



Lab 4: Cosmos DB and ASP.NET.

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IT457 Cloud Computing
3/2/24

Question – 1

1. Create NoSQL Azure Table storage design for the following problems and implement crud operations using your opted language SDK to validate the working of the design.

a. A gift shop wants to start a portal which allows users to view various items present in its store. The items details like name, price, available quantity etc. are shown. Along with that, pictures of item from different angles are also available. There's a high-res image also available for every item:

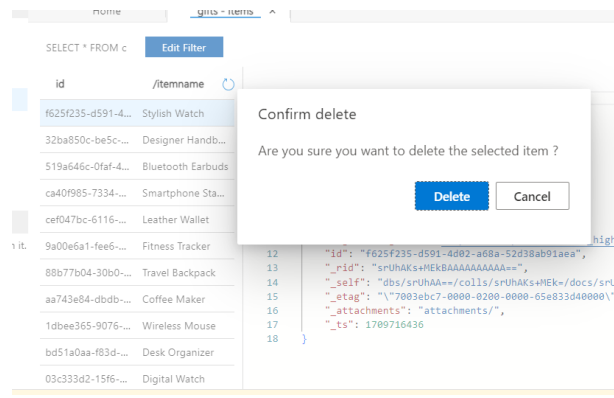
Items to upload in gifts container:

id	/itemname
625f235-d591-4d02-a68a-52d3fab91...	Stylish Watch
32ba850c-be5c-4716-b18b-5781a376...	Designer Handbag
519a646c-0faf-47ad-bb7c-dac9bae3...	Bluetooth Earbuds
ca40f985-7334-4690-87ed-d5e07d05e...	Smartphone Stand
cef047bc-6116-4fda-a68d-722ce3205...	Leather Wallet
9a00e6a1-fee6-4794-860f-d33771c76...	Fitness Tracker
88b77b04-30b0-43a7-bc88-c7e2296...	Travel Backpack
aa743e84-dbd5-4b85-a646-8c23fbfc...	Coffee Maker
1dbee365-9076-4fd0-9344-d726b1eb...	Wireless Mouse
bd51a0aa-483d-4f71-8230-3cb8826ba...	Desk Organizer

Inserting Item and inserted list: -

id	/itemname
625f235-d591-4...	Stylish Watch
32ba850c-be5c...	Designer Handbag
519a646c-0faf-4...	Bluetooth Earbuds
ca40f985-7334...	Smartphone Sta...
cef047bc-6116...	Leather Wallet
9a00e6a1-fee6...	Fitness Tracker
88b77b04-30b0...	Travel Backpack
aa743e84-dbd5...	Coffee Maker
1dbee365-9076...	Wireless Mouse
bd51a0aa-483d...	Desk Organizer

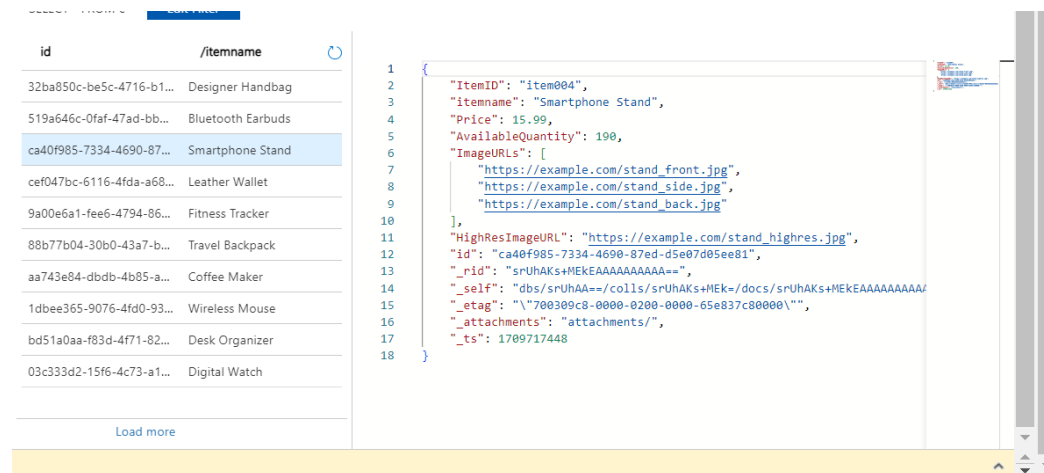
Deleting item and deleted items: -



The screenshot shows a web application interface with a table of items. A modal dialog titled "Confirm delete" is displayed, asking "Are you sure you want to delete the selected item?". The dialog has "Delete" and "Cancel" buttons. The table lists items with columns "id" and "/itemname".

id	/itemname
f625f235-d591-4...	Stylish Watch
32ba850c-be5c-...	Designer Handb...
519a646c-0faf-4...	Bluetooth Earbuds
ca40f985-7334-...	Smartphone Sta...
cef047bc-6116-...	Leather Wallet
9a00e6a1-fee6-...	Fitness Tracker
88b77b04-30b0-...	Travel Backpack
aa743e84-dbdb-...	Coffee Maker
1dbee365-9076-...	Wireless Mouse
bd51a0aa-f83d-...	Desk Organizer
03c333d2-15f6-...	Digital Watch

Updating item: -



The screenshot shows a web application interface with a table of items. A JSON object is displayed next to the table, representing the updated item data.

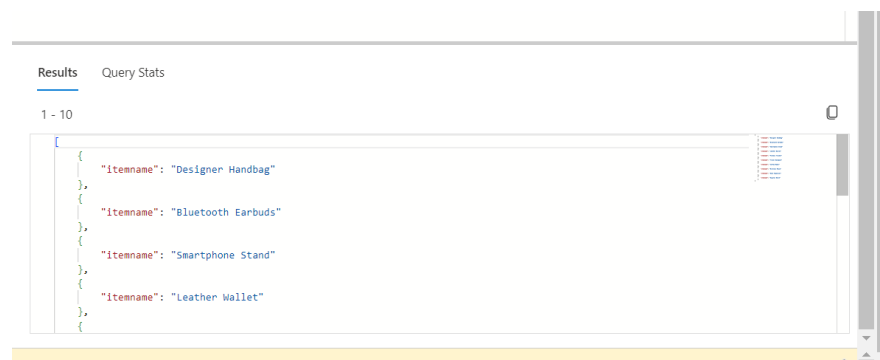
id	/itemname
32ba850c-be5c-4716-b1...	Designer Handbag
519a646c-0faf-47ad-bb...	Bluetooth Earbuds
ca40f985-7334-4690-87...	Smartphone Stand
cef047bc-6116-4fda-a68...	Leather Wallet
9a00e6a1-fee6-4794-86...	Fitness Tracker
88b77b04-30b0-43a7-b...	Travel Backpack
aa743e84-dbdb-4b85-a...	Coffee Maker
1dbee365-9076-4fd0-93...	Wireless Mouse
bd51a0aa-f83d-4f71-82...	Desk Organizer
03c333d2-15f6-4c73-a1...	Digital Watch

```

1 {
2   "ItemID": "item004",
3   "itemname": "Smartphone Stand",
4   "Price": 15.99,
5   "AvailableQuantity": 190,
6   "ImageURLs": [
7     "https://example.com/stand_front.jpg",
8     "https://example.com/stand_side.jpg",
9     "https://example.com/stand_back.jpg"
10  ],
11   "HighResImageURL": "https://example.com/stand_highres.jpg",
12   "id": "ca40f985-7334-4690-87ed-d5e07d05ee81",
13   "_rid": "srUuAKs+MEKEAAAAAAAAA==",
14   "_self": "dbs/srUuAA==/colls/srUuAKs+MEK=/docs/srUuAKs+MEKEAAAAAAAAA",
15   "_etag": "\"1700309c8-0000-0200-0000-65e837c80000\"",
16   "_attachments": "attachments/",
17   "_ts": 1709717448
18 }

```

Query Execution: -



The screenshot shows a query execution results window. The "Results" tab is active, displaying a list of items. The "Query Stats" tab is also visible.

Results
1 - 10
{ "Itemname": "Designer Handbag" }
{ "Itemname": "Bluetooth Earbuds" }
{ "Itemname": "Smartphone Stand" }
{ "Itemname": "Leather Wallet" }

A company has training period for employees. It has around 500 training modules that an employee needs to cover over the period of 6 months. A module could be a video, document, e-book or other form or content. The requirement is to track the status of modules covered by employee over the training period:

Items uploaded in modules container:

Home

modules - lte...

SELECT * FROM c

Edit Filter

id	/ModuleName
08c9a843-9c77-46d4-a17f-a...	Introduction to Company Cul...
2730c023-e252-438d-ac24-3...	Employee Handbook
49d55371-e1d6-4f78-98de-1...	Effective Communication Skills
0058c04b-6a0f-4294-a1b4-e...	Cybersecurity Basics
84341f7d-6726-4bcb-b5e4-1...	Project Management Principl...
afcbcf3a-67f1-48a9-8c22-d8...	Time Management Techniques
e36cff4b-42ab-4750-b029-2...	Diversity and Inclusion Traini...
ae3cefe-6fcf-4bc8-929e-bb...	Leadership Essentials
bcad6ceb-4074-4fdb-b15a-a...	Team Collaboration Strategies
efd725e-ee31-4e54-9fb1-d3...	Health and Safety Guidelines

Load more

```

1  "ModuleID": "module001",
2  "ModuleName": "Introduction to Company Culture",
3  "ModuleType": "Video",
4  "Status": "Not Covered",
5  "ContentURL": "https://example.com/intro_video.mp4",
6  "id": "08c9a843-9c77-46d4-a17f-a01c03d024e5",
7  "rid": "woH+ALD2hrcBAAAAAAAAA=",
8  "self": "dbs/woH+AA~/colls/woH+ALD2hrc+/docs/woH+ALD2hrcBAAA
9  "etag": "\"fe013c93-0000-0200-0000-65e844130000\"",
10 "attachments": "attachments/",
11 "ts": 1709720595
12
13

```

Inserting Item and inserted item: -

SELECT * FROM c

Edit Filter

id	/ModuleName
08c9a843-9c77-46d4-a17f-a...	Introduction to Company Cul...
2730c023-e252-438d-ac24-3...	Employee Handbook
49d55371-e1d6-4f78-98de-1...	Effective Communication Skills
0058c04b-6a0f-4294-a1b4-e...	Cybersecurity Basics
84341f7d-6726-4bcb-b5e4-1...	Project Management Principl...
afcbcf3a-67f1-48a9-8c22-d8...	Time Management Techniques
e36cff4b-42ab-4750-b029-2...	Diversity and Inclusion Traini...
ae3cefe-6fcf-4bc8-929e-bb...	Leadership Essentials
bcad6ceb-4074-4fdb-b15a-a...	Team Collaboration Strategies
efd725e-ee31-4e54-9fb1-d3...	Health and Safety Guidelines

Load more

```

1  "ModuleID": "module011",
2  "ModuleName": "Company Values",
3  "ModuleType": "Video",
4  "Status": "Not Covered",
5  "ContentURL": "https://example.com/intro_video2.mp4"
6
7

```

Deleting item: -

Item deleted and Updating item: -

Home

modules - Itle. x

SELECT * FROM c

Edit Filter

id	/ModuleName
2730c023-e252-438d-ac24-3...	Employee Handbook
49d55371-e1d6-4f78-98de-1...	Effective Communication Skills
0058c04b-6a0f-4294-a1b4-e...	Cybersecurity Basics
84341f7d-6726-4bc3-b84-1...	Project Management Principles
af6cb3a3-67f1-48a9-8c22-d5e...	Time Management Techniques
e36cf4b-42ab-4750-b029-2d...	Diversity and Inclusion Training
ae3cfe-5f6c-4bc8-929e-bb...	Leadership Essentials
bcad6ceb-4074-4fdb-b15a-a...	Team Collaboration Strategies
efdf725e-ee31-4546-9fb1-d3...	Health and Safety Guidelines
8990f833-9d24-4c04-a212-5...	Company Values

1 {

"ModuleID": "module002",

"ModuleName": "Employee Handbook",

"ModuleType": "Document",

"Status": "Covered",

"ContentURL": "https://example.com/employee_handbook.pdf",

"id": "2730c023-e252-438d-ac24-322160cf6d4",

"_rid": "w0H+ALD2hrcCAAAAAAAAA...",

"_self": "dbs/w0H+AA==/colls/w0H+ALD2hrcCAAA...",

"_etag": "\"f0e199af-0000-0200-0000-05e844f30000\"",

"attachments": "attachments/",

"_ts": 1709208019

}

c023-e252-438d-ac24-322160cf6d4

Query Execution: -

```
1 SELECT e.ModuleName, e.ModuleType FROM e
```

Results Query Stats

1 - 10

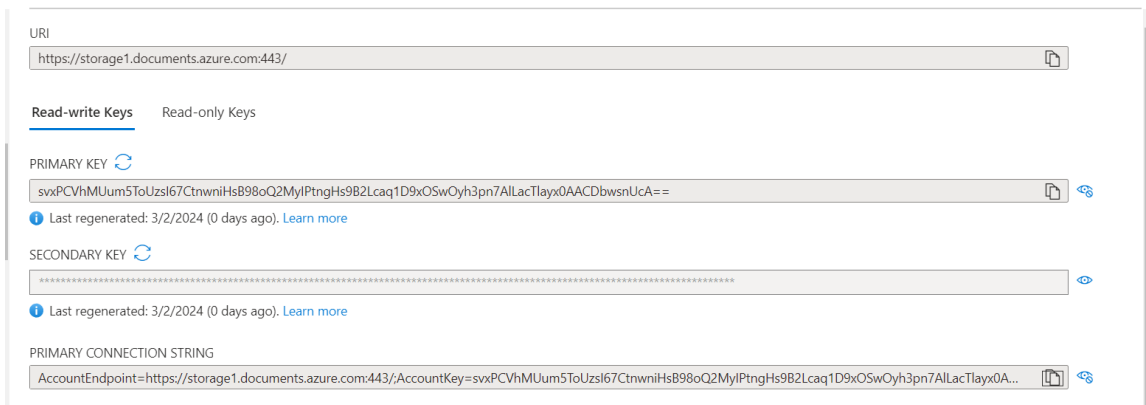
```
[  
  {  
    "ModuleName": "Employee Handbook",  
    "ModuleType": "Document"  
  },  
  {  
    "ModuleName": "Effective Communication Skills",  
    "ModuleType": "Video"  
  },  
  {  
    "ModuleName": "Cybersecurity Basics",  
    "ModuleType": "E-Book"  
  },  
  {  

```

Question - 2


Develop an ASP.NET web application with Azure Cosmos DB for NoSQL

Keys in Cosmos DB account: -





URI
https://storage1.documents.azure.com:443/


Read-write Keys Read-only Keys

PRIMARY KEY 

svxPCVhMUUm5ToUzsl67CtnwniHsB98oQ2MylPtngHs9B2Lcaq1D9xOSwOyh3pn7AILacTlayx0AACDbwsnUcA==

 Last regenerated: 3/2/2024 (0 days ago). [Learn more](#)

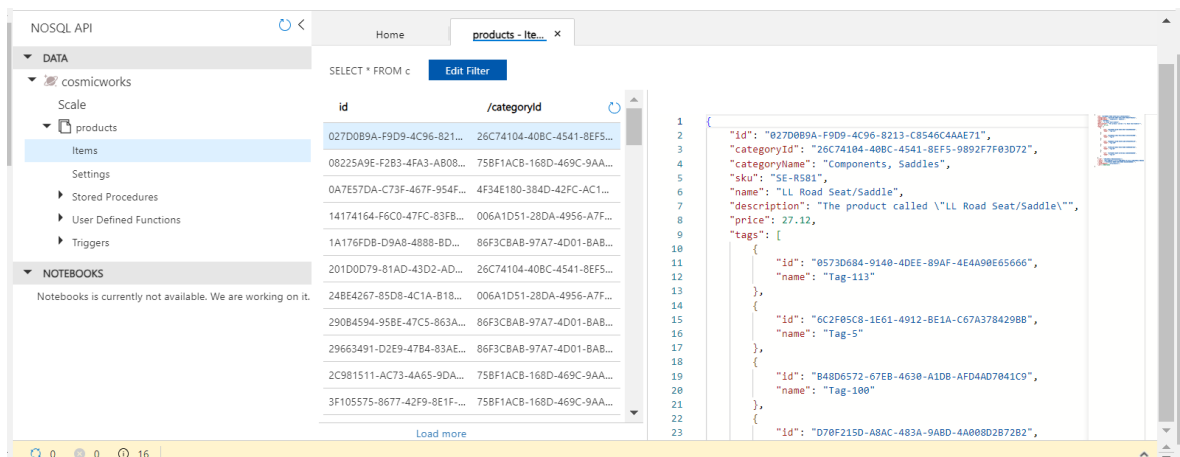
SECONDARY KEY 

 Last regenerated: 3/2/2024 (0 days ago). [Learn more](#)

PRIMARY CONNECTION STRING

AccountEndpoint=https://storage1.documents.azure.com:443/;AccountKey=svxPCVhMUUm5ToUzsl67CtnwniHsB98oQ2MylPtngHs9B2Lcaq1D9xOSwOyh3pn7AILacTlayx0A...

Data Population: -



NOSQL API

DATA

- cosmicworks
 - Scale
 - products
 - Items
 - Settings
 - Stored Procedures
 - User Defined Functions
 - Triggers
- NOTEBOOKS

Notebooks is currently not available. We are working on it.

SELECT * FROM c

id /categoryid

027D0B9A-F9D9-4C96-821...	26C74104-408C-4541-8EF5...
08225A9E-F2B3-4FA3-AB08...	75BF1ACB-168D-469C-9AA...
0A7E57DA-C73F-467F-954F...	4F34E180-384D-42FC-AC1...
14174164-F6C0-47FC-83FB...	006A1D51-28DA-4956-A7F...
1A176FDB-D9A8-4888-8D...	86F3CBAB-97A7-4D01-BAB...
201D0D79-81AD-43D2-AD...	26C74104-408C-4541-8EF5...
24BE4267-85D8-4C1A-B18...	006A1D51-28DA-4956-A7F...
290B4594-958E-47C5-863A...	86F3CBAB-97A7-4D01-BAB...
29663491-D2E9-47B4-83AE...	86F3CBAB-97A7-4D01-BAB...
2C981511-AC73-4A65-9DA...	75BF1ACB-168D-469C-9AA...
3F105575-8677-42F9-8E1F...	75BF1ACB-168D-469C-9AA...

Load more

```

1 {
2   "id": "027D0B9A-F9D9-4C96-8213-C8546C4AE71",
3   "categoryId": "26C74104-408C-4541-8EF5-9892F7F03D72",
4   "categoryName": "Components, Saddles",
5   "sku": "SE-R581",
6   "name": "LL Road Seat/Saddle",
7   "description": "The product called \"LL Road Seat/Saddle\"",
8   "price": 27.12,
9   "tags": [
10    {
11      "id": "0573D684-9148-4DEE-89AF-4E4A98E65666",
12      "name": "Tag-113"
13    },
14    {
15      "id": "6C2F05C8-1E61-4912-BE1A-C67A3784298B",
16      "name": "Tag-5"
17    },
18    {
19      "id": "B48D6572-67EB-4638-A1D8-AFD4AD7041C9",
20      "name": "Tag-100"
21    }
22  ],
23  "id": "D70F215D-A8AC-483A-9ABD-4A080D287282",

```

Query Executions: -

NOSQL API

DATA

cosmicworks

Scale

products

Items

Settings

Stored Procedures

User Defined Functions

Triggers

NOTEBOOKS

Notebooks is currently not available. We are working on it.

Home

products - ite...

Scale

Query 1

```

1 SELECT
2   p.name,
3   p.categoryName,
4   p.tags
5 FROM products p
6 JOIN t IN p.tags
7 WHERE t.name = "Tag-32"

```

Results

Query Stats

1 - 8

```

{
  "name": "Touring-3000 Blue, 58",
  "categoryName": "Bikes, Touring Bikes",
  "tags": [
    {
      "id": "18AC309F-F81C-4234-A752-5DD028EAE83",
      "name": "Tag-32"
    },
    {
      "id": "F132E788-65B1-471E-8D3E-5E8D7110CA48",
      "name": "Tag-118"
    }
  ]
}

```

Building and running application:-

6

Active products

Latest products found in NoSQL container.

View all products

FR-R72R-60 ₹ 594.83 <p>ML Road Frame - Red, 60</p> <p>The product called "ML Road Frame - Red, 60".</p> <p>Components, Road Frames</p>	FK-5136 ₹ 175.49 <p>ML Fork</p> <p>The product called "ML Fork".</p> <p>Components, Forks</p>	FR-R38R-52 ₹ 337.22 <p>LL Road Frame - Red, 52</p> <p>The product called "LL Road Frame - Red, 52".</p> <p>Components, Road Frames</p>
FR-R38B-62 ₹ 337.22 <p>LL Road Frame - Black, 62</p> <p>The product called "LL Road Frame - Black, 62".</p>	FR-R72Y-38 ₹ 594.83 <p>ML Road Frame-W - Yellow, 38</p> <p>The product called "ML Road Frame-W - Yellow, 38".</p>	FR-R72Y-42 ₹ 594.83 <p>ML Road Frame-W - Yellow, 42</p> <p>The product called "ML Road Frame-W - Yellow, 42".</p>

Adding code and running the application: -

```

7 public class CosmosService : ICosmosService
10 public CosmosService()
11 {
12     _client = new CosmosClient(
13         connectionString: "AccountEndpoint=https://storage1.documents.azure.com:443/;AccountKey=30
14     );
15 }
16 2 references
17 private Container container
18 {
19     get => _client.GetDatabase("cosmicworks").GetContainer("products");
20 }
21 2 references
22 public async Task<IEnumerable<Product>> RetrieveAllProductsAsync()
23 {
24     var queryable = container.GetItemInQueryQueryable<Product>();
25     using FeedIterator<Product> feed = queryable
26         .Where(p => p.price < 2000m)
27         .OrderByDescending(p => p.price)
28         .ToFeedIterator();
29     List<Product> results = new();
30     while (feed.HasMoreResults)
31     {
32         var response = await feed.ReadNextAsync();
33         foreach (Product item in response)
34         {
35             results.Add(item);
36         }
37     }
38     return results;
39 }

```

PROBLEMS DEBUG CONSOLE OUTPUT TERMINAL PORTS AZURE

```

info: Microsoft.AspNetCore.Mvc.RazorPages.Infrastructure.PageActionInvoker[4]
      Executed page /Index in 1506.617ms
info: Microsoft.AspNetCore.Routing.EndpointMiddleware[1]
      Request finished HTTP/1.1 GET http://localhost:5000/ - - 200 - text/html; charset=utf-8 1507.2470ms
info: Microsoft.AspNetCore.Hosting.Diagnostics[1]
      Request starting HTTP/1.1 GET http://localhost:5000/favicon.ico - -
info: Microsoft.AspNetCore.StaticFiles.StaticFileMiddleware[6]
      The file /favicon.ico was not modified
om

```

Updated list of products from the Azure Cosmos DB database with prices descending

Lab- Cloud Computing

Legend					
Standard price					
High price [> ₹ 1,000.00]					
Low price [< ₹ 100.00]					
ID	Name	SKU	Category	Description	Price
C461038A-6DB6-4EC7-924F-ECA906259A6E	Road-350-W Yellow, 42	BK-R79Y-42	Bikes, Road Bikes	The product called "Road-350-W Yellow, 42"	₹ 1,700.99
9E5C74FD-F685-45AE-A799-D67EFB5C28A1	Road-350-W Yellow, 40	BK-R79Y-40	Bikes, Road Bikes	The product called "Road-350-W Yellow, 40"	₹ 1,700.99
4F9FC42A-F43F-4C13-92FC-ADF701F48C36	Road-350-W Yellow, 44	BK-R79Y-44	Bikes, Road Bikes	The product called "Road-350-W Yellow, 44"	₹ 1,700.99
063F1A00-8CA1-4DB9-8298-BEAC4B8CC238	Road-350-W Yellow, 48	BK-R79Y-48	Bikes, Road Bikes	The product called "Road-350-W Yellow, 48"	₹ 1,700.99
F1AA8B6D-4CF2-4DB2-BB17-997C2BD1A6AC	Road-450 Red, 58	BK-R68R-58	Bikes, Road Bikes	The product called "Road-450 Red, 58"	₹ 1,457.99
E2FD2420-B084-4764-8BC4-94574DFF1AC6	Road-450 Red, 48	BK-R68R-48	Bikes, Road Bikes	The product called "Road-450 Red, 48"	₹ 1,457.99
D616598D-3159-4616-BF9D-5B3C7F5F3331	Road-450 Red, 60	BK-R68R-60	Bikes, Road Bikes	The product called "Road-450 Red, 60"	₹ 1,457.99

Azure Cosmos DB – end to end example:

Storage account, database, container, and items: -

Query with AI using Microsoft Copilot for Azure in Cosmos DB! Ask your subscription admin to enable the preview today. [LEARN MORE](#) [Enroll](#)

NOSQL API

Home Events2021 - It...

DATA

Events

Events2021

Items

Scale & Settings

Stored Procedures

User Defined Functions

Triggers

NOTEBOOKS

Notebooks is currently not available. We are working on it.

SELECT * FROM c

Edit Filter

id	/Event...
d5c137ae...	Triathlon ...
4b4d72d5...	Triathlon ...
e3c459bf...	Triathlon ...
7c041e5c...	Ironman ...
b043d41c...	Triathlon L...
81f5b5e2...	Ironman B...
94b07f89...	Triathlon S...
e6cb8787...	Triathlon ...
78a0fc82...	Ironman F...

```

{
  "id": "d5c137ae-5954-4eb2-9a7b-59ad3e65236d",
  "Eventname": "Triathlon Amsterdam",
  "Eventdate": "2021-03-04",
  "ParticipantId": 4713,
  "ParticipantLastname": "Visser",
  "ParticipantFirstname": "Cyrille",
  "Category": "Olympic",
  "SwimmingScore": "03:17:16",
  "CyclingScore": "03:25:48",
  "RunningScore": "03:04:23",
  "TotalScore": "09:47:27",
  "_rid": "1ANWAPHSu4BAAAAAAAAA==",
  "_self": "dbs/1ANWAA==/colls/1ANWAPHSu4B-/docs/1ANWAPHSu4BAAAAAAAAA==/",
  "_etag": "\"16e0027c9-0000-0200-0000-65e419000000\"",
  "_attachments": "/",
  "_ts": 1709447437
}

```

Executing query: -



Lab- Cloud Computing

Home		Query 1 x
<pre>1 SELECT * FROM c 2 WHERE c.Eventname = 'Triathlon Amsterdam' 3 ORDER BY c.TotalScore asc</pre>		
Results Query Stats		
METRIC		VALUE
Request Charge		2.9 RUs
Showing Results		1 - 3
Retrieved document count		3
Retrieved document size		1571 bytes
Output document count		3
Output document size		1871 bytes
Per-partition query metrics (CSV)		

Old indexing policy: -

Scale	Settings	Indexing Policy	Partition Keys
<pre>1 { 2 "indexingMode": "consistent", 3 "automatic": true, 4 "includedPaths": [5 { 6 "path": "/*" 7 } 8], 9 "excludedPaths": [10 { 11 "path": "/\"_etag\"/?" 12 } 13] 14 }</pre>			

New indexing policy: -

Lab- Cloud Computing

```

Scale  Settings  Indexing Policy  Partition Keys

1  {
2    "indexingMode": "consistent",
3    "automatic": true,
4    "includedPaths": [
5      {
6        "path": "/Eventname/?"
7      },
8      {
9        "path": "/Eventdate/?"
10     },
11     {
12       "path": "/ParticipantId/?"
13     },
14     {
15       "path": "/TotalScore/?"
16     }
17   ],
18   "excludedPaths": [

```

Optimised querying: -

Home
Query 1 x

```

1 SELECT * FROM c
2 WHERE c.Eventname = 'Triathlon Amsterdam'
3 ORDER BY c.TotalScore asc

```

Results
Query Stats

METRIC	VALUE
Request Charge	2.1 RU/s
Showing Results	1 - 3
Retrieved document count	3
Retrieved document size	1571 bytes
Output document count	3
Output document size	1871 bytes

[Per-partition query metrics \(CSV\)](#)

Azure Cosmos DB for Table for .NET

Creating Cosmos DB account using Azure PowerShell:



|

```
PS /home/akshar2 > # Variable for resource group name
PS /home/akshar2 > $RESOURCE_GROUP_NAME = "msdocs-cosmos-quickstart-rg"
PS /home/akshar2 > $LOCATION = "West US"
PS /home/akshar2 >
PS /home/akshar2 > # Variable for account name with a randomly generated suffix
PS /home/akshar2 > $SUFFIX = Get-Random
PS /home/akshar2 > $ACCOUNT_NAME = "msdocs-$SUFFIX"
PS /home/akshar2 > $parameters = @{
>>     Name = $RESOURCE_GROUP_NAME
>>     Location = $LOCATION
>> }
PS /home/akshar2 > New-AzResourceGroup @parameters

ResourceGroupName : msdocs-cosmos-quickstart-rg
Location           : westus
ProvisioningState  : Succeeded
Tags              :
ResourceId         : /subscriptions/97e43b90-2dab-44c3-a90a-fa73529dceac/resourceGroups/msdocs-cosmos-quickstart-rg
```

```
PS /home/akshar2 > New-AzCosmosDBAccount @parameters

Id                : /subscriptions/97e43b90-2dab-44c3-a90a-fa73529dceac/resourceGroups/msdocs-cosmos-quickstart-rg/providers/Microsoft.DocumentDB
Name              : msdocs-1162849875
Location          : West US
Tags              : {}
EnableCassandraConnector :
EnableMultipleWriteLocations : False
VirtualNetworkRules : {}
FailoverPolicies   : {msdocs-1162849875-westus}
Locations          : {msdocs-1162849875-westus}
ReadLocations      : {msdocs-1162849875-westus}
WriteLocations     : {msdocs-1162849875-westus}
Capabilities       : {EnableTable}
ConsistencyPolicy  : Microsoft.Azure.Management.CosmosDB.Models.ConsistencyPolicy
EnableAutomaticFailover : False
IsVirtualNetworkFilterEnabled : False
IpRules            : {}
DatabaseAccountOfferType : Standard
DocumentEndpoint   : https://msdocs-1162849875.documents.azure.com:443/
ProvisioningState  : Succeeded
Kind               : GlobalDocumentDB
ConnectorOffer     :
DisableKeyBasedMetadataWriteAccess : False
PublicNetworkAccess : Enabled
KeyVaultKeyUri     :
PrivateEndpointConnections :
EnableFreeTier     : False
ApiProperties       : Microsoft.Azure.Commands.CosmosDB.Models.PSApiProperties
EnableAnalyticalStorage : False
EnableBurstCapacity : False
```

Getting document endpoints: -

```
PS /home/akshar2> $parameters = @{
>>     ResourceGroupName = $RESOURCE_GROUP_NAME
>>     Name = $ACCOUNT_NAME
>>     Type = "ConnectionStrings"
>> }
PS /home/akshar2> Get-AzCosmosDBAccountKey @parameters | Select-Object -Property "Primary Table Connection String"

Primary Table Connection String
-----
DefaultEndpointsProtocol=https;AccountName=msdocs-1162849875;AccountKey=fcsCkdV8P8JjK8MFqH8qMjMACXqM1Dd8Kx5qpsIu6JpuN45QmWZEnRA4b4wehoGNIj
```

Code: -

Lab- Cloud Computing

```

var product = await tableClient.GetEntityAsync<Product>(
    rowKey: "68719518388",
    partitionKey: "gear-surf-surfboards"
);
Console.WriteLine("Single product:");
Console.WriteLine(product.Value.Name);

// Read multiple items from container
var prod2 = new Product()
{
    RowKey = "68719518390",
    PartitionKey = "gear-surf-surfboards",
    Name = "Sand Surfboard",
    Quantity = 5,
    Sale = false
};

await tableClient.AddEntityAsync<Product>(prod2);

var products = tableClient.Query<Product>(x => x.PartitionKey == "gear-surf-surfboards");

Console.WriteLine("Multiple products:");
foreach (var item in products)
{
    Console.WriteLine(item.Name);
}

```

Output: -

```

PS E:\Acads\Sem 6\IT457 Cloud Computing\Labs\Lab4\Code\myApp> dotnet run
Single product:
Ocean Surfboard
Multiple products:
Ocean Surfboard
Sand Surfboard

```

Output on Azure portal: -

ta Explorer ☆ ...

Query Text Run Query Add Entity Edit Entity Delete Entities

Home Entities x

Action	And/Or	Field	Type	Operator	Value
+ x	<input type="checkbox"/>	PartitionKey	String	=	gear-surf-surfboards
+ x	<input type="checkbox"/> And	RowKey	String	=	68719518388

+ Add new clause

Advanced Options

ng on it.

PartitionKey	RowKey	Timestamp	Name	Quantity	Sale
gear-surf-surfboards	68719518388	Sun, 03 Mar 2024 09:06:17 GMT	Ocean Surfboard	8	true
gear-surf-surfboards	68719518390	Sun, 03 Mar 2024 09:06:18 GMT	Sand Surfboard	5	false

