

Assignment-3

Q3. Host a Jenkins image on azure container instance?

Output screens:

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the 'Microsoft Azure' logo, a search bar, and a 'Copilot' button. The breadcrumb trail indicates the path: Home > Microsoft.ContainerInstances-20240819043108 | Overview >. The main content area displays the 'shanu' Container Instance. On the left, a sidebar lists navigation options: Overview (selected), Activity log, Access control (IAM), Tags, Settings, Monitoring, Automation, and Help. The 'Overview' section shows a table of instance details:

Essentials	
Resource group (move)	SKU
training	Standard
Status	OS type
Running	Linux
Location	IP address (Public)
Central India	20.235.196.231
Subscription (move)	FQDN
Azure Pass - Sponsorship	---
Subscription ID	Container count
eeb4ac4d-15ea-4514-b2fe-436f3e9e24c5	1
Tags (edit)	
Add tags	

Below the table, there are tabs for 'CPU' and 'Memory'. The bottom of the screen shows the Windows taskbar with various application icons and the system clock displaying 4:36 AM on 8/19/2024.

The screenshot shows the Jenkins 'Getting Started' dialog box. The title is 'Getting Started'. The main heading is 'Unlock Jenkins'. The text below reads: 'To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:'. Below this, a code snippet is shown: `/var/jenkins_home/secrets/initialAdminPassword`. The text continues: 'Please copy the password from either location and paste it below.' There is a label 'Administrator password' above a text input field. At the bottom right, there is a 'Continue' button. The background of the dialog box is a blurred image of the Jenkins interface. The bottom of the screen shows the Windows taskbar with various application icons and the system clock displaying 4:34 AM on 8/19/2024.

Q5. Create an alert for the high c.p.u usage with email notification on windows server?

Output screens:

The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and the user profile 'shankmukhi_micron@ou...'. The main content area displays the details of a virtual machine named 'azureuser'. A warning message at the top states: 'azureuser virtual machine agent status is not ready. Troubleshoot the issue →'. Below this, the 'Essentials' section provides key information:

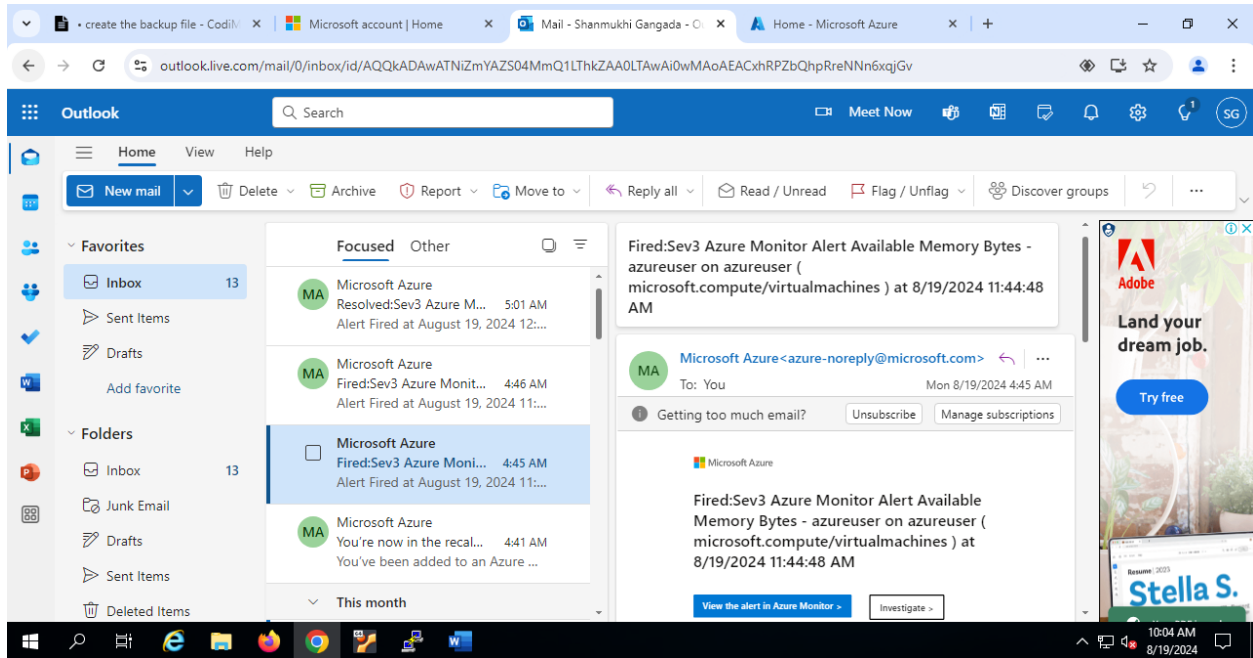
- Resource group: (move) [training](#)
- Status: Running
- Location: Central India (Zone 1)
- Subscription: (move) [Azure Pass - Sponsorship](#)
- Subscription ID: eeb4ac4d-15ea-4514-b2fe-436f3e9e24c5
- Availability zone: 1
- Operating system: Windows (Windows Server 2022 Datacenter Azure Edition)
- Size: Standard B1s (1 vcpu, 1 GiB memory)
- Public IP address: [4.188.73.129](#)
- Virtual network/subnet: [azureuser-vnet/default](#)
- DNS name: [Not configured](#)
- Health state: -

The left sidebar shows the navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Connect, Networking, Settings, Availability + scale, Security, Backup + disaster recovery, and Operations. The bottom taskbar shows the Windows operating system with various application icons.

The screenshot shows the Sysinternals CPU Stress tool running on a Windows server. The tool's interface includes a menu bar (File, Process, Thread, Options, Help) and a toolbar. The main window displays a table of running processes, with the following data:

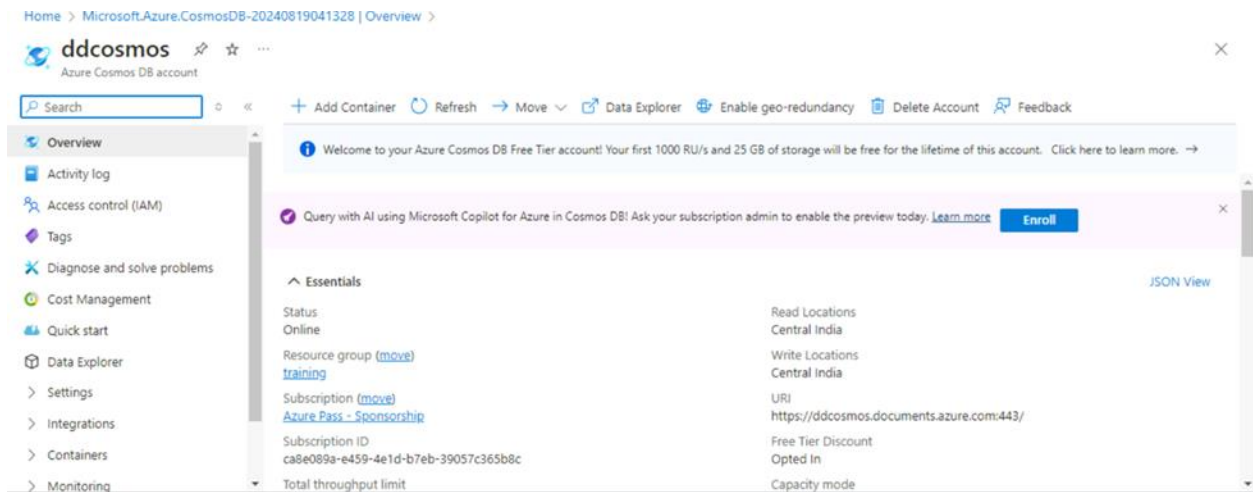
#	ID	Active?	Activity	Priority	Ideal CPU	Affinity
1	4872	Yes	Medium	Normal	0	11
2	7268	Yes	Maximum	Normal	1	11
3	7736		Maximum	Normal	0	11
4	6476		Busy	Normal	1	11

The left sidebar of the CPU Stress tool shows a list of Sysinternals tools, including CpuStres, Ctrl2Cap, DebugView, Desktops, Hex2dec, NotMyFault, PsPasswd, PsShutdown, and RDCMan. The right sidebar shows the 'Application Tools' section with a list of files and folders, including 'Type', 'Size', 'Application', and 'Text Document'.



Q4. Create and configure a cosmos database and demonstrate crud operations?

