jupyter Assignment Functions Last Checkpoint: 4 hours ago

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Code

JupyterLab Python 3 (ipykernel)

*[15]:
```
#1
def sum(num1,num2=10,num3=None):
    if num3 is None:
        output=num1+num2
        print(f"Sum of {num1} and {num2} is {output}.")
    else:
        output=num1*num2*num3
        print(f"Product of {num1}, {num2} and {num3} is {output}")
```

[9]:
```
sum(15)
```
```
Sum of 15 and 10 is 25.
```

[11]:
```
sum(20,37,None)
```
```
Sum of 20 and 37 is 57.
```

[17]:
```
sum(2,4,5)
```
```
Product of 2, 4 and 5 is 40
```

*[19]:
```
#2
def string(strings):
    return[s for s in strings if len(s)>=5]
string1={"car","television","mobile","fruits"]
result=string(string1)
print(result)
```
```
['television', 'mobile', 'fruits']
```

*[21]:
```
#3
def evaluate_expression(expression):
    try:
        result=eval(expression)
        print(f"The result of the expression '{expression}' is:{result}")
    except Exception as e:
        print(f"Error evaluating expression:{e}")
```

[27]:
```
expression="3 * 5 + 2"
evaluate_expression(expression)
```
```
The result of the expression '3 * 5 + 2' is:17
```

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Code

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[41]:
```
#4
def prime(n):
    if n<=1:
        return False
    for i in range(2, int(n**0.5)+1):
        if n % i == 0:
            return False
    return True
def filter_prime(numbers):
    return list(filter(prime,numbers))
```

[43]:
```
numbers=[1,2,3,4,10,11,13,14,15,17,7,9]
prime_numbers=filter_prime(numbers)
print(f"Prime numers:{prime_numbers}")
```

```
Prime numers:[2, 3, 11, 13, 17, 7]
```

[45]:
```
#5
def convert_uppercase(strings):
    return list(map(str.upper,strings))
strings=["ten","twelve","one","two"]
upper_case=convert_uppercase(strings)
print(upper_case)
```

```
['TEN', 'TWELVE', 'ONE', 'TWO']
```

[49]:
```
#6
def calculate_length(strings):
    return list(map(len,strings))
strings=["car","television","mobile","fruits"]
lengths=calculate_length(strings)
print(lengths)
```

```
[3, 10, 6, 6]
```

[53]:
```
#7
from functools import reduce
def calculate_sum(numbers):
    return reduce(lambda x,y:x+y,numbers)
numbers=[1,2,3,4,5,6]
total_sum=calculate_sum(numbers)
print(f"The sum of the list is {total_sum}.")
```

```
The sum of the list is 21.
```

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[55]:
```python
#8
from functools import reduce
def max_number(numbers):
    return reduce(lambda x,y:x if x>y else y, numbers)
numbers=[1,4,6,3,12,2,15]
maximum=max_number(numbers)
print(f"The maximum of the list is {maximum}")
```

```
The maximum of the list is 15
```

[ ]: