0x09. Island Perimeter

gorithmy Playthogyplanning/me)

Weight: 1

旨

6

Projects(/projects/current)

An auto **CPA** i Previebres al upalme that the flow or lieue tions / to review)

? Evaluation quizzes(/dashboards/my current evaluation quizzes) In a nutshell...

Auto QA review: 9.75/15 mandatory

Altogether: 65.0%

Curriculums(/dashb.oa/ds/my_curriculums)

Optional: no optional tasks

Concepts(/concepts)

🏂 r the "Odaland Rerimetas"//பூது அக்கு அது will ac adtomapply your knowledge of algorithms, data structures (specifically matrices or 2D lists), and iterative or conditional logic to solve a geometric problem within a grid context. The goal is to calculate the perimeter of a single island in a grid, where the 📸 id is re**டின்கு rat/stay சு இ**D array of integers. Understanding how to navigate and analyze 2D arrays and apply logical operations to determine the conditions for perimeter calculation is crucial for this task.

Concepts Needed.

1. 2D Arrays (Matrices):

Tools(/dashboards/my tools)

- Accessing and iterating over elements in a 2D array.
- Understanding how to navigate through adjacent cells (horizontally and vertically).
- 2. Conditional engined (/dashboards/videos)
 - Applying conditions to determine whether a cell contributes to the perimeter of the island.
 - 3. Counting Techniques:

Developing a method to count the edges that contribute to the island's perimeter. 4. **Problem-Solving Strategies**:

• Breaking down the problem into smaller tasks, such as identifying land cells and calculating Discord https://discord.com/applmeter.

- 5. Python Programming:
 - Nested loops for iterating over grid cells.
 - Conditional statements to check the status of adjacent cells.



Resources:

Python Official Documentation:

 Nested Lists (/rltoken/8SPalOgoGDWQChVbct0p1g): Understanding how to work with lists within lists in Python.

Home(/) GeeksforGeeks Articles:



- Python Multi-dimensional Arrays (/rltoken/IYcYmeVICfF-F7Szn1fzfQ): A guide to working My Rhamming unlanging by thon effectively.
- TutorialsPoint:

ဗှ

Projects/projects//ctrken/TZ8UtQaRxN5cFf8c1TB-rw): Explains how to create, access, and manipulate lists in Python, which is essential for working with a grid.

- YouTube Tutorials:

QA Reviews I can make(/corrections/to_review)
Python 2D arrays and lists (/ritoken/H7SWI_XYDpwYonNYKXQfg)

By understanding these concepts and utilizing the provided resources, you will be equipped to approach ?ne prob**lem luation divizity.sylola is interear cts/treya transven**t<u>the gluid</u>, imp<u>ly</u>ubzgica), operations to identify the perimeter of the island, and account for the specific conditions described in the task. This project not only tests your algorithmic thinking but also reinforces your ability to manipulate data structures and apply logical reasoning to solve problems.



Curriculums(/dashboards/my_curriculums)

Additional Resources



Modritectial ใจสาเจอสาร์ละพร (/rltoken/9ZYjQgC9HvOLZiHxmgd89Q)

Requirements shboards/video_rooms)

<u> G</u>eneral

Servers(/servers)

- Allowed editors: vi, vim, emacs
- All your files will be interpreted/compiled on Ubuntu 20.04 LTS using python3 (version 3.4.3)
- AIPANHPRASSHUSARLERATAIRPRACHWIRNE)
 - The first line of all your files should be exactly #!/usr/bin/python3



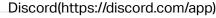
- A README.md file, at the root of the folder of the project, is mandatory Tools(/dashboards/my_tools)
 Your code should use the PEP 8 style (version 1.7)
- You are not allowed to import any module



- Allymedules and all noting in the language of the languag
- All your files must be executable



Peers(/users/peers)



0. Island Perimeter



Score: 65.0% (Checks completed: 100.0%)

My Profile(/users/my_profile)

Create a function def island_perimeter(grid): that returns the perimeter of the island described in __grid: grid is a list of list of integers: o 0 represents water Home(A) presents land Each cell is square, with a side length of 1 • Cells are connected horizontally/vertically (not diagonally). My Planning (helerning) and with its width and height not exceeding 100 The grid is completely surrounded by water There is only one island (or nothing). The island doesn't have "lakes" (water inside that isn't connected to the water surrounding the guillaume@ubuntu:~/oxo9\$(/corrections/to_review) #!/usr/bin/python3 _{0-mair}Evaluation quizzes(/dashboards/my_current_evaluation_quizzes) island_perimeter = __import__('0-island_perimeter').island_perimeter -ใช้ฟีคี่เculนิ้ักรใ<mark>/da่รีคี่มี</mark>bards/my_curriculums) grid = [[0, 0, 0, 0, 0, 0]Concepts (/concepts) 0], Ħ [0, 1, 0, 0, 0, 0], [0, 1, 1, 1, 0, 0], Conference rooms (dashboards/video_rooms) print(island_perimeter(grid)) | Servers(/servers) |guillaume@ubuntu:~/0x09\$ guillaume@ubuntu:~/0x09\$./0-main.py Sandboxes(/user_containers/current) Tools(/dashboards/my_tools) Repo: Github repository: all interview deos) Directory: 0x09-island_perimeter File: 0-island_perimeter.py Peers(/users/peers)
Check submission View results Discord(https://discord.com/app)

Copyright @ 2024 ALX, All rights reserved.