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SLOT-B

PYTHON PROGRAMMING FOR BLOCK CHAIN PROJECTS

CSA0815

1. Write a program to check whether a string is a palindrome or not

```
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                                            -<u>`</u>oʻ.-
                                                               Run
                                                                          Output
main.py
1 - def is_palindrome(s):
                                                                        Enter a string: 123
      s = s.replace(" ", "").lower()
                                                                        '123' is not a palindrome.
4 text = input("Enter a string: ")
5 if is_palindrome(text):
      print(f"'{text}' is a palindrome.")
6
      print(f"'{text}' is not a palindrome.")
8
```

2. Write a program to count the occurrences of each word in a given sentence

```
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                                                                             Output
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                                                                   Run
چ
       main.py
       1 from collections import Counter
                                                                           Enter a sentence: 5
       2 def count_words(sentence):
              words = sentence.lower().split()
              word_count = Counter(words)
              return word_count
       6 sentence = input("Enter a sentence: ")
5
       7 word_count = count_words(sentence)
          for word, count in word_count.items():
              print(f"'{word}': {count}")
```

3. Write a program to count number of characters, words, and lines in the given string

```
∝ Share
       main.py
        1 def count_text_info(text):
                                                                           Enter your text (press Enter twice to finish):
æ
              num_characters = len(text)
              num_words = len(text.split())
              num_lines = len(text.splitlines())
return num_characters, num_words, num_lines
       6 print("Enter your text (press Enter twice to finish):")
5
        7 lines = []
ঙ
            line = input()
              if line ==
0
             lines.append(line)
      13 text = "\n".join(lines)
      14 characters, words, lines = count_text_info(text)
                                                                           --- Text Statistics ---
                                                                           Number of characters: 19
③
      16 print(f"Number of characters: {characters}")
                                                                           Number of words: 10
      17 print(f"Number of words: {words}")
                                                                           Number of lines: 10
      18 print(f"Number of lines: {lines}")
      19
```

4.Maximum Number of Words Found in SentenceA sentence is a list of words that are separated by a single space with no leading or trailin

spaces. You are given a list of strings sentences, where each sentences[i] represents a single

sentence. Write a python program to return the maximum number of words that appear in

a single sentence

Test Cases:

1.Input: sentences = ["alice and bob love apple", "i think so too", "this is great thanks very

much"]

Output: 6

2. Input: sentences = ["please wait", "continue to fight", "continue to win"]

Output: 3

```
main.py

C Share Run

Output

sentences = ["please wait", "continue to fight", "continue to win"]

max_words = max(len(sentence.split()) for sentence in sentences)

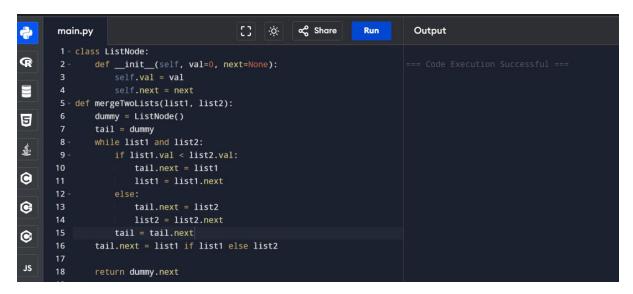
max_words = max(len(sentence.split()) for sentence in sentences)

print("Maximum number of words in a sentence:", max_words)

max_words = Code Execution Successful ===

code Execution Successful ===
```

3. ["the heads", "of", "two", "sorted linked lists"]



4. ["python", "is", "an object-oriented programming language"]



5. ["python", "is", "an interactive language"]



5. Given an integer x as numeric data type. Write a python program to return true if x is palindrome integer.

An integer is a palindrome when it reads the same backward as forward.

For example, 121 is a palindrome while 123 is not.

Test cases:

1.Input: x = 121

Output: true

```
main.py
                                           [] ÷
                                                      ∝ Share
                                                                   Run
                                                                            Output
       1 def is_palindrome(x):
                                                                           Enter an integer: 123
R
                                                                           123 is not a palindrome.
              if x < 0:
              return str(x) == str(x)[::-1]
       5 x = int(input("Enter an integer: "))
       6 - if is_palindrome(x):
5
              print(f"{x} is a palindrome.")
             print(f"{x} is not a palindrome.")
```

6. Write a python program to print the numbers from M to N by skipping K numbers in between? Get the input using list data type.

7. Most years have 365 days. However, the time required for the Earth to orbit the Sun is actually slightly more than that. As a result, an extra day, February 29, is included in some years to correct for this difference. Such years are referred to as leap years.

The rules for determining whether or not a year Is a leap year follow:

Any year that is divisible by 400 is a leapyear.

SampleInput:

EnterDate:1947



8. Write a python program to print the following pattern.

SampleInput:

Numberofrows:5