2306aml109-byogeshwar-assignment-7

July 1, 2023

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##Assignment 7
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##1. Write a Python program to find the second smallest number in a list.
```

[3]:
```
def second_smallest(lst):
    if len(lst) < 2:
        return None

    smallest = min(lst[0], lst[1])
    second_smallest = max(lst[0], lst[1])

    for num in lst[2:]:
        if num < smallest:
            second_smallest = smallest
            smallest = num
        elif num < second_smallest and num != smallest:
            second_smallest = num

    return second_smallest
```

[4]:
```
my_list = [1, 2, -8, -2, 0]
second_smallest_number = second_smallest(my_list)
print("Second smallest number:", second_smallest_number)
```

```
Second smallest number: -2
```

[ ]:
```
##2. Write a Python program to change a given string to a new string where the␣
↪first and last chars have been exchanged
```

[5]:
```
def exchange_first_last(string):
    if len(string) < 2:
        return string

    first_char = string[0]
    last_char = string[-1]
    middle_chars = string[1:-1]

    return last_char + middle_chars + first_char
```

[6]:
```
original_string = "hello"
new_string = exchange_first_last(original_string)
print("Original String:", original_string)
print("New String:", new_string)
```

```
Original String: hello
New String: oellh
```

[7]:
```
original_string = "he"
new_string = exchange_first_last(original_string)
print("Original String:", original_string)
print("New String:", new_string)
```

```
Original String: he
New String: eh
```

[ ]:
```
##3.Write a Python function that takes a list of words and returns the length␣
↪of the longest one
```

[11]:
```
def find_longest_word_length(words):
    longest_length = 0
    for word in words:
        if len(word) > longest_length:
            longest_length = len(word)
    return longest_length
```

[12]:
```
word_list = ["apple", "banana", "cherry", "durian", "elderberry"]
longest_length = find_longest_word_length(word_list)
print("Length of the longest word:", longest_length)
```

```
Length of the longest word: 10
```

[ ]:
```
##4. Write a Python program to remove the nth index character from a nonempty␣
↪string
```

[8]:
```
def remove_nth_character(string, n):
    if n < 0 or n >= len(string):
        return string

    return string[:n] + string[n+1:]
```

[9]:
```
original_string = "Hello, World!"
index_to_remove = 7
new_string = remove_nth_character(original_string, index_to_remove)
print("Original String:", original_string)
print("New String:", new_string)
```

```
Original String: Hello, World!
New String: Hello, orld!
```

[ ]:
```
##5.Check if a given key already exists in a dictionary
```

[15]:
```
def is_key_present(dictionary, key):
    if key in dictionary:
        return True
    else:
        return False
```

[17]:
```
my_dictionary = {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
given_key = 5
key_exists = is_key_present(my_dictionary, given_key)
if key_exists:
    print("The key exists in the dictionary.")
else:
    print("The key does not exist in the dictionary.")
```

```
The key exists in the dictionary.
```

[18]:
```
my_dictionary = {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
given_key = 9
key_exists = is_key_present(my_dictionary, given_key)
if key_exists:
    print("The key exists in the dictionary.")
else:
    print("The key does not exist in the dictionary.")
```

```
The key does not exist in the dictionary.
```

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