

creativecapsule

Python Training '24

Python

Overview

Complete all problems in each section before attempting new section.

Section 1

- [Task 1: Check Palindrome Number](#)
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Task 1: Check Palindrome Number

Problem Statement

Check if a given number is a Palindrome Number.

Expected output

Examples

```
Input : 16461
Output : Palindrome number

Input : 5621
Output : Not palindrome number
```

Task 2: Evaluate Expression

Problem Statement

Create a function "evaluate_expression " that returns True if a given inequality expression is correct and False otherwise.

Expected output

Examples

```
Input: evaluate_expression ("3 < 7 < 11")
```

```
Output: True
```

```
Input: evaluate_expression ("13 > 44 > 33 > 1")
```

```
Output: False
```

```
Input: evaluate_expression ("1 < 2 < 6 < 9 > 3")
```

```
Output: True
```

Task 3: Asynchronous Call

Problem Statement

The following code is written in a Synchronous manner. Write an Asynchronous version of this code that takes less time.

Code Snippet

```
import requests
import time

def download_site(url, session):
    with session.get(url) as response:
        print(f"Read {len(response.content)} from {url}")

def download_all_sites(sites):
    with requests.Session() as session:
        for url in sites:
            download_site(url, session)

if __name__ == "__main__":
    sites = [ "https://www.jython.org", "http://olympus.realpython.org/dice", ] *
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    start_time = time.time()
    download_all_sites(sites)
    duration = time.time() - start_time
    print(f"Downloaded {len(sites)} in {duration} seconds")
```

Task 4: Calculate Robot Movements

Problem Statement

A robot moves in a plane starting from the original point (0,0). The robot can move toward UP, DOWN, LEFT and RIGHT with a given steps. The trace of robot movement is shown as the following: UP 5 DOWN 3 LEFT 3 RIGHT 2

The numbers after the direction are steps. Write a program to compute the distance from current position after a sequence of movement and original point. If the distance is a float, then just print the nearest integer.

Expected output

Examples

```
Input:
UP 5
DOWN 3
LEFT 3
RIGHT 12

Output: 2
```

Task 5: Desktop Notifier App

Problem Statement

Write a simple Desktop Notifier App that allows to add entries and then displays / notifies at scheduled time.

Expected output

Examples

```
Input: Time: 17:00
      Message: Client meeting
Output: Notify/Display message at scheduled time

<hr>
```