



中原大學 雲端計算平台實務

11/26-作業報告

Store data in Azure

資訊四乙 10727211 林彥輝

授課教師：鍾武君 教授

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# 1. Learning Path Intro

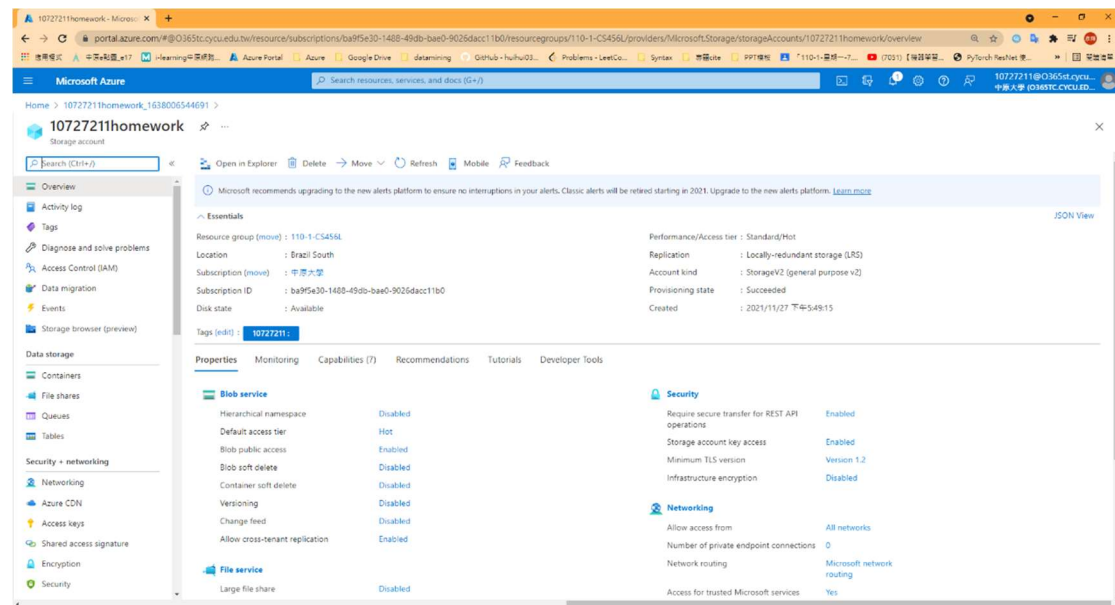
Store data in Azure

<https://docs.microsoft.com/en-us/learn/paths/store-data-in-azure/>

## 2. Summary Homework Assignment

### Model 2: Create an Azure Storage account

1. Unit5: Create a storage account using the Azure portal



### Model 3: Connect an app to Azure Storage

1. Create a Node.js application

```
Azure Cloud Shell

Type "az" to use Azure CLI
Type "help" to learn about Cloud Shell

azureuser@Azure:~$ mkdir PhotoSharingApp
azureuser@Azure:~$ cd PhotoSharingApp/
azureuser@Azure:~/PhotoSharingApp$ npm init -y
Wrote to /home/azureuser/PhotoSharingApp/package.json:

{
  "name": "PhotoSharingApp",
  "version": "1.0.0",
  "description": "",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "keywords": [],
  "author": "",
  "license": "ISC"
}

azureuser@Azure:~/PhotoSharingApp$ touch index.js
azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$ node index.js
Hello, World!
azureuser@Azure:~/PhotoSharingApp$
```

## 2. Create an Azure storage account

```
azureuser@Azure:~/PhotoSharingApp$ az storage account create \
> --resource-group learn-4c7467fb-5c33-4e0c-93dd-7158e373a91d \
> --location westus \
> --sku Standard_LRS \
> --name 10727211azcount
{
  "accessTier": "Hot",
  "allowBlobPublicAccess": true,
  "allowCrossTenantReplication": null,
  "allowSharedKeyAccess": null,
  "azureFilesIdentityBasedAuthentication": null,
  "blobRestoreStatus": null,
  "creationTime": "2021-11-26T05:29:12.212226+00:00",
  "customDomain": null,
  "defaultToOAuthAuthentication": null,
  "enableHttpsTrafficOnly": true,
```

## 3. Add the Azure Storage package

```
azureuser@Azure:~/PhotoSharingApp$ npm install @azure/storage-blob --save
npm WARN PhotoSharingApp@1.0.0 No description
npm WARN PhotoSharingApp@1.0.0 No repository field.

+ @azure/storage-blob@12.8.0
added 36 packages from 135 contributors and audited 36 packages in 9.2s
found 0 vulnerabilities

azureuser@Azure:~/PhotoSharingApp$ node index.js
Hello, World!
azureuser@Azure:~/PhotoSharingApp$
```

## 4. Create an .env configuration file

```
azureuser@Azure:~/PhotoSharingApp$ npm install @azure/storage-blob --save
npm WARN PhotoSharingApp@1.0.0 No description
npm WARN PhotoSharingApp@1.0.0 No repository field.

+ @azure/storage-blob@12.8.0
added 36 packages from 135 contributors and audited 36 packages in 9.2s
found 0 vulnerabilities

azureuser@Azure:~/PhotoSharingApp$ node index.js
Hello, World!
azureuser@Azure:~/PhotoSharingApp$ ls
index.js  node_modules  package.json  package-lock.json
azureuser@Azure:~/PhotoSharingApp$ touch .env
azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$
azureuser@Azure:~/PhotoSharingApp$ az storage account show-connection-string \
> --resource-group learn-4c7467fb-5c33-4e0c-93dd-7158e373a91d \
> --query connectionString \
> --name 10727211azcount
"DefaultEndpointsProtocol=https;EndpointSuffix=core.windows.net;AccountName=10727211azcount;AccountKey=wETQhtaizy+rC0rUd13Z3Zdm63Gx1KNeHFc560U1m929adNuMTenHHqRwEK1Mm2j5GL1SGGdRWi5jCV3skhmRA=="
azureuser@Azure:~/PhotoSharingApp$
```

```
Azure Cloud Shell

.env
...
FILES 1 AZURE_STORAGE_CONNECTION_STRING="DefaultEndpointsPr
node_modules
.env
index.js
package-lock.json
package.json

zcount;AccountKey=wETQhtaizy+rC0rUd13Z3Zdm63Gx1KNeHFc560U1m929adNuMTenHHqRwEK1Mm2j5GL1SGGdRWi5jCV3skhmRA=="
azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$
```

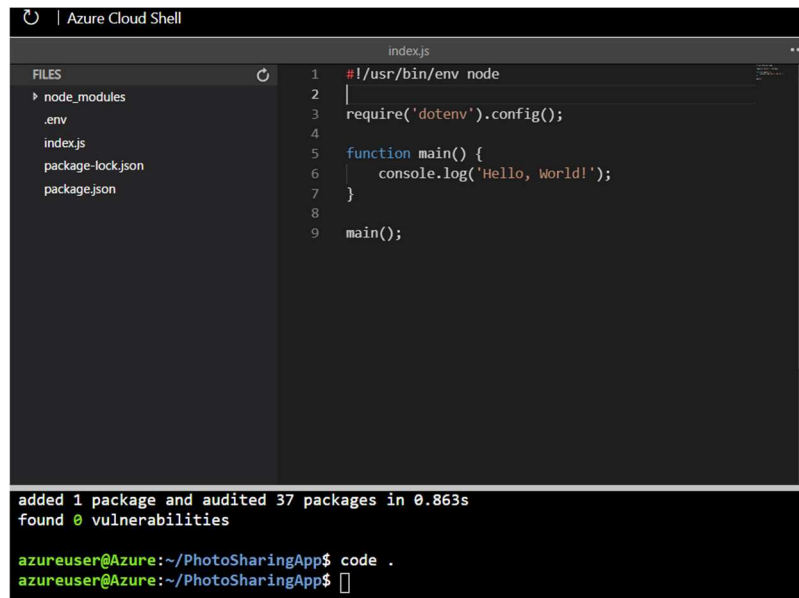
5. Add support to read an environment configuration file

```
azureuser@Azure:~/PhotoSharingApp$ npm install dotenv --save
npm WARN PhotoSharingApp@1.0.0 No description
npm WARN PhotoSharingApp@1.0.0 No repository field.

+ dotenv@10.0.0
added 1 package and audited 37 packages in 0.863s
found 0 vulnerabilities

azureuser@Azure:~/PhotoSharingApp$
```

