Project: Deploy An Article CMS to Azure

Leandro Roncoroni

Resource Group

Provide a screenshot of the resource group in Azure, containing your running resources.

Storage

Provide a screenshot from your SQL database within Azure, showing that both the posts and users tables have been created. Alternatively, if the site is still live, provide the URL for the site.

cms (cms789/cms) | Query editor (preview) ☆ ⋯ ✕
SQL database

🔍 Search | ○ « | 👤 Login | + New Query | ↑ Open query | 🔗 Feedback | 📖 Getting started

- 📊 Overview
- 📋 Activity log
- 🏷 Tags
- 🔧 Diagnose and solve problems
- 🔲 Query editor (preview)
- 🌿 Mirror database in Fabric (preview)
- 🔗 Resource visualizer
- › Settings
- › Data management
- › Integrations
- › Power Platform
- › Security
- › Intelligent performance
- › Monitoring
- › Automation
- › Help

cms (odl_user_281273@udacityhol.onm...

ⓘ Showing limited object explorer here. For full capability please click here to open Azure Data Studio.

∨ 🗂 Tables
  › ⊞ dbo.POSTS ⋯
  › ⊞ dbo.USERS ⋯
› 🗂 Views
› 🗂 Stored Procedures

Query 1 ✕

▷ Run | ☐ Cancel query | ⬇ Save query | ⬇ Export data as ∨ | ⊞ Show only Editor

```
1    SELECT * FROM [dbo].[USERS]
```

Results   Messages

🔽 Search to filter items...

id	username	password_hash
1	admin	pbkdf2:sha256:150000$QIIrz6Hg$5f4cd25d78a6c79906a53f74ef5d3bb2609af2b...

🟢 Query succeeded | 0s

Add or remove favorites by pressing Ctrl+Shift+F

Query 1 ✕

▷ Run | ☐ Cancel query | ⬇ Save query | ⬇ Export data as ∨ | ⊞ Show only Editor

```
1    -- SELECT * FROM [dbo].[USERS]
2    SELECT * FROM [dbo].[POSTS]
```

Results   Messages

🔽 Search to filter items...

id	title	author	body	image_path
1	Lorem ipsum dolor s...	John Smith	Proin sit amet mi orn...	

🟢 Query succeeded | 0s

Add or remove favorites by pressing Ctrl+Shift+F

Provide a screenshot from your Storage Account within Azure, with the blob storage endpoint URL visible (can be seen in "Settings"->"Properties"). Alternatively, if the site is still live, provide the URL for the CMS site to show images are able to be stored and viewed.
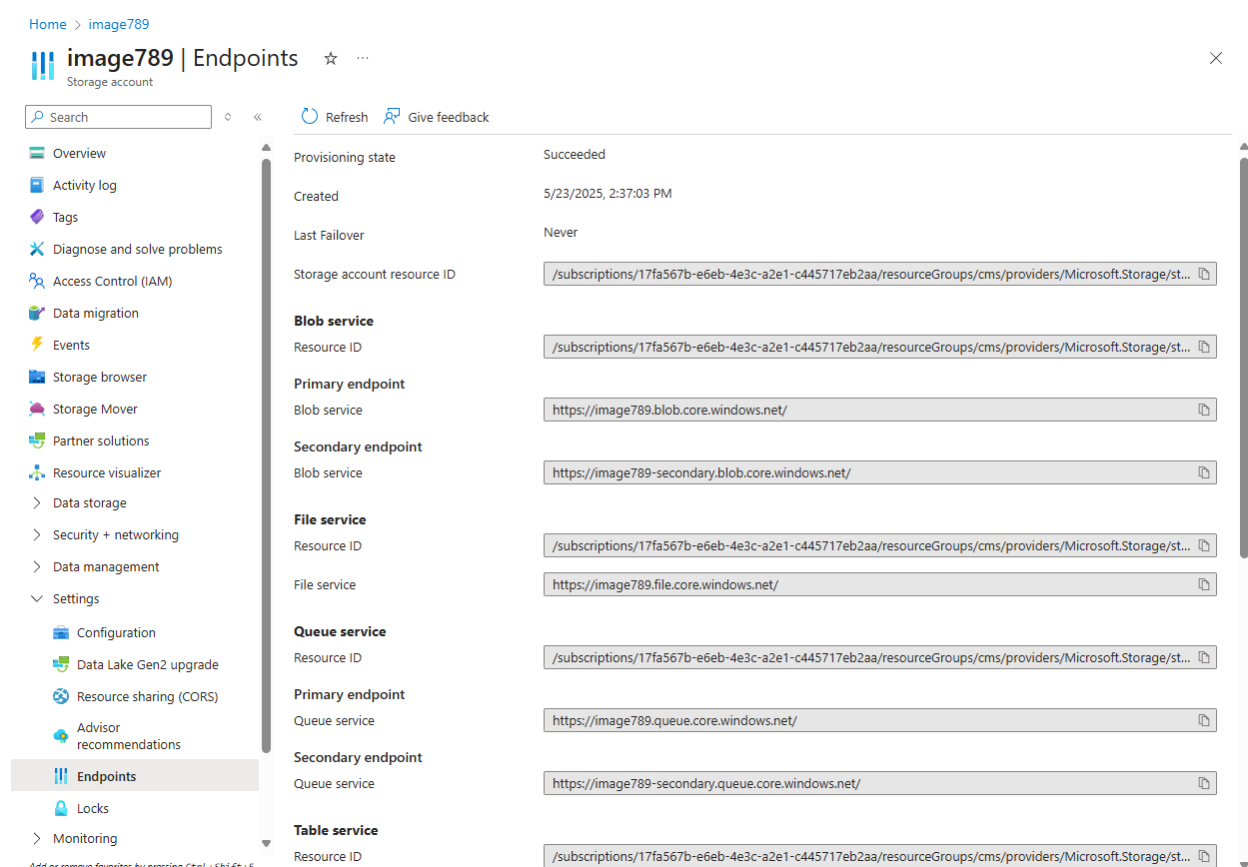
Resource Justification

In the provided writeup.md file, for **both** the VM and the App Service solution for the CMS app: Analyze costs, scalability, availability, and workflow

Ensure the write-up should include information on all four analysis points mentioned above for both VM and App Service.

Cost.

- Azure App Service: offers a tiered pricing (free in this case) with built-in scaling; abstraction of infrastructure management.

- Azure VM: Offers pay-as-you-go for compute, storage and bandwidth. Need to pay for OS licensing, patching and maintenance

Scalability

- Azure App Service: built-in auto-scaling, minimal configuration and fast scaling
- Azure VM: Manual scaling, full control over scaling process and slow scaling due to provisioning

Availability

- Azure App Service: built-in high availability, integrated disaster recovery
- Azure VM: requires setup, manual configuration for disaster recovery

Workflow

- Azure App Service: GH Actions, Azure DevOps. Azure handles platform updates. Built-in diagnostic and logging.
- Azure VM: Manual setup (SSH, FTP, CI/CD). Customer manages OS updates, patches and runtime and requires to setup monitoring.

Choose the appropriate solution (VM or App Service) for deploying the app and justify your choice. The justification should have at least 2-3 sentences on why you have chosen the VM or App Service.

The solution chosen is Azure App Service, because of its ease of use, lower maintenance, and built-in scalability.

If there were any requirement for custom OS-level control, specialized libraries, or non-standard configurations, I woud go with Azure VM.

Deployment

The Python web app has been deployed to Azure using the chosen resource in the previous section.

As evidence, provide a screenshot of the Python application running from a browser (this can be part of the screenshot in the next section). **The screenshot should include the URL and the black header that states "Article CMS".** Alternatively, you can provide a link to the deployed app, if it is still live.
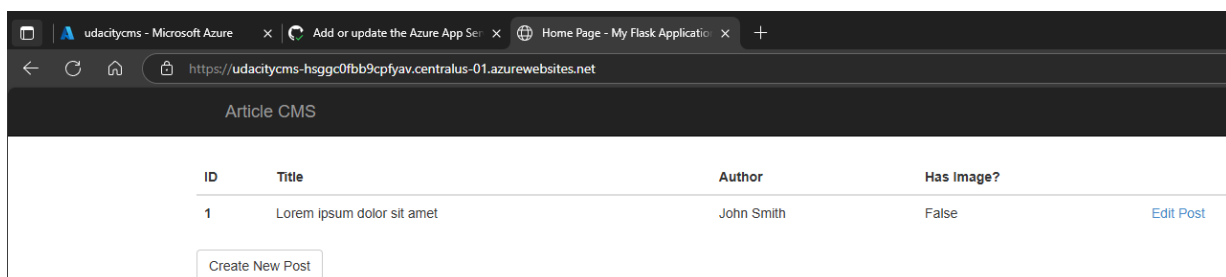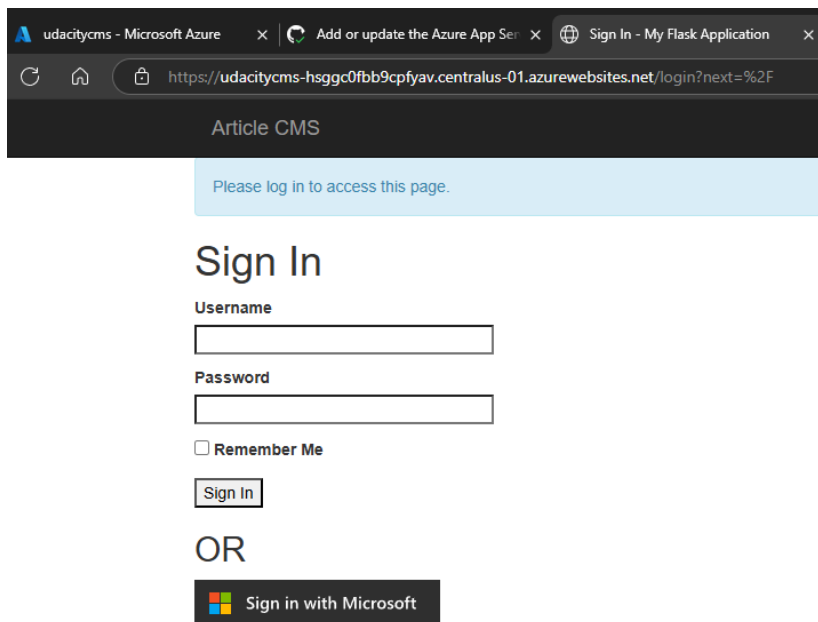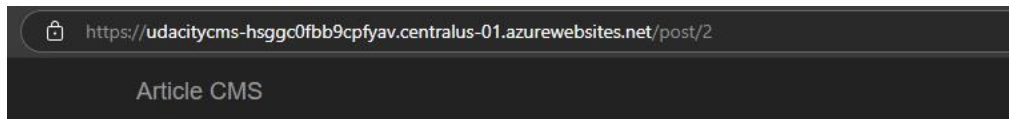

The Python web app is able to connect to the related storage solutions.

As evidence, provide a screenshot of the Python application running from a browser. **The screenshot should include the URL and at least one article containing title, author, body, and an image.** Alternatively, you can provide a link to the deployed app, if it is still live.
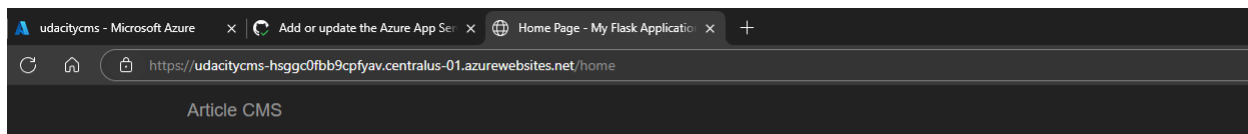
Security & Monitoring

The Python web app has an additional, operational option to sign in with Microsoft.

As evidence, provide a screenshot of the redirect URIs configured within the App Registration page in Azure. Alternatively, you can provide a link to the deployed app, if it is still live.

Additionally, your code in views.py should appropriately implement the Microsoft sign-in button using the msal library.

https://github.com/learonco/cd1756-Azure-Applications-project/blob/main/FlaskWebProject/views.py

Microsoft

odl_user_281273@udacityhol.onmicrosoft.com

Permissions requested

cmsEntraID
`unverified`

This application is not published by Microsoft.

This app would like to:

⌄ Sign you in and read your profile

⌄ Maintain access to data you have given it access to

Accepting these permissions means that you allow this app to use your data as specified in their terms of service and privacy statement. **The publisher has not provided links to their terms for you to review.** You can change these permissions at https://myapps.microsoft.com. Show details

Does this app look suspicious? Report it here

| Cancel | Accept |

🅰 udacitycms - Microsoft Azure × ⟳ Build and deploy Python app to A × ⬛ Sign out × +

⟳ ⌂ 🔒 https://login.**microsoftonline.com**/common/oauth2/v2/logout?post_logout_redirect_uri=http://udacitycms-hsggc0fbb9cpfyav.centralus-

Microsoft

Pick an account

Which account do you want to sign out of?

🪪 **ODL_User 281273**
odl_user_281273@udacityhol.onmicrosoft.com
Signed in

https://udacitycms-hsggc0fbb9cpfyav.centralus-01.azurewebsites.net/
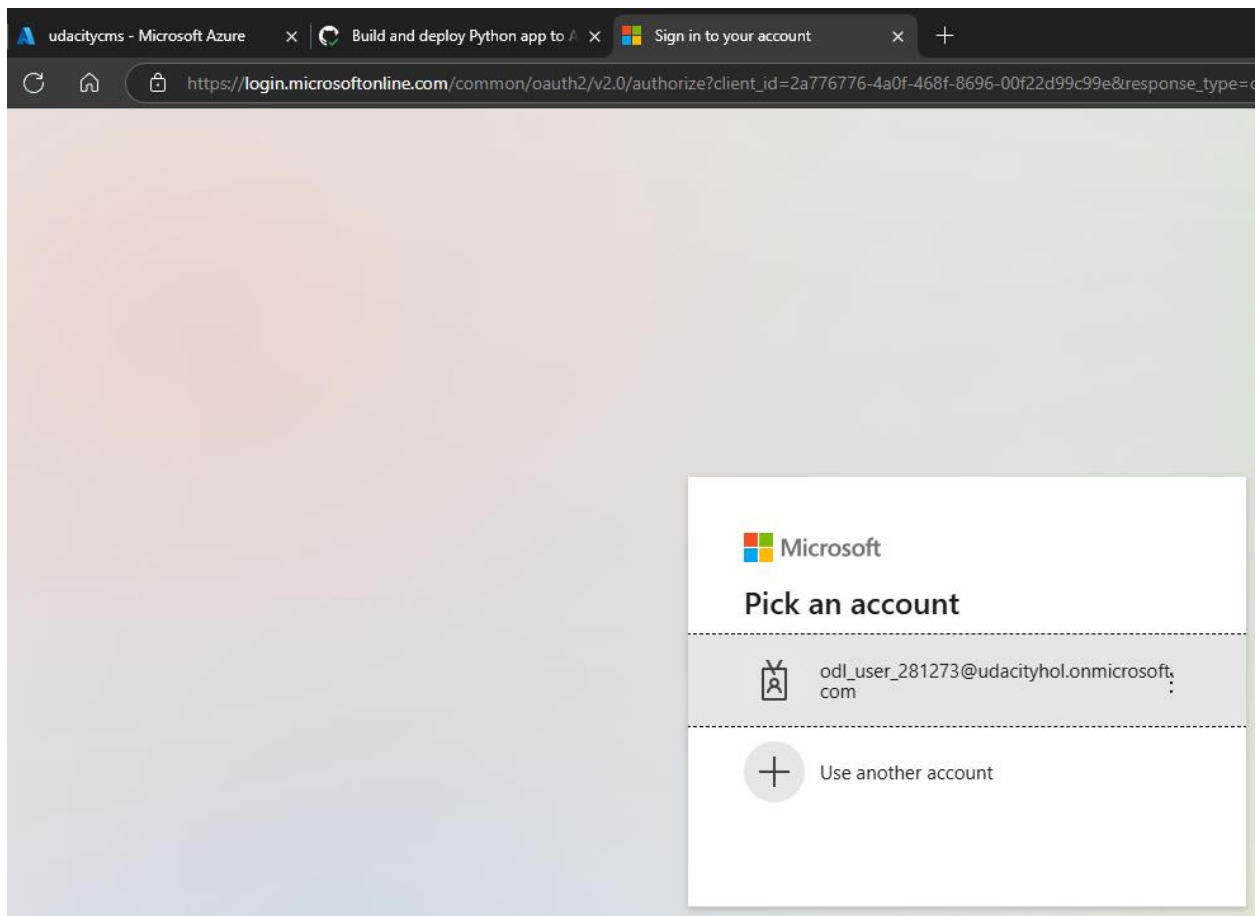
Both successful and unsuccessful attempts to access the web app are logged.

As evidence, provide a screenshot or download the logs from Azure containing at least one successful and one unsuccessful access attempt, and include them in your submission files. If otherwise submitting a URL, please include a link to screenshot/logs in the "Submission Details" box on the project submission page.

Hint: Share the screenshots where logs show the successful and failed login attempts. You can share Azure Portal logging, localhost terminal logs, or logs in Azure storage account.

udacitycms | Log stream
Web App

Search

Log Level ▾   Stop   Copy   Clear

Instances   0da0fe57fb91e6f11257116c067f1677ea2b718625ee60d6406366ad463cfb0e ▾

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)
Recommended services (preview)
Log stream

```
Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/5
2025-05-23T19:38:13.4152045Z 169.254.129.1 - - [23/May/2025:19:38:11 +0000] "GET /static/content/site.css H
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136
2025-05-23T19:38:13.4152616Z 169.254.129.1 - - [23/May/2025:19:38:12 +0000] "GET /static/scripts/modernizr-
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/5
2025-05-23T19:38:13.4152692Z 169.254.129.1 - - [23/May/2025:19:38:12 +0000] "GET /static/images/sign-in-with
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/5
2025-05-23T19:38:13.4153001Z 169.254.129.1 - - [23/May/2025:19:38:12 +0000] "GET /static/scripts/jquery-1.1
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136
2025-05-23T19:38:13.4153086Z 169.254.129.1 - - [23/May/2025:19:38:12 +0000] "GET /static/scripts/bootstrap.
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136
2025-05-23T19:38:13.4153143Z 169.254.129.1 - - [23/May/2025:19:38:12 +0000] "GET /static/scripts/respond.js
(Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136
2025-05-23T19:38:28.0095839Z [2025-05-23 19:38:28,009] WARNING in views: admin logged successfully.
2025-05-23T19:38:28.0097147Z admin logged successfully.
2025-05-23T19:38:28.0166091Z 169.254.129.1 - - [23/May/2025:19:38:28 +0000] "POST /login HTTP/1.1" 302 216
Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0 Safari/537.36 Edg/136.0.0.0"
```

udacitycms | Log stream
Web App

Search

Log Level ▾   Stop   Copy   Clear

Instances   0da0fe57fb91e6f11257116c067f1677ea2b718625ee60d6406366ad463cfb0e ▾

Overview
Activity log
Access control (IAM)
Tags
Diagnose and solve problems
Microsoft Defender for Cloud
Events (preview)
Recommended services (preview)
Log stream
Resource visualizer
Deployment
Settings
Performance
App Service plan
Development Tools

```
2025-05-23T19:39:52.2274818Z 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/content/bootstrap.min.css HTTP/1.1" 304 0 "https://udacitycms-hsggc0f
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:39:52.2392463Z 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/scripts/modernizr-2.6.2.js HTTP/1.1" 304 0 "https://udacitycms-hsggc0f
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:39:52.2536265Z 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/images/sign-in-with-ms.svg HTTP/1.1" 304 0 "https://udacitycms-hsggc0f
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:39:52.2574554Z 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/content/site.css HTTP/1.1" 304 0 "https://udacitycms-hsggc0fbb9cpfyav-
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:39:52.2606043Z 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/scripts/jquery-1.10.2.js HTTP/1.1" 304 0 "https://udacitycms-hsggc0fbb
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:39:52.4552422 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/scripts/bootstrap.js HTTP/1.1" 304 0 "https://udacitycms-hsggc0fbb9cpfy
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:39:52.4672262Z 169.254.129.1 - - [23/May/2025:19:39:52 +0000] "GET /static/scripts/respond.js HTTP/1.1" 304 0 "https://udacitycms-hsggc0fbb9cpfyav
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:40:08.2279615Z [2025-05-23 19:40:08,227] WARNING in views: Invalid login attemp - Invalid username or password. Username: invaliduser
2025-05-23T19:40:08.2280825Z Invalid login attemp - Invalid username or password. Username: invaliduser
2025-05-23T19:40:08.2318336Z 169.254.129.1 - - [23/May/2025:19:4
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chro
NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chro
2025-05-23T19:40:08.5569762 169.254.129.1 - - [23/May/2025:19:40
Chrome/136.0.0.0 Safari/537.36 Edg/136.0.0.0"
2025-05-23T19:40:08.7761314Z 169.254.129.1 - - [23/May/2025:19:4
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64
2025-05-23T19:40:08.7890092 169.254.129.1 - - [23/May/2025:19:4
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64
2025-05-23T19:40:08.7932197Z 169.254.129.1 - - [23/May/2025:19:4
"Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (K
2025-05-23T19:40:08.8143339Z 169.254.129.1 - - [23/May/2025:19:4
01.azurewebsites.net/login" "Mozilla/5.0 (Windows NT 10.0; Win64
2025-05-23T19:40:08.8181053Z 169.254.129.1 - - [23/May/2025:19:4
```

Home Page - My Flask Application   Sign In - My Flask Application

https://udacitycms-hsggc0fbb9cpfyav.centralus-01.azurewebsites.n...

Article CMS

Invalid username or password