Output screens:



Home > Microsoft.Azure.CosmosDB-20240819041328 | Overview > ddcosmos

ddcosmos | Data Explorer

Azure Cosmos DB account

Search

New Item Update Discard Delete Upload Item

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Cost Management Quick start Data Explorer Settings Integrations Containers Monitoring

+ New Container

Home

SampleDB

Scale

SampleContainer

Items Settings Stored Procedures

SELECT * FROM c

id	/categ
<input checked="" type="checkbox"/> 0F124781-C991-48A9...	564...
<input type="checkbox"/> BF87ACE3-C52B-44EA...	7FF...
<input type="checkbox"/> AFED4FD0-17D1-4CD...	006...
<input type="checkbox"/> 056C459F-DA40-475E...	926...

Load more

```
{
  "id": "0F124781-C991-48A9-ACF2-249771D44029",
  "categoryId": "56400CF3-446D-4C3F-89B2-68286DA38B99",
  "categoryName": "Bikes, Mountain Bikes",
  "sku": "BK-M688-42",
  "name": "Mountain-200 Black, 42",
  "description": "The product called \"Mountain-200 Black, 42\"",
  "price": 2294.99,
  "tags": [
    {
      "id": "4F67013C-385E-4A3D-B4B0-8C597A491E86",
      "name": "Tag-82"
    }
  ]
}
```

Home > Microsoft.Azure.CosmosDB-20240819041328 | Overview > ddcosmos

ddcosmos | Data Explorer

Azure Cosmos DB account

Search

New Item Update Discard Delete Upload Item

Overview Activity log Access control (IAM) Tags Diagnose and solve problems Cost Management Quick start Data Explorer Settings Integrations Containers Monitoring

+ New Container

Home

SampleDB

Scale

SampleContainer

Items Settings Stored Procedures

SELECT * FROM c

id	/categ
<input checked="" type="checkbox"/> 0F124781-C991-48A9...	564...
<input type="checkbox"/> BF87ACE3-C52B-44EA...	7FF...
<input type="checkbox"/> AFED4FD0-17D1-4CD...	006...
<input type="checkbox"/> 056C459F-DA40-475E...	926...

Load more

```
{
  "id": "0F124781-C991-48A9-ACF2-249771D44029",
  "categoryId": "56400CF3-446D-4C3F-89B2-68286DA38B99",
  "categoryName": "Bikes, Mountain Bikes",
  "sku": "BK-M688-42",
  "name": "Mountain-200 Black, 42",
  "description": "The product called \"Mountain-200 Black, 42\"",
  "price": 2294.99,
  "tags": [
    {
      "id": "4F67013C-385E-4A3D-B4B0-8C597A491E86",
      "name": "Tag-82"
    }
  ]
}
```

Home > Microsoft.Azure.CosmosDB-20240819041328 | Overview > ddcosmos

ddcosmos | Scale

Azure Cosmos DB account

Search

New Item Update Discard Delete Upload Item

Tags Diagnose and solve problems Cost Management Quick start Data Explorer Settings Integrations Containers Browse Scale Settings Monitoring

+ New Container

Home

SampleDB

Scale

SampleContainer

Items Settings Stored Procedures

SELECT * FROM c WHERE c.price > 2000

id	/categ
<input checked="" type="checkbox"/> 0F124781-C991-48A9...	564...
<input type="checkbox"/> 462F8EAF-0988-4D32...	564...
<input type="checkbox"/> 4DA12D36-495E-4DC...	564...
<input type="checkbox"/> 935EB287-8D50-4E20...	564...

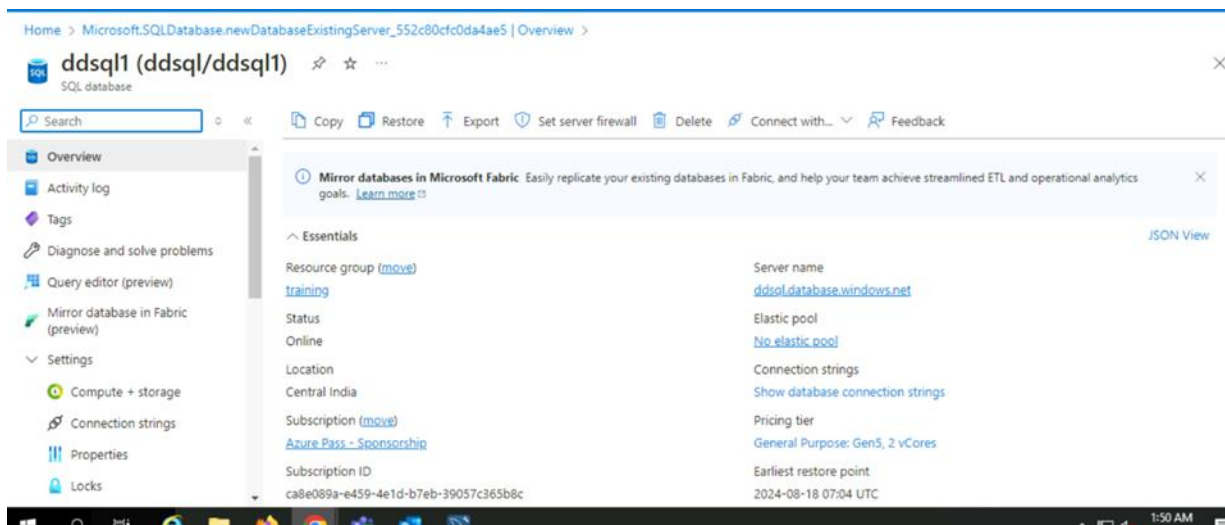
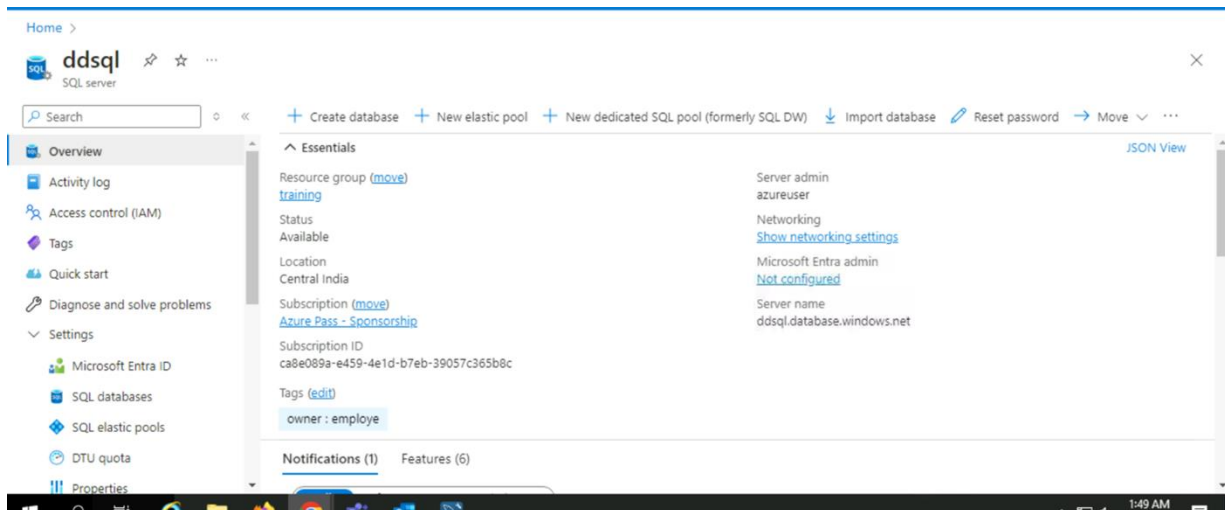
Load more

```
{
  "description": "The product called \"Mountain-200 Black, 42\"",
  "price": 2294.99,
  "tags": [
    {
      "id": "4F67013C-385E-4A3D-B4B0-8C597A491E86",
      "name": "Tag-82"
    }
  ]
},
{
  "id": "596761B3-1807-48A0-83B0-42B3C8800E80",
  "name": "Tag-64"
},
{
  "id": "89500F13-B516-4F77-8128-47FC4128EFC0",
  "name": "Tag-151"
}
```

Q1. Create and Configure an Azure SQL Database:

- **Create a new Azure SQL Database.**
- **Configure firewall rules to allow access to your database from specific IP addresses.**
- **Create tables, insert sample data, and run basic SQL queries**
- **Create Employees and Departments tables and demonstrate INNER JOIN, LEFT OUTER JOIN and RIGHT OUTER JOIN**
- **Configure automated backups and test restoring a database from a backup**
- **Set up and configure geo-replication to create readable secondary replicas in different regions.**

Output screens:



Home > Azure SQL > ddsq11 (ddsql/ddsql1)

Azure SQL

Default Directory (dedeeyarachakondagmail.on...)

+ Create Reservations ...

Filter for any field...