6. Add code to read the configuration file



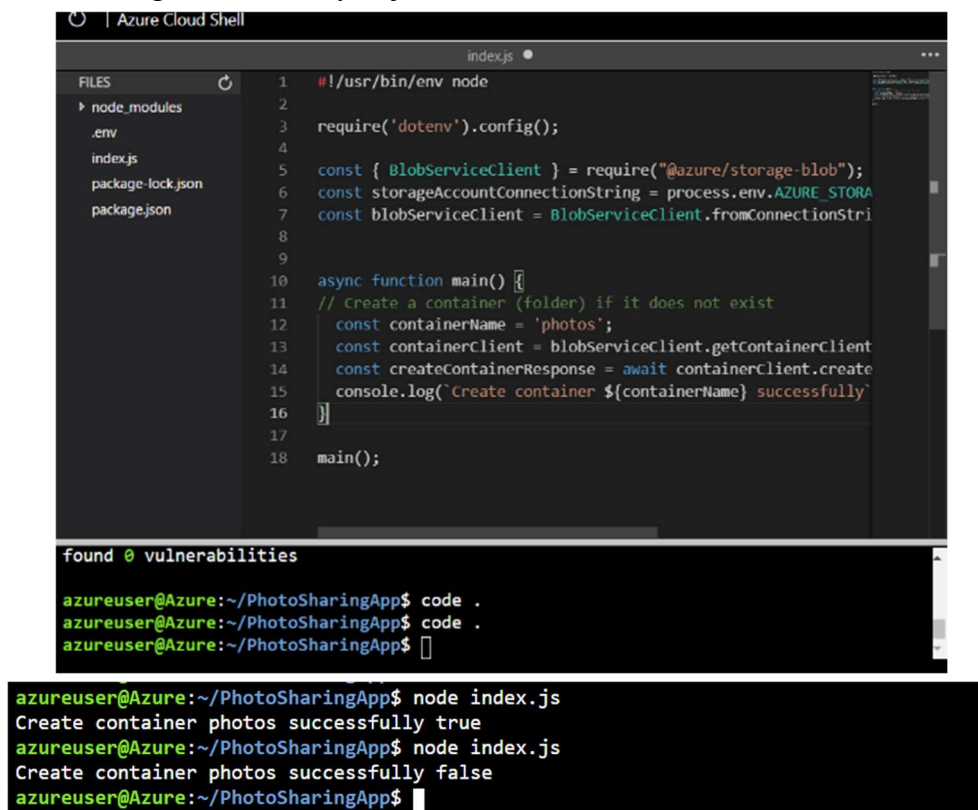
The screenshot shows the Azure Cloud Shell interface. On the left, a file explorer shows the project files: node\_modules, .env, index.js, package-lock.json, and package.json. The main editor displays the content of index.js, which is a Node.js script that uses the dotenv package to load environment variables and logs a message. The terminal at the bottom shows the output of the npm install command and the command to run the code.

```
index.js
1  #!/usr/bin/env node
2
3  require('dotenv').config();
4
5  function main() {
6    console.log('Hello, World!');
7  }
8
9  main();

added 1 package and audited 37 packages in 0.863s
found 0 vulnerabilities

azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$
```

7. Azure Storage client library object model



The screenshot shows the Azure Cloud Shell interface. On the left, a file explorer shows the project files: node\_modules, .env, index.js, package-lock.json, and package.json. The main editor displays the content of index.js, which is a Node.js script that uses the @azure/storage-blob package to create a container. The terminal at the bottom shows the output of the npm install command and the command to run the code. The output shows that the container 'photos' was created successfully.

```
index.js
1  #!/usr/bin/env node
2
3  require('dotenv').config();
4
5  const { BlobServiceClient } = require("@azure/storage-blob");
6  const storageAccountConnectionString = process.env.AZURE_STORAGE_CONNECTION_STRING;
7  const blobServiceClient = BlobServiceClient.fromConnectionString(storageAccountConnectionString);
8
9
10 async function main() {
11   // Create a container (folder) if it does not exist
12   const containerName = 'photos';
13   const containerClient = blobServiceClient.getContainerClient(containerName);
14   const createContainerResponse = await containerClient.create();
15   console.log(`Create container ${containerName} successfully`);
16 }
17
18 main();

found 0 vulnerabilities

azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$

azureuser@Azure:~/PhotoSharingApp$ node index.js
Create container photos successfully true
azureuser@Azure:~/PhotoSharingApp$ node index.js
Create container photos successfully false
azureuser@Azure:~/PhotoSharingApp$
```

```
Azure Cloud Shell
azureuser@Azure:~/PhotoSharingApp$ az storage container list \
> --account-name 10727211azcount

There are no credentials provided in your command and environment, we will query for
account key for your storage account.
It is recommended to provide --connection-string, --account-key or --sas-token in you
r command as credentials.

You also can add '--auth-mode login' in your command to use Azure Active Directory (A
zure AD) for authorization if your login account is assigned required RBAC roles.
For more information about RBAC roles in storage, visit https://docs.microsoft.com/az
ure/storage/common/storage-auth-aad-rbac-cli.

In addition, setting the corresponding environment variables can avoid inputting cred
entials in your command. Please use --help to get more information about environment
variable usage.
[
{
  "deleted": null,
  "encryptionScope": {
    "defaultEncryptionScope": "$account-encryption-key",
    "preventEncryptionScopeOverride": false
  },
  "metadata": null,
  "name": "photos",
  "properties": {
    "etag": "\"0x8D9B0A0B1CB067A\"",
    "hasImmutabilityPolicy": false,
```

