minwindowsubstring.py - C:\Users\Sneha Gungi\Documents\minwindowsubstring.py (3.11.2)

File Edit Format Run Options Window Help

```
s1=input("Enter string s1\n")
s2=input("Enter Sting s2\n")
from collections import Counter
def min_window_substring(s1,s2):
    n,m=len(s1),len(s2)
    if m>n or s2=="":
        return ""
    freqt=Counter(s2)
    start,end=0,n
    satisfied=0
    freqs=Counter()
    left=0
    for right in range(n):
        freqs[s1[right]]+=1
        if s1[right] in freqt and freqs[s1[right]]==freqt[s1[right]]:
            satisfied+=1
        if satisfied==len(freqt):
            while s1[left] not in freqt or freqs[s1[left]]>freqt[s1[left]]:
                freqs[s1[left]]-=1
                left+=1
            if right-left+1<end-start+1:
                start,end=left,right
    return s1[start:end+1] if end-start+1<=n else ""
result=min_window_substring(s1,s2)
print("output  ",result)
```

Ln: 1 Col: 0

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========= RESTART: C:\Users\Sneha Gungi\Documents\minwindowsubstring.py ========
Enter string s1
ADCFEBECEABEBADFCDFCBFCBEAD
Enter Sting s2
ABCA
output   CEABEBA
>>>
```

Ln: 10

anagrams.py - C:\Users\Sneha Gungi\Documents\anagrams.py (3.11.2)

File Edit Format Run Options Window Help

```
s1=input("Enter string 1\n")
s2=input("Enter string 2\n")
def anagrams(s1,s2):
    if len(s1)!=len(s2):
        return False
    return sorted(s1)==sorted(s2)
result=anagrams(s1,s2)
print(" output :-",result)
```

Ln: 9 Col: 17

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\anagrams.py ==========
Enter string 1
DANGER
Enter string 2
GARDEN
 output :- True
>>>
```

Ln: 10 Col: 0

ENG 14:19

first_and_lastindex.py - C:\Users\Sneha Gungi\Documents\first_and_lastindex.py (3.11.2)

ile Edit Format Run Options Window Help

```
ef first_last_index(arr,k):
    for i in range(len(arr)):
        if arr[i]==k:
            start=i
            while i+1<len(arr) and arr[i+1]==k:
                i=i+1
            return [start,i]
    return [-1,-1]

m=int(input("Enter number of array elements :\n"))
arr=[]
for i in range(m):
    l=int(input())
    arr.append(l)
print(arr)
k=int(input("Target value:\n"))
j=first_last_index(arr,k)
print("output : ",j)
```

Ln: 10 Col: 47

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
======== RESTART: C:\Users\Sneha Gungi\Documents\first_and_lastindex.py ========
Enter number of array elements :
8
2
4
5
5
5
5
7
9
[2, 4, 5, 5, 5, 5, 7, 9]
Target value:
5
output :  [2, 5]
>>>
```

Ln: 19 Col: 0

kthlargest.py - C:\Users\Sneha Gungi\Documents\kthlargest.py (3.11.2)

File Edit Format Run Options Window Help

```
def kth_largest_element(arr,k):
    n=len(arr)
    arr.sort()
    return arr[n-k]


m=int(input("Enter number of array elements:\n"))
arr=[]
print("Enter array Elements")
for i in range(m):
    l=int(input())
    arr.append(l)
print(arr)
k=int(input("Target value\n"))
j=kth_largest_element(arr,k)
print("output : ",j)
```

Ln: 9 Col: 27

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\kthlargest.py ==========
Enter number of array elements:
9
Enter array Elements
4
2
9
7
5
6
7
1
3
[4, 2, 9, 7, 5, 6, 7, 1, 3]
Target value
4
output :  6
>>>
```

Ln: 21 Col: 0

ENG 14:23

symmetric.py - C:\Users\Sneha Gungi\Documents\symmetric.py (3.11.2)

File Edit Format Run Options Window Help

```
class Node:
    def __init__(self,val):
        self.val=val
        self.left=None
        self.right=None
def are_symmetric(root1,root2):
    if root1 is None and root2 is None:
        return True
    elif ((root1 is None)!=(root2 is None)) or root1.val!=root2.val:
        return False
    else:
        return are_symmetric(root1.left,root2.right) and are_symmetric(root1.right,root2.left
def is_symmetric(root):
    if root is None:
        return True
    return are_symmetric(root.left,root.right)

root=Node(1)
root.left=Node(2)
root.right=Node(2)
root.left.left=Node(3)
root.left.right=Node(4)
root.right.left=Node(4)
root.right.right=Node(3)
print("Symmetric" if is_symmetric(root)==True else "Not Symmetric")
```

Ln: 1 Col: 0

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\symmetric.py ==========
Symmetric
>>>
```

Ln: 6 Col: 0

gasstation.py - C:\Users\Sneha Gungi\Documents\gasstation.py (3.11.2)

File Edit Format Run Options Window Help

```
m=int(input("Enter number of gas elements\n"))
gas=[]
print("Enter gas elements")
for i in range(m):
    l=int(input())
    gas.append(l)
print(gas)
n=int(input("Enter number of cost elements\n"))
cost=[]
print("Enter cost elements")
for i in range(n):
    k=int(input())
    cost.append(k)
print(cost)
def gas_station(gas,cost):
    remaining=0
    prev_remaining=0
    candidate=0
    for i in range(len(gas)):
        remaining+=gas[i]-cost[i]
        if remaining<0:
            candidate=i+1
            prev_remaining+=remaining
            remaining