

Python

Week -2 Practice Problems - Solutions

Problem 1 : Write a program to interchange the first and last element in the list.

Solution:

```
def interchange(elements):
    n = len(elements)
    elements[0], elements[n-1] = elements[n-1], elements[0]
    return list

elements = [1,2,3,4,5,6,7,8]
interchange(elements)
print(elements)
```

Problem 2 : Write a program to compute the minimum number from the list of integers.

Solution:

```
from cmath import inf

def minimum(elements):
    min = inf
    for i in elements:
        if i < min:
            min = i
    return min

elements = [1,2,3,4,5,6,7,8]
print(minimum(elements))
```

Problem 3: Write a program to print even length words from a given string.

Solution:

```
string = 'I am software engineer'
```

```
for word in string.split(' '):  
    if len(word)%2 == 0:  
        print(word)
```

Problem 4: Write a program to remove nested records from a tuple.

Solution:

```
def remove_nested_records(elements):  
    result = tuple()  
    for i in elements:  
        if not isinstance(i, tuple):  
            result += (i,)   
  
    return result  
  
elements = (1,2,3,(4,5,6), 7, (1,2), 9)  
print(elements)  
print(remove_nested_records(elements))
```

Problem 5: Write a program to compute the frequency of each element from a given list of elements.

Solution:

```
def getFrequency(elements):
    map = dict()
    for i in elements:
        if i in map:
            map[i] += 1
        else:
            map[i] = 1

    for i, j in map.items():
        print(i, j)

elements = [1,2,1,2,3,4,1,2,3,5,3,4,5,6,7]
getFrequency(elements)
```

Problem 6: Write a function to check if two sets have at-least one element in common.

Solution:

```
def hasCommonElements(set1, set2):
    for i in set1:
        if i in set2:
            return True
    return False

set1 = {1,2,3,4,5}
set2 = {3,4,5,6,8}
print(hasCommonElements(set1, set2))
```

Problem 7: Write a function to remove all duplicates from a given string.

Solution:

```
def removeDuplicates(string):  
    result = ""  
    for char in string:  
        if char not in result:  
            result += char  
  
    return result  
  
string = "softwareengineer"  
print(removeDuplicates(string))
```

Problem 8 : Write a function to sort a string in reverse order.

Solution:

```
def sortInReverse(string:str):  
    result = list(string)  
    result.sort(reverse=True)  
    return "".join(result)  
  
string = "software"  
print(sortInReverse(string))
```

Problem 9: Write a program to get yesterday's date.

Solution:

```
from datetime import date, timedelta

today = date.today()
print(today)

yesterday = today - timedelta(days=1)
print(yesterday)
```

Problem 10: Write a program to multiply numbers using the kwargs concept.

Implement the below function :

```
def multiply(**kwargs):
    pass

print(multiply(a=1, b=2, c=3, d=4)) #prints 24
```

Solution:

```
def multiply(**kwargs):
    result = 1

    for _, value in kwargs.items():
        result *= value

    return result

print(multiply(a=1, b=2, c=3, d=4))
```