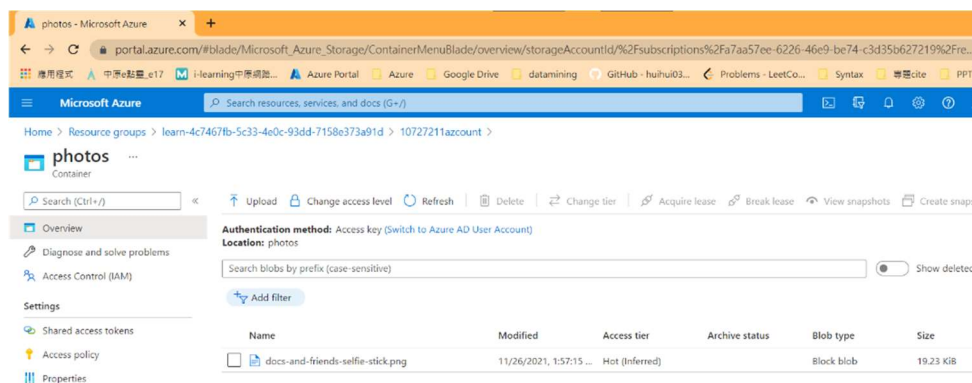
## 8. Upload an image to blob storage

```
Azure Cloud Shell
Connecting to github.com (github.com)|20.205.243.166|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://github.com/MicrosoftDocs/mslearn-connect-app-to-azure-storage/raw/main/images/docs-and-friends-selfie-stick.png [following]
--2021-11-26 05:53:05-- https://github.com/MicrosoftDocs/mslearn-connect-app-to-azur
e-storage/raw/main/images/docs-and-friends-selfie-stick.png
Reusing existing connection to github.com:443.
HTTP request sent, awaiting response... 302 Found
Location: https://raw.githubusercontent.com/MicrosoftDocs/mslearn-connect-app-to-azur
e-storage/main/images/docs-and-friends-selfie-stick.png [following]
--2021-11-26 05:53:05-- https://raw.githubusercontent.com/MicrosoftDocs/mslearn-conn
ect-app-to-azure-storage/main/images/docs-and-friends-selfie-stick.png
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.110.133, 1
85.199.111.133, 185.199.108.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.110.133|
:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 19693 (19K) [image/png]
Saving to: 'docs-and-friends-selfie-stick.png'

docs-and-friends-self 100%[=====] 19.23K --.-KB/s in 0s

2021-11-26 05:53:05 (68.6 MB/s) - 'docs-and-friends-selfie-stick.png' saved [19693/19
693]

azureuser@Azure:~/PhotoSharingApp$ code .
azureuser@Azure:~/PhotoSharingApp$ node index.js
Container photos already exists
```





# Model 5: Store application data with Azure Blob storage

## 1. Create Storage account

```
Bash
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

azureuser@azure:~$ az storage account create \
> --kind StorageV2 \
> --resource-group learn-978673b2-7c20-4779-a38d-f49ad33d1f69 \
> --location centralus \
> --name sandbox10727211storage
{
  "accessTier": "Hot",
  "allowBlobPublicAccess": true,
  "allowCrossTenantReplication": null,
  "allowSharedKeyAccess": null,
  "azureFileIdentityBasedAuthentication": null,
  "blobRestoreStatus": null,
  "creationTime": "2021-11-27T11:37:59.856739400:00",
  "customDomain": null,
  "defaultToAuthAuthentication": null,
  "enableHttpsTrafficOnly": true,
  "enableHfsv3": null,
  "encryption": {
    "encryptionIdentity": null,
    "keySource": "Microsoft.Storage",
    "keyVaultProperties": null,
    "requireInfrastructureEncryption": null,
    "services": {
      "blob": {
        "enabled": true,
        "keyType": "Account",
        "lastEnabledTime": "2021-11-27T11:37:59.950474400:00"
      },
      "file": {
        "enabled": true,
        "keyType": "Account",
        "lastEnabledTime": "2021-11-27T11:37:59.950474400:00"
      },
      "queue": null,
      "table": null
    }
  },
}
```

