

# CSI3007 - ADVANCED PYTHON PROGRAMMING

## LAB ACTIVITY – 20

### Web Deployment (Streamlit Cloud)

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**Goal:** To deploy a Streamlit-based Logic Puzzle & Riddle Quiz Web Application on Streamlit Community Cloud, enabling public web access to an interactive logic-based quiz app that was previously containerized locally using Docker.

#### Project Overview

**Title –Logic Puzzle and Riddle Quiz Using Streamlit**

#### Aim:

The aim of this project is to build and deploy a web-based puzzle quiz application using Streamlit that presents random logic puzzles of varying difficulty levels (Easy, Medium, Hard). The app evaluates user answers, provides explanations, and enhances logical reasoning skills. This project also demonstrates how a Dockerized Streamlit app can be deployed to the cloud for public use.

**Framework Suitability: Streamlit**

#### Project Structure

**PUZZLE\_APP/**

```
|
|
|— app.py          # Main Streamlit application
|— puzzles_data.py  # Dataset of 150+ logic riddles
|— Dockerfile       # Docker configuration for local containerization
|— requirements.txt # Python dependencies
└— .dockerignore    # Ignored files (cache, env, etc.)
```

#### Build & Deployment Process

```
docker build -t puzzle-quiz-app .
```

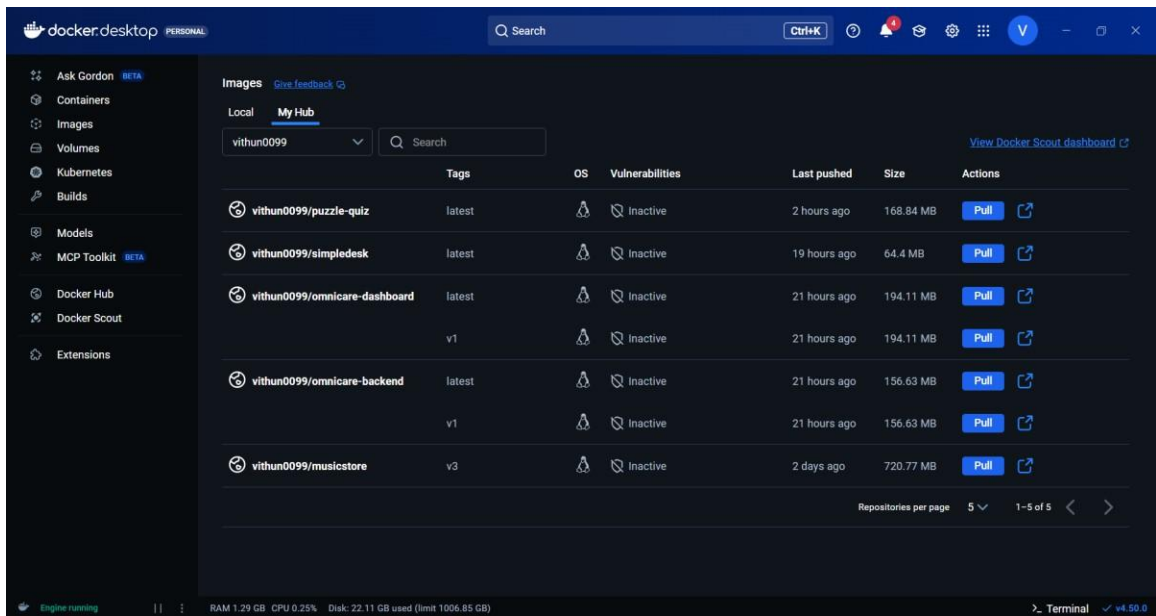
```
docker run -p 8501:8501 puzzle-quiz-app
```

#### 2. Push Image to Docker Hub

```
docker tag puzzle-quiz-app vithun0099/puzzle-quiz-app:latest
```

```
docker push vithun0099/puzzle-quiz-app:latest
```

DOCKER HUB SNAPSHOT WITH LOADED IMAGE:



### 3. Streamlit Cloud Deployment

share.streamlit.io

vithun-007

My apps

My profile

Explore

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Create app

vithun-007's apps

email-phishing-main-t/app.py

email-phishing-main-t/streamlit\_app.py

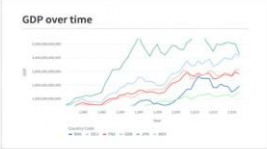
gdp-dashboard-main-streamlit\_app.py

puzzle-main-app.py

Get started from a template

View all templates

GDP over time



Chatbot

This is a simple chatbot that uses OpenAI GPT-3.5 model to generate responses. To use this app, you need to provide an OpenAI API key, which you can get [here](#). You can also learn how to build this app step by step by following [this tutorial](#).

Send a key

What is it?

Existing tickets

Number of tickets: 120

You can add the tickets by clicking on a cell. Note how the plot below updates automatically! You can also sort the table by clicking on the column headers.

ID	Issue	Category	Severity	Date Submitted
10001-0001	Website performance degradation	Cloud	High	2023-01-01
10001-0002	Authentication and authorization configuration	Infrastructure	Medium	2023-01-05
10001-0003	System updates causing compatibility issues	Cloud	Medium	2023-01-10
10001-0004	Website content not updating	API	High	2023-01-15
10001-0005	Security vulnerability identified	Server	Medium	2023-01-20
10001-0006	Website performance degradation	Cloud	Medium	2023-01-25
10001-0007	Customer support request for new feature	Other	Low	2023-01-30

My new app

Let's start building! For help and inspiration, head over to [DataCamp's guide](#).

github.com/Vithun-007/puzzle

Vithun-007 / puzzle

Type (/) to search

Code

Issues

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

puzzle

Public

Pin

Watch 0

Fork

Star 0

main

1 Branch

0 Tags

Go to file

Add file

Code

About

Vithun-007

Add files via upload

10/16/23 · 1 hour ago

1 Commit

.dockerignore

Add files via upload

1 hour ago

app.py

Add files via upload

1 hour ago

puzzles\_data.py

Add files via upload

1 hour ago

requirements.txt

Add files via upload

1 hour ago

README

Add a README

Help people interested in this repository understand your project by adding a README.

Add a README

About

No description, website, or topics provided.

Activity

0 stars

0 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Languages

Python 100.0%

Suggested workflows

Based on your tech stack

share.streamlit.io/deploy

vithun-007

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### Deploy an app

Repository [Paste GitHub URL](#)

Vithun-007/puzzle

Branch

main

Main file path

app.py

App URL (optional)

puzzle-ysd7att4aug7zoha3bedyr .streamlit.app

Domain is available

[Advanced settings](#)

Deploy

PUBLIC URL LINK: <https://puzzle-sba6pvzqd2g8kxjjeuxuxl.streamlit.app/>

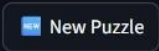
Share ☆ ✎ 🔍 ⋮

# Logic Puzzle & Riddle Quiz

Sharpen your mind with logic puzzles! Choose wisely and learn from explanations 🧠

Select Difficulty Level:

☒ Easy ☐ Medium ☐ Hard

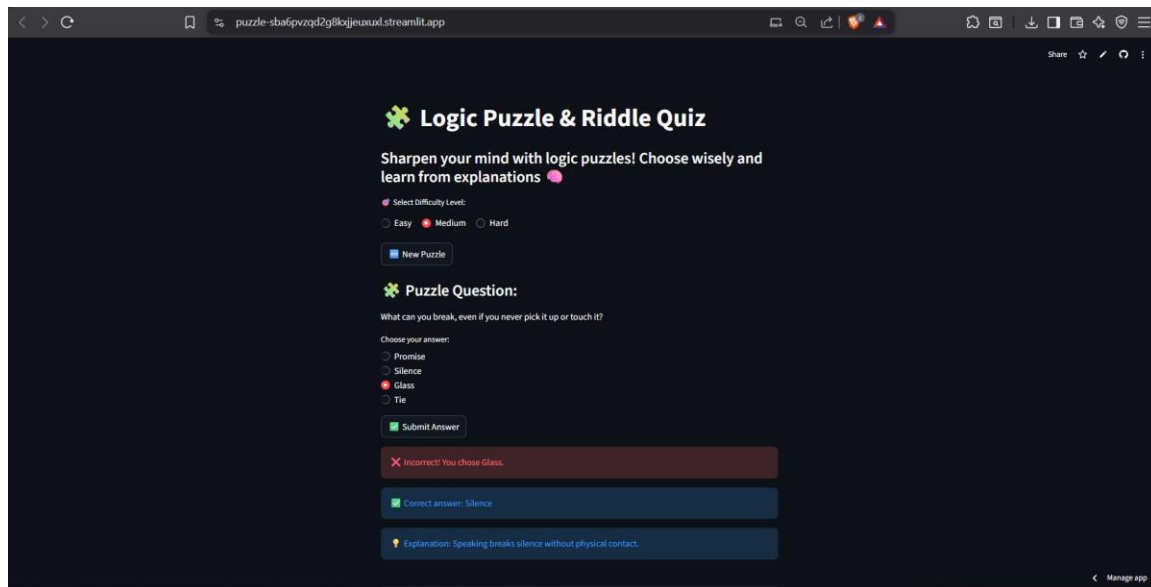
 New Puzzle

Click New Puzzle to start playing!

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Made with ❤️ using Streamlit | 150 logic puzzles with explanations 🧠

Manage app



## Conclusion

The deployment of the **Logic Puzzle and Riddle Quiz** web application on **Streamlit Community Cloud** successfully demonstrates a complete workflow — from local development and Docker-based containerization to cloud deployment.

This project showcases how Streamlit simplifies the process of publishing interactive Python web apps online while maintaining reliability, scalability, and ease of use.