, a unified security package including vulnerability assessment and advanced threat protection for your server. [Learn more](#)


Get started with a 30 day free trial period, and then 1247.9202 INR/server/month.

Enable Microsoft Defender for SQL \* ☐ Start free trial ☒ Not now

**Ledger**

Ledger cryptographically verifies the integrity of your data and detects any tampering that might have occurred. [Learn more](#)

Ledger **Not configured**  
[Configure ledger](#)



Cost summary	
<b>General Purpose (GP_S_Gen5_1)</b>	
Cost per GB (in INR)	9.57
<b>Max storage selected (in GB)</b>	x 41.6
<b>ESTIMATED STORAGE COST / MONTH</b>	398.00 INR
<b>COMPUTE COST / VCORE SECOND<sup>1</sup></b>	0.012058 INR

**NOTES**  
<sup>1</sup> Serverless databases are billed in vCore seconds based on a combination of CPU and memory utilization. [Learn more about serverless billing](#)

[Review + create](#) [< Previous](#) [Next : Additional settings >](#)

Microsoft Azure | Search resources, services, and docs (G+)

Home > SQL databases >

## Create SQL Database

Microsoft

Basics Networking Security Additional settings Tags Review + create


**Product details**

SQL database by Microsoft  
[Terms of use](#) | [Privacy policy](#)

**Estimated cost**  
Storage cost 398.00 INR / month + Compute cost 0.012058 INR / vCore second

**Terms**

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. For additional details see [Azure Marketplace Terms](#).



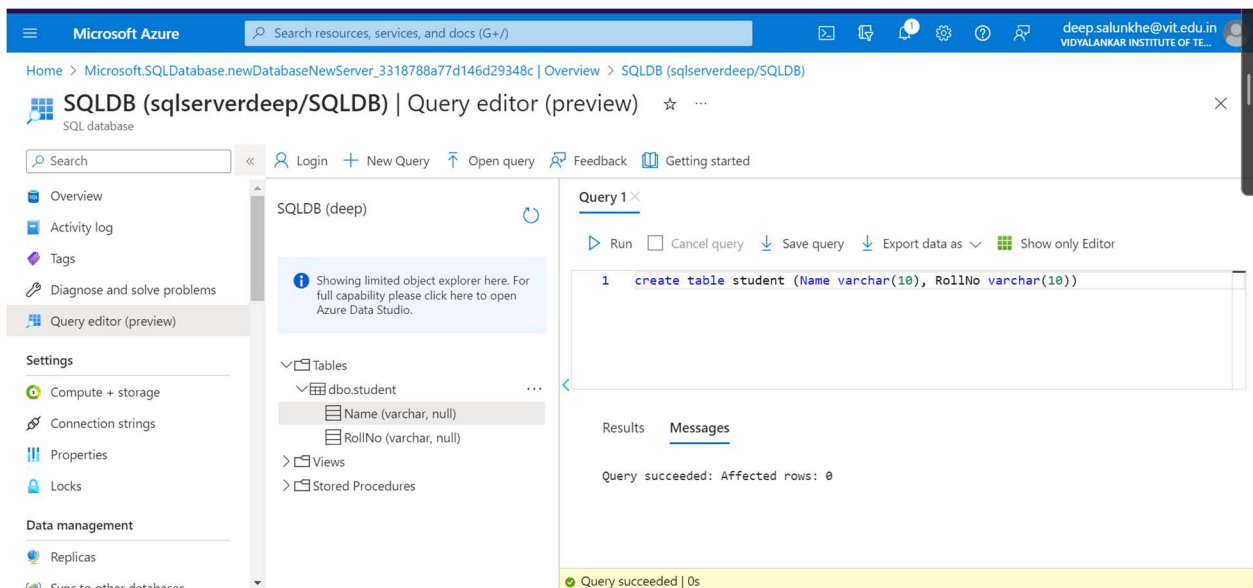
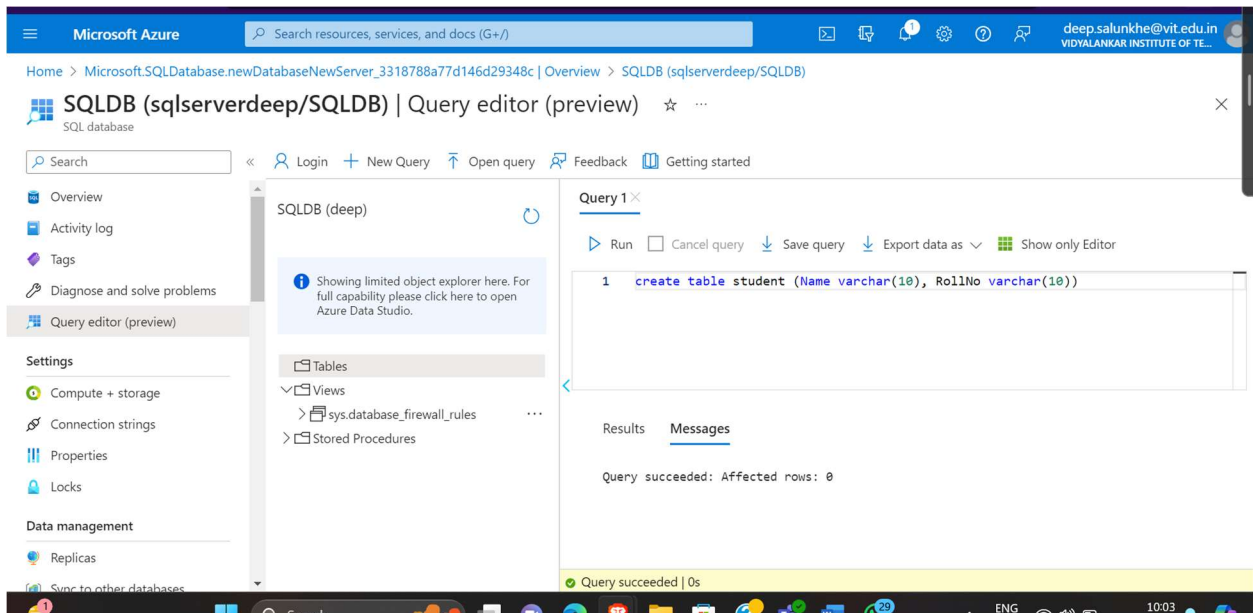
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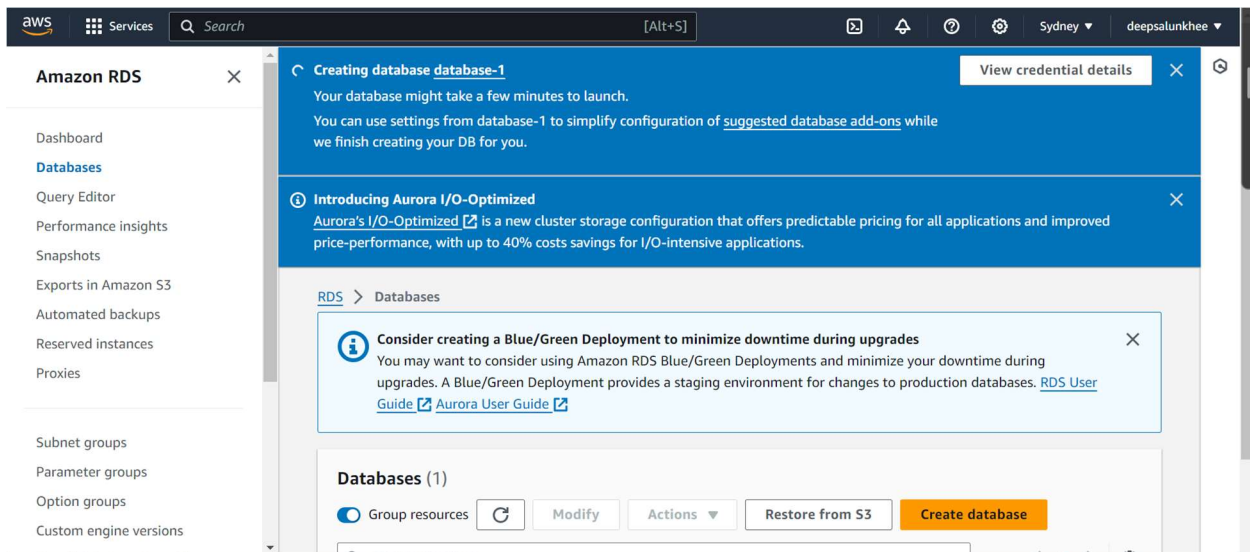
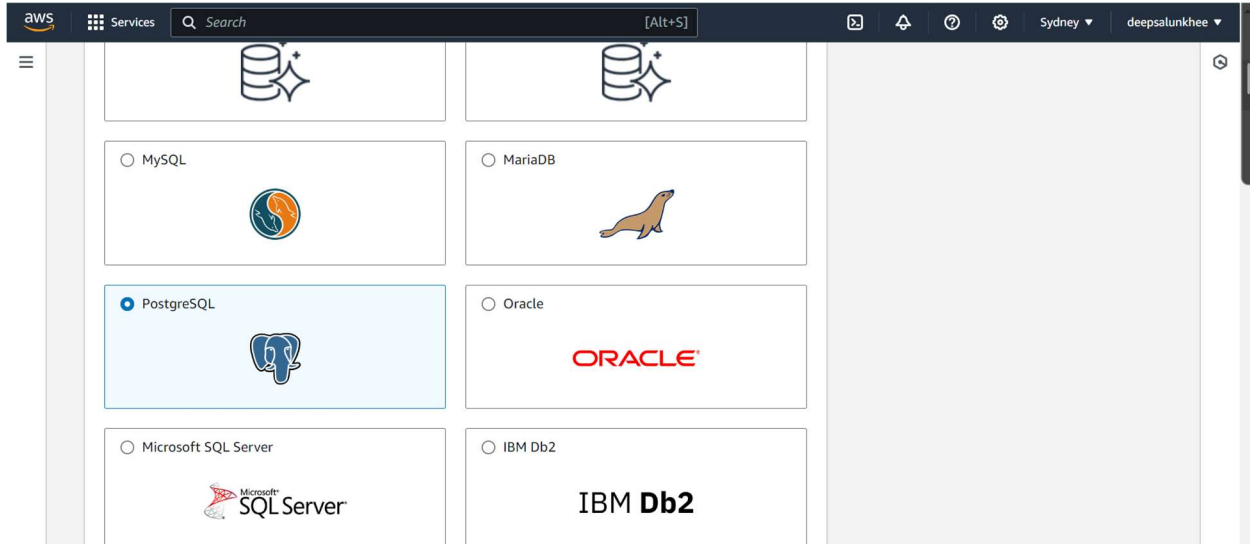
[Create](#) [< Previous](#) [Download a template for automation](#)

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information for 'deep.salunkhe@vit.edu.in'. The main content area displays the 'Overview' page for a deployment named 'Microsoft.SQLDatabase.newDatabaseNewServer\_3318788a77d146d29348c'. A green checkmark indicates 'Your deployment is complete'. Deployment details include: Deployment name: Microsoft.SQLDatabase.newD..., Subscription: Azure for Students, Resource group: SQLRG, Start time: 3/8/2024, 9:56:42 AM, and Correlation ID: 79acd557-cd14-4ee8-95f6-d7... The left sidebar shows navigation options: Overview, Inputs, Outputs, and Template. The right sidebar contains promotional cards for Cost management, Microsoft Defender for Cloud, and Free Microsoft tutorials.

The screenshot shows the Microsoft Azure portal interface for the 'SQLDB (sqlserverdeep/SQLDB)' resource. The top navigation bar is consistent with the previous screenshot. The main content area displays the 'Query editor (preview)' for the 'SQLDB (deep)' resource. The left sidebar shows navigation options: Overview, Activity log, Tags, Diagnose and solve problems, and Query editor (preview). The 'Query editor (preview)' section includes a 'Query 1' tab with a 'Run' button, 'Cancel query', 'Save query', 'Export data as', and 'Show only Editor' options. Below the query editor, there are 'Results' and 'Messages' tabs, and a search bar for filtering items. The bottom status bar shows 'Ready'.



## 2)AWS RDS



The screenshot shows the AWS Management Console interface for an EC2 instance. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, and a list of Instance types (Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, and Images). The main content area displays the 'Instance summary for i-0c93bc12128774627 (RBClient)'. The instance state is 'Pending'. Key details include: Instance ID: i-0c93bc12128774627 (RBClient), Public IPv4 address: 3.27.90.166, Private IPv4 addresses: 172.31.15.125, Instance state: Pending, Hostname type: IP name: ip-172-31-15-125.ap-southeast-2.compute.internal, Private IP DNS name (IPv4 only): ip-172-31-15-125.ap-southeast-2.compute.internal, Instance type: t2.micro, VPC ID: vpc-033a8f136ab28a27b, and Auto-assigned IP address: 3.27.90.166 [Public IP]. A recommendation to 'Opt-in to AWS Compute Optimizer for recommendations' is also visible.

The screenshot shows the AWS Management Console interface for Amazon RDS. The left sidebar contains navigation links for Dashboard, Databases, Query Editor, Performance insights, Snapshots, Exports in Amazon S3, Automated backups, Reserved instances, Proxies, Subnet groups, Parameter groups, Option groups, and Custom engine versions. The main content area displays the 'Databases (1)' section. A notification banner at the top states: 'Introducing Aurora I/O-Optimized. Aurora's I/O-Optimized is a new cluster storage configuration that offers predictable pricing for all applications and improved price-performance, with up to 40% costs savings for I/O-intensive applications.' Below this, a message suggests 'Consider creating a Blue/Green Deployment to minimize downtime during upgrades'. The 'Databases (1)' section shows a table with one database entry: 'database-1' with status 'Creating', engine 'PostgreSQL', region 'ap-southeast-2b', and size 'db.t3.micro'. The table has columns for DB identifier, Status, Role, Engine, Region & AZ, Size, and Recommendation.

**Instance summary for i-Od6e65eddc76860b8 (RDSCClient)** Info

Updated less than a minute ago

<b>Instance ID</b> i-Od6e65eddc76860b8 (RDSCClient)	<b>Public IPv4 address</b> 3.24.179.216 <a href="#">open address</a>	<b>Private IPv4 addresses</b> 172.31.11.23
<b>IPv6 address</b> -	<b>Instance state</b> Running	<b>Public IPv4 DNS</b> ec2-3-24-179-216.ap-southeast-2.compute.amazonaws.com <a href="#">open address</a>
<b>Hostname type</b> IP name: ip-172-31-11-23.ap-southeast-2.compute.internal	<b>Private IP DNS name (IPv4 only)</b> ip-172-31-11-23.ap-southeast-2.compute.internal	<b>Elastic IP addresses</b> -
<b>Answer private resource DNS name</b> IPv4 (A)	<b>Instance type</b> t2.micro	<b>AWS Compute Optimizer finding</b> Opt-in to AWS Compute Optimizer for recommendations.
<b>Auto-assigned IP address</b> 3.24.179.216 [Public IP]	<b>VPC ID</b> vpc-033a8f136ab28a27b	

```
Fetched 2692 kB in 0s (24.8 MB/s)
Selecting previously unselected package mysql-client-core-8.0.
(Reading database ... 64801 files and directories currently installed.)
Preparing to unpack .../mysql-client-core-8.0_8.0.36-0ubuntu0.22.04.1_amd64.deb ...
Unpacking mysql-client-core-8.0 (8.0.36-0ubuntu0.22.04.1) ...
Setting up mysql-client-core-8.0 (8.0.36-0ubuntu0.22.04.1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-11-23:~$
```

i-Od6e65eddc76860b8 (RDSCClient)

PublicIPs: 3.24.179.216 PrivateIPs: 172.31.11.23



```

aws
Services
Search [Alt+S]
Sydney deepsalunkhee

ubuntu@ip-172-31-11-23:~$ mysql -h database-1
ERROR 2005 (HY000): Unknown MySQL server host 'database-1' (-3)
ubuntu@ip-172-31-11-23:~$ mysql -h database-1.cds68oi8cpk0.ap-southeast-2.rds.amazonaws.com 5432
mysql: [ERROR] mysql: unknown option '-l'.
ubuntu@ip-172-31-11-23:~$ ^C
ubuntu@ip-172-31-11-23:~$ mysql -h database-1.cds68oi8cpk0.ap-southeast-2.rds.amazonaws.com 5432

create database dummy;
^C
ubuntu@ip-172-31-11-23:~$ mysql -h database-1.cds68oi8cpk0.ap-southeast-2.rds.amazonaws.com 5432
^C
ubuntu@ip-172-31-11-23:~$ mysq
Command 'mysql' not found, did you mean:
  command 'mysql' from deb mysql-client-core-8.0 (8.0.35-0ubuntu0.22.04.1)
  command 'mysql' from deb mariadb-client-core-10.6 (1:10.6.12-0ubuntu0.22.04.1)
Try: sudo apt install <deb name>
ubuntu@ip-172-31-11-23:~$ mysql
ERROR 2002 (HY000): Can't connect to local MySQL server through socket '/var/run/mysqld/mysqld.sock' (2)
ubuntu@ip-172-31-11-23:~$ mysql -h database-1.cds68oi8cpk0.ap-southeast-2.rds.amazonaws.com 5432

```

i-0d6e65eddc76860b8 (RDSClient)
PublicIPs: 3.24.179.216 PrivateIPs: 172.31.11.23

### 3)MongoBD atlas