## 2. Clone and explore the unfinished app

```
Bash
azureuser@azure:~$
azureuser@azure:~$
azureuser@azure:~$ git clone https://github.com/MicrosoftDocs/mslearn-store-data-in-azure.git
Cloning into 'mslearn-store-data-in-azure'...
remote: Enumerating objects: 103, done.
remote: Counting objects: 100% (23/23), done.
remote: Compressing objects: 100% (19/19), done.
remote: Total 103 (delta 0), reused 14 (delta 4), pack-reused 80
Receiving objects: 100% (103/103), 39.16 KiB | 240.00 KiB/s, done.
Resolving deltas: 100% (29/29), done.
azureuser@azure:~$ cd mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start
```

## 3. Add the NuGet package

```
azureuser@azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ dotnet add package Azure.Storage.Blobs

Welcome to .NET Core 3.1!
-----
SDK Version: 3.1.403

Telemetry
-----
The .NET Core tools collect usage data in order to help us improve your experience. The data is anonymous. It is collected by Microsoft and shared with the community. You can opt-out of telemetry by setting the DOTNET_CLI_TELEMETRY_OPTOUT environment variable to '1' or 'true' using your favorite shell.

Read more about .NET Core CLI tools telemetry: https://aka.ms/dotnet-cli-telemetry

-----
Explore documentation: https://aka.ms/dotnet-docs
Report issues and find source on GitHub: https://github.com/dotnet/core
Find out what's new: https://aka.ms/dotnet-whats-new
Learn about the installed HTTPS developer cert: https://aka.ms/aspnet-core-https
Use 'dotnet --help' to see available commands or visit: https://aka.ms/dotnet-cli-docs
Write your first app: https://aka.ms/first-net-core-app

-----
Determining projects to restore...
Writing /tmp/tmp1kzqv.tmp
info : Adding PackageReference for package 'Azure.Storage.Blobs' into project '/home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/FileUploader.csproj'.
info : Restoring packages for /home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/FileUploader.csproj...
info : GET https://api.nuget.org/v3-flatcontainer/azure.storage.blobs/index.json
info : OK https://api.nuget.org/v3-flatcontainer/azure.storage.blobs/index.json 990ms
info : GET https://api.nuget.org/v3-flatcontainer/azure.storage.blobs/12.10.0/azure.storage.blobs.12.10.0.nupkg
info : OK https://api.nuget.org/v3-flatcontainer/azure.storage.blobs/12.10.0/azure.storage.blobs.12.10.0.nupkg 53ms

azureuser@azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ dotnet restore
Determining projects to restore...
Restored /home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/FileUploader.csproj (in 318 ms).
Restored /home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/FileUploader.csproj (in 12.68 sec).
azureuser@azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ code .
azureuser@azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ az appservice plan create \
> --name blob-exercise-plan \
> --resource-group learn-978673b2-7c20-4779-a38d-f49ad33d1f69 \
> --sku FREE --location centralus
{
  "freeOfferExpirationTime": null,
  "region": "central us",
  "hostingEnvironmentProfile": null,
  "hyperV": false,
  "id": "/subscriptions/1ca0bf90-05e5-401c-a602-4f23fb9fbd1a/resourceGroups/learn-978673b2-7c20-4779-a38d-f49ad33d1f69/providers/Microsoft.Web/serverfarms/blob-exercise-plan",
  "isSpot": false,
  "isXenon": false,
  "kind": "app",
  "location": "centralus",
  "maximumElasticWorkerCount": 1,
  "maximumNumberOfWorkers": 0,
  "name": "blob-exercise-plan",
  "numberOfSites": 0,
  "perSiteScaling": false,
  "provisioningState": "Succeeded",
  "reserved": false,
  "resourceGroup": "learn-978673b2-7c20-4779-a38d-f49ad33d1f69",
  "sku": {
    "capabilities": null,
    "capacity": 0,
  },
}
```

## 4. Models/BlobStorage.cs

```
1  using Azure;
2  using Azure.Storage.Blobs;
3  using Azure.Storage.Blobs.Models;
4
5  using System;
6  using System.Collections.Generic;
7  using System.IO;
8  using System.Threading.Tasks;
9  using Microsoft.Extensions.Options;
10
11 namespace FileUploader.Models
12 {
13     public class BlobStorage : IStorage
14     {
15         private readonly AzureStorageConfig storageConfig;
16
17         public BlobStorage(IOptions<AzureStorageConfig> storageConfig)
18         {
19             this.storageConfig = storageConfig.Value;
20         }
21
22         public Task Initialize()
23         {
24             BlobServiceClient blobServiceClient = new BlobServiceClient(storageConfig.ConnectionString);
25             BlobContainerClient containerClient = blobServiceClient.GetBlobContainerClient(storageConfig.FileContainerName);
26             return containerClient.CreateIfNotExistsAsync();
27         }
28
29         public Task Save(Stream fileStream, string name)
30         {
31             BlobServiceClient blobServiceClient = new BlobServiceClient(storageConfig.ConnectionString);
32
33             // Get the container (folder) the file will be saved in
34             BlobContainerClient containerClient = blobServiceClient.GetBlobContainerClient(storageConfig.FileContainerName);
35
36             // Get the Blob Client used to interact with (including create) the blob
37             BlobClient blobClient = containerClient.GetBlobClient(name);
38
39             // Upload the blob
40             return blobClient.UploadAsync(fileStream);
41         }
42
43         public async Task<IEnumerable<string>> GetNames()
44         {
45             List<string> names = new List<string>();
46
47             BlobServiceClient blobServiceClient = new BlobServiceClient(storageConfig.ConnectionString);
48
49             // Get the container the blobs are saved in
50             BlobContainerClient containerClient = blobServiceClient.GetBlobContainerClient(storageConfig.FileContainerName);
51
52             // This gets the info about the blobs in the container
53             AsyncPageable<BlobItem> blobs = containerClient.GetBlobsAsync();
54
55             await foreach (var blob in blobs)
56             {
57                 names.Add(blob.Name);
58             }
59             return names;
60         }
61
62         public Task<Stream> Load(string name)
63         {
64             BlobServiceClient blobServiceClient = new BlobServiceClient(storageConfig.ConnectionString);
65
66             // Get the container the blobs are saved in
67             BlobContainerClient containerClient = blobServiceClient.GetBlobContainerClient(storageConfig.FileContainerName);
68
69             // Get a client to operate on the blob so we can read it.
70             BlobClient blobClient = containerClient.GetBlobClient(name);
71
72             return blobClient.OpenReadAsync();
73         }
74     }
75 }
```

## 5. Deploy and run in Azure

```
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ az appservice plan create \
> --name blob-exercise-plan \
> --resource-group learn-978673b2-7c20-4779-a38d-f49ad33d1f69 \
> --sku FREE --location centralus
{
  "freeOfferExpirationTime": null,
  "geoRegion": "Central US",
  "hostingEnvironmentProfile": null,
  "hyperv": false,
  "id": "/subscriptions/1ca6bf90-85e5-401c-a602-4f23fb9fbd1/resourceGroups/learn-978673b2-7c20-4779-a38d-f49ad33d1f69/providers/Microsoft.Web/serverfarms/blob-exercise-plan",
  "isSpot": false,
  "isXenon": false,
  "kind": "app",
  "location": "centralus",
  "maximumElasticWorkerCount": 1,
  "maximumNumberOfWorkers": 0,
  "name": "blob-exercise-plan",
  "numberOfSites": 0,
  "perSiteScaling": false,
  "provisioningState": "Succeeded",
  "reserved": false,
  "resourceGroup": "learn-978673b2-7c20-4779-a38d-f49ad33d1f69",
  "sku": {
    "capabilities": null,
    "capacity": 0,

```

```

}
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ az webapp create \
> --name 10727211app \
> --plan blob-exercise-plan \
> --resource-group learn-978673b2-7c20-4779-a38d-f49ad33d1f69
{
  "availabilityState": "Normal",
  "clientAffinityEnabled": true,
  "clientCertEnabled": false,
  "clientCertExclusionPaths": null,
  "clientCertMode": "Required",
  "cloningInfo": null,
  "containerSize": 0,
  "customDomainVerificationId": "CB2AF50B807A9956133F5257A8A91F2857493F44098763658B591750A7F998CB",
  "dailyMemoryTimeQuota": 0,
  "defaultHostName": "10727211app.azurewebsites.net",
  "enabled": true,
  "enabledHostNames": [
    "10727211app.azurewebsites.net",
    "10727211app.scm.azurewebsites.net"
  ],
  "ftpPublishingUrl": "ftp://waws-prod-dm1-229.ftp.azurewebsites.windows.net/site/wwwroot",
  "hostNameSslStates": [
    {
      "hostType": "Standard",
      "ipBasedSslResult": null,
      "ipBasedSslState": "NotConfigured",
      "name": "10727211app.azurewebsites.net",
      "sslState": "Disabled",
      "thumbprint": null,
      "toUpdate": null,
      "toUpdateIpBasedSsl": null,
      "virtualIp": null
    },
    {
      "hostType": "Repository",

```

```

azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ az storage account show-connection-string \
> --name sandbox10727211storage \
> --output tsv
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ az webapp config appsettings set \
> --name 10727211app --resource-group learn-978673b2-7c20-4779-a38d-f49ad33d1f69 \
> --settings AzureStorageConfig:connectionString=$CONNECTIONSTRING AzureStorageConfig:fileName=files
{
  "name": "WEBSITE_NODE_DEFAULT_VERSION",
  "slotSetting": false,
  "value": "10.14.1"
},
{
  "name": "AzureStorageConfig:connectionString",
  "slotSetting": false,
  "value": "DefaultEndpointsProtocol=https;EndpointSuffix=core.windows.net;AccountName=sandbox10727211storage;AccountKey=Q8kp30mi5y9f20VtnvlebspVczepu8zh7LWkdap2x8ogpgVehBafCvrgyfaqp2pgkCamsat1IFk0rPXEdbyQ="
},
{
  "name": "AzureStorageConfig:fileName",
  "slotSetting": false,
  "value": "files"
}

```

```

azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ dotnet publish -o pub
Microsoft (R) Build Engine version 16.7.0+fb82e5b2 for .NET
Copyright (C) Microsoft Corporation. All rights reserved.

Determining projects to restore...
All projects are up-to-date for restore.
Fileloader -> /home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/bin/Debug/netcoreapp3.1/Fileloader.dll
Fileloader -> /home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/bin/Debug/netcoreapp3.1/Fileloader.Views.dll
Fileloader -> /home/azureuser/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/pub/
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start$ cd pub
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/pub$ zip -r ../site.zip *
adding: appsettings.Development.json (deflated 32%)
adding: appsettings.json (deflated 23%)
adding: Azure.Core.dll (deflated 56%)
adding: Azure.Storage.Blobs.dll (deflated 69%)
adding: Azure.Storage.Common.dll (deflated 55%)
adding: Fileloader (deflated 61%)
adding: Fileloader.deps.json (deflated 91%)
adding: Fileloader.dll (deflated 55%)
adding: Fileloader.pdb (deflated 48%)
adding: Fileloader.runtimeconfig.json (deflated 31%)
adding: Fileloader.Views.dll (deflated 65%)
adding: Fileloader.Views.pdb (deflated 49%)
adding: Microsoft.Bcl.AsyncInterfaces.dll (deflated 45%)
adding: System.Memory.Data.dll (deflated 41%)
adding: System.Text.Encoding.Web.dll (deflated 58%)
adding: web.config (deflated 40%)
adding: wwwroot (stored 0%)
adding: wwwroot/favicon.ico (deflated 71%)
azureuser@Azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/pub$ az webapp deployment source config-zip \
> --src ../site.zip \
> --name 10727211app \
> --resource-group learn-978673b2-7c20-4779-a38d-f49ad33d1f69
Getting scm site credentials for zip deployment
Starting zip deployment. This operation can take a while to complete ...
Deployment endpoint responded with status code 202

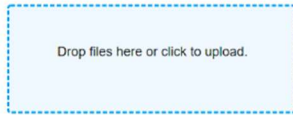
```





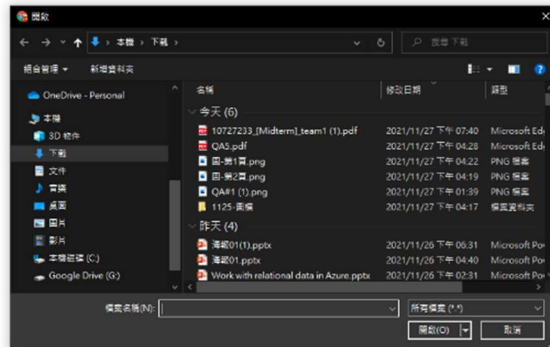
## File Uploader

### Upload files



### Uploaded files

- [QA5.pdf](#)



Home > All resources > sandbox10727211storage > files >

files

Search (Ctrl+F)

Upload Change access level

Overview

Diagnose and solve problems

Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

Authentication method: Access key (Switch to Azure AD User Account)

Location: files

Search blobs by prefix (case-...)

Show deleted blobs

Add filter

Name

☐ QA5.pdf

QA5.pdf

Overview Versions Snapshots Edit Generate SAS

Properties

URL <https://sandbox10727211...>

LAST MODIFIED 11/27/2021, 7:56:19 PM

CREATION TIME 11/27/2021, 7:56:19 PM

VERSION ID

TYPE Blob blob

SIZE 643.2 KB

ACCESS TIER Hot (Inferred)

ACCESS TIER LAST MODIFIED N/A

ARCHIVE STATUS -

REHYDRATE PRIORITY -

SERVER ENCRYPTED true

FLAG OutD9R19KCF89983

VERSION-LEVEL IMMUTABILITY POLICY Disabled

CONTENT-TYPE application/octet-stream

CONTENT-MD5 OviqXiaMdytD3T9RyGbn=

LEASE STATUS Unlocked

LEASE STATE Available

LEASE DURATION -

COPY STATUS -

COPY COMPLETION TIME -

Unlink

Metadata

```
azureuser@azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/pub$ az storage blob list --account-name sandbox10727211storage --container-name files --query [].Name --out put table

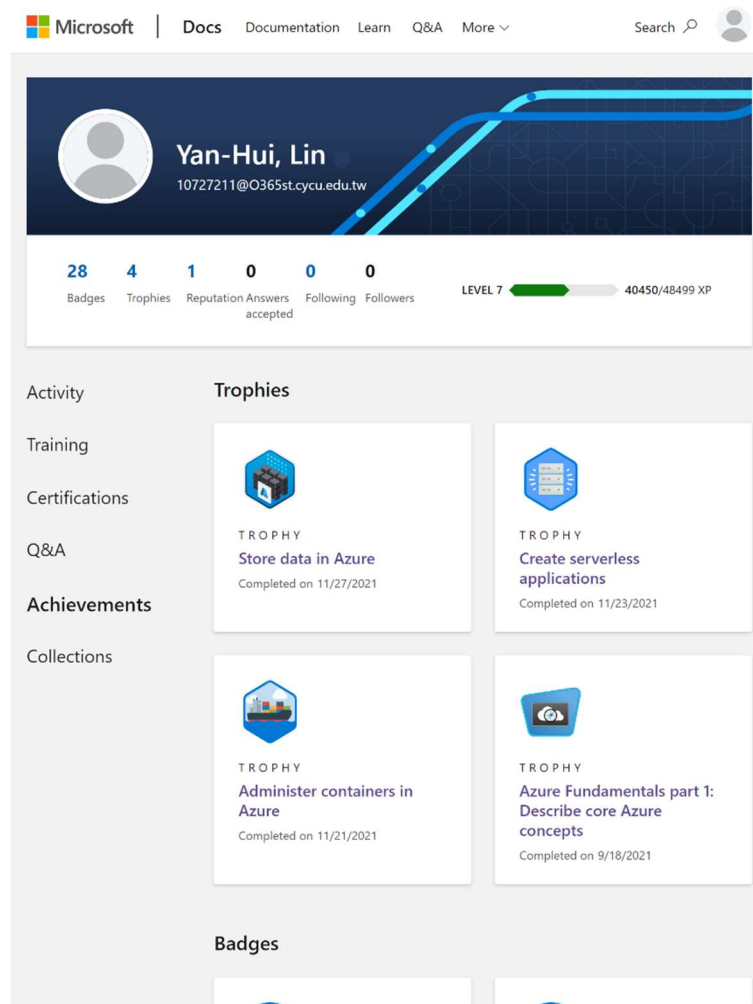
There are no credentials provided in your command and environment, we will query for account key for your storage account.
It is recommended to provide --connection-string, --account-key or --sas-token in your command as credentials.

You also can add "--auth-mode login" in your command to use Azure Active Directory (Azure AD) for authorization if your login account is assigned required RBAC roles.
For more information about RBAC roles in storage, visit https://docs.microsoft.com/azure/storage/common/storage-auth-aad-rbac-c11.

In addition, setting the corresponding environment variables can avoid inputting credentials in your command. Please use --help to get more information about environment variable usage.

Name
QA5.pdf
azureuser@azure:~/mslearn-store-data-in-azure/store-app-data-with-azure-blob-storage/src/start/pub$
```

## Take screenshots of Badges and Trophies



## Learned from the Learning Path

在 Model1 簡單介紹資料格式儲存的種類，透過種類更清楚各種 Azure Storage 的適當使用時機。Model2-3 開始實作如何創建 Storage Account，並且透過簡單的程式透過 Storage 的金鑰與 Storage 做互動，在 Model4 中了解 Azure 背後的安全性機制，在最後的 Model5 簡單實作一隻程式能與 Blob 作互動。

## Problems

整體實作相當流暢，並無遇到任何困難。但在課堂上有碰到其他人在實作的過程中有困難，原因主要為指令輸入錯誤（每個人在 sandbox 的 resource group 不同，而使用投影片的指令將會使用他人的 resource group，導致 error）。

## FeedBack

整體的教學解說精細、範例程式都能正常 work，是個相當適合新手的教學，但仍希望在中文版翻譯中，一些名詞能在後面補充原文，例如佇列 (Queue)。