Name ↑

- ddsql
- ddsql1 (ddsql/ddsql1)

Overview

Activity log

Tags

Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview)

Settings

- Compute + storage
- Connection strings
- Properties
- Locks

Page 1 of 1

ddsql1 (ddsql/ddsql1) | Query editor (preview)

SQL database

Search

Login + New Query Open query Feedback Getting started

Query 5 × Query 6 × Query 7 ×

Run Cancel query Save query Export data as Show only Editor ...

```
1 CREATE TABLE Departments (  
2   DepartmentID INT PRIMARY KEY,  
3   DepartmentName VARCHAR(255)  
4 )  
5
```

Results Messages

Query succeeded: Affected rows: 4

Query succeeded | 0s

Home > Azure SQL > ddsq11 (ddsql/ddsql1)

Azure SQL

Default Directory (dedeeyarachakondagmail.on...)

+ Create Reservations ...

Filter for any field...

Name ↑

- ddsql
- ddsql1 (ddsql/ddsql1)

Overview

Activity log

Tags

Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview)

Settings

- Compute + storage
- Connection strings
- Properties
- Locks

Page 1 of 1

ddsql1 (ddsql/ddsql1) | Query editor (preview)

SQL database

Search

Login + New Query Open query Feedback Getting started

Query 5 × Query 6 × Query 7 × Query 8 × Query 9 ×

Run Cancel query Save query Export data as Show only Editor ...

```
1 /* RIGHT OUTER JOIN */  
2  
3 SELECT Employees.FirstName, Employees.LastName, Departments.DepartmentName  
4 FROM Employees  
5 RIGHT OUTER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID  
6
```

Results Messages

Robert	Davis	Engineering
Jane	Smith	Marketing
Michael	Brown	Finance

Query succeeded | 0s

Home > Azure SQL > ddsq11 (ddsql/ddsql1)

Azure SQL

Default Directory (dedeeyarachakondagmail.on...)

+ Create Reservations ...

Filter for any field...

Name ↑

- ddsql
- ddsql1 (ddsql/ddsql1)

Overview

Activity log

Tags

Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview)

Settings

- Compute + storage
- Connection strings
- Properties
- Locks

Page 1 of 1

ddsql1 (ddsql/ddsql1) | Query editor (preview)

SQL database

Search

Login + New Query Open query Feedback Getting started

Query 5 × Query 6 × Query 7 × Query 8 ×

Run Cancel query Save query Export data as Show only Editor ...

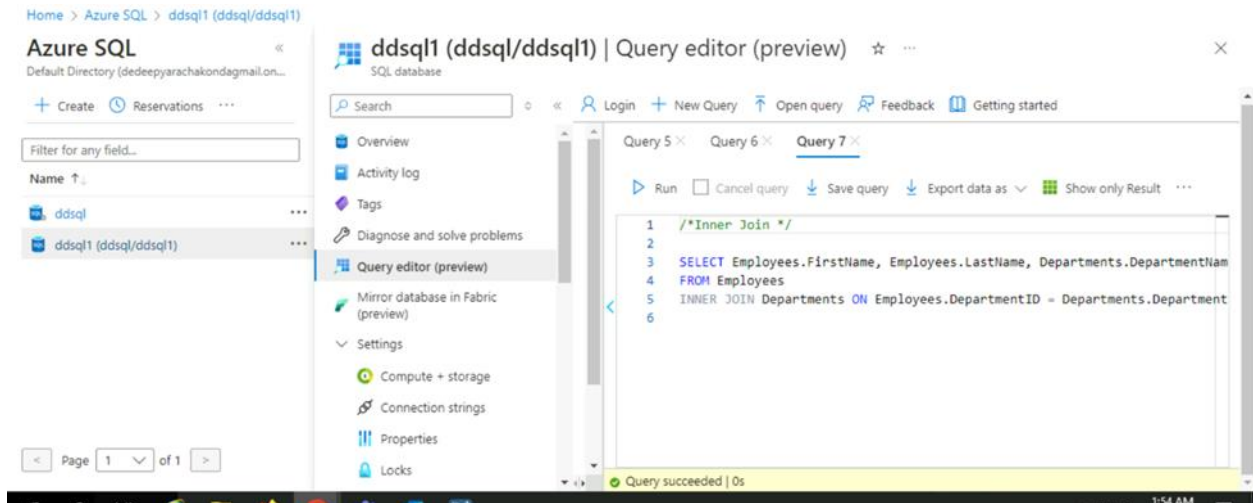
```
3 SELECT Employees.FirstName, Employees.LastName, Departments.DepartmentName  
4 FROM Employees  
5 LEFT OUTER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID  
6  
7
```

Results Messages

Search to filter items...

FirstName	LastName	DepartmentName
John	Doe	Engineering

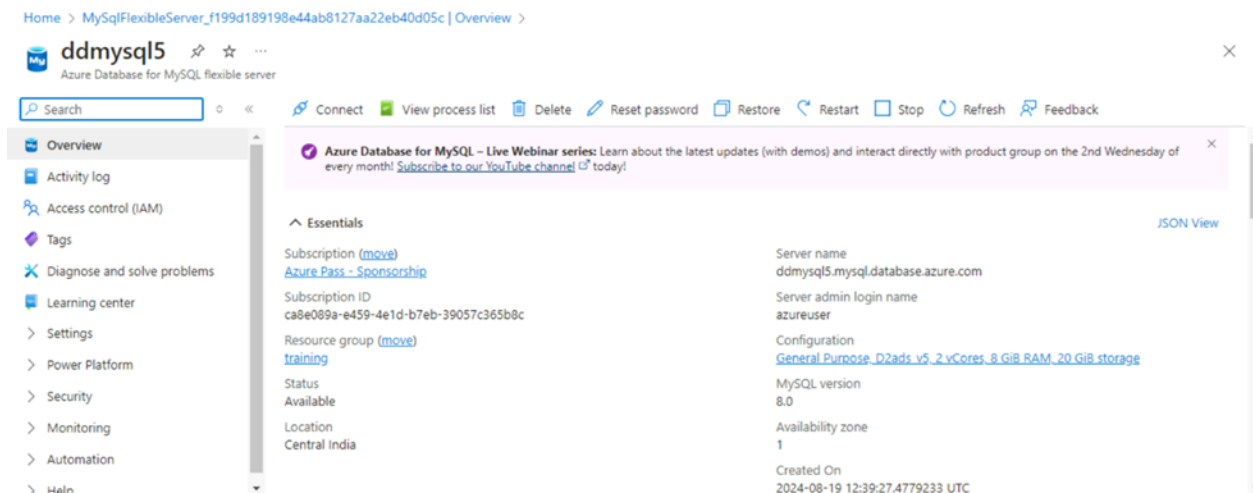
Query succeeded | 0s



Q2 . Create and Configure an Azure MYSQL Database:

- Create a new Azure SQL Database.
- Configure firewall rules to allow access to your database from specific IP addresses.
- Create tables, insert sample data, and run basic SQL queries
- Create Employees and Departments tables and demonstrate INNER JOIN, LEFT OUTER JOIN and RIGHT OUTER JOIN
- Configure automated backups and test restoring a database from a backup
- Set up and configure geo-replication to create readable secondary replicas in different regions.

Output screens:



MySQL Workbench

dd x

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

Administration Schemas

Information

No object selected

Object Info Session

Query 1 SQL File 4*

```
1 • INSERT INTO Departments (Departme
2 (1, 'HR'),
3 (2, 'Finance'),
4 (3, 'IT');
5
6 • INSERT INTO Employees (EmployeeID
7 (101, 'Alice', 1),
8 (102, 'Bob', 2),
9 (103, 'Charlie', 3),
10 (104, 'David', NULL);
11
```

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Context Help Snippets

Output

Action Output

#	Time	Action	Message	Duration / Fetch
7	06:01:40	CREATE DATABASE testdatabase	1 row(s) affected	0.063 sec
8	06:02:01	USE testdatabase	0 row(s) affected	0.047 sec
9	06:02:41	CREATE TABLE Departments (DepartmentID INT PRIMARY KEY, ...	0 row(s) affected	0.109 sec
10	06:02:42	CREATE TABLE Employees (EmployeeID INT PRIMARY KEY, Em...	0 row(s) affected	0.109 sec
11	06:06:31	INSERT INTO Departments (DepartmentID, DepartmentName) VALUES ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.062 sec
12	06:06:31	INSERT INTO Employees (EmployeeID, EmployeeName, DepartmentID) ...	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0	0.063 sec

MySQL Workbench

dd x

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

- Server Status
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- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

Administration Schemas

Information

No object selected

Object Info Session

Query 1 SQL File 4* SQL File 5*

Limit to 1000 rows

```
1 • SELECT Employees.EmployeeID, Employees.EmployeeName, Departments.DepartmentName
2 FROM Employees
3 INNER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;
4
```

Result Grid

EmployeeID	EmployeeName	DepartmentName
101	Alice	HR
102	Bob	Finance
103	Charlie	IT

Result 1 x

Read Only Context Help Snippets

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Output

Action Output

#	Time	Action	Message	Duration / Fetch
8	06:02:01	USE testdatabase	0 row(s) affected	0.047 sec
9	06:02:41	CREATE TABLE Departments (DepartmentID INT PRIMARY KEY, ...	0 row(s) affected	0.109 sec
10	06:02:42	CREATE TABLE Employees (EmployeeID INT PRIMARY KEY, Em...	0 row(s) affected	0.109 sec
11	06:06:31	INSERT INTO Departments (DepartmentID, DepartmentName) VALUES ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.062 sec
12	06:06:31	INSERT INTO Employees (EmployeeID, EmployeeName, DepartmentID) ...	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0	0.063 sec
13	06:07:27	SELECT Employees EmployeeID, Employees EmployeeName, Departme...	3 row(s) returned	0.063 sec / 0.000 sec

MySQL Workbench

dd x

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

- Server Status
- Client Connections
- Users and Privileges
- Status and System Variables
- Data Export
- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

Administration Schemas

Information

No object selected

Object Info Session

Query 1 SQL File 4* SQL File 5* SQL File 6* SQL File 7*

1 SELECT Employees.EmployeeID, Employees.EmployeeName, Departments.DepartmentName

2 FROM Employees

3 LEFT OUTER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;

4

Result Grid

EmployeeID	EmployeeName	DepartmentName
101	Alice	HR
102	Bob	Finance
103	Charlie	IT
104	David	NULL

Result 1 x

Read Only Context Help Snippets

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Output

Action Output

#	Time	Action	Message	Duration / Fetch
10	06:02:42	CREATE TABLE Employees (EmployeeID INT PRIMARY KEY, Em...	0 row(s) affected	0.109 sec
11	06:06:31	INSERT INTO Departments (DepartmentID, DepartmentName) VALUES ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.062 sec
12	06:06:31	INSERT INTO Employees (EmployeeID, EmployeeName, DepartmentID) ...	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0	0.063 sec
13	06:07:27	SELECT Employees.EmployeeID, Employees.EmployeeName, Departme...	3 row(s) returned	0.063 sec / 0.000 sec
14	06:08:28	SELECT Employees.EmployeeID, Employees.EmployeeName, Departme...	4 row(s) returned	0.047 sec / 0.000 sec
15	06:09:13	SELECT Employees.EmployeeID, Employees.EmployeeName, Departme...	3 row(s) returned	0.047 sec / 0.000 sec

MySQL Workbench

dd x

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

- Server Status
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- Data Import/Restore

INSTANCE

- Startup / Shutdown
- Server Logs
- Options File

PERFORMANCE

Administration Schemas

Information

No object selected

Object Info Session

Query 1 SQL File 4* SQL File 5* SQL File 6* SQL File 7*

1 SELECT Employees.EmployeeID, Employees.EmployeeName, Departments.DepartmentName

2 FROM Employees

3 RIGHT OUTER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;

4

Result Grid

EmployeeID	EmployeeName	DepartmentName
101	Alice	HR
102	Bob	Finance
103	Charlie	IT

Result 1 x

Read Only Context Help Snippets

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Output

Action Output

#	Time	Action	Message	Duration / Fetch
10	06:02:42	CREATE TABLE Employees (EmployeeID INT PRIMARY KEY, Em...	0 row(s) affected	0.109 sec
11	06:06:31	INSERT INTO Departments (DepartmentID, DepartmentName) VALUES ...	3 row(s) affected Records: 3 Duplicates: 0 Warnings: 0	0.062 sec
12	06:06:31	INSERT INTO Employees (EmployeeID, EmployeeName, DepartmentID) ...	4 row(s) affected Records: 4 Duplicates: 0 Warnings: 0	0.063 sec
13	06:07:27	SELECT Employees.EmployeeID, Employees.EmployeeName, Departme...	3 row(s) returned	0.063 sec / 0.000 sec
14	06:08:28	SELECT Employees.EmployeeID, Employees.EmployeeName, Departme...	4 row(s) returned	0.047 sec / 0.000 sec
15	06:09:13	SELECT Employees.EmployeeID, Employees.EmployeeName, Departme...	3 row(s) returned	0.047 sec / 0.000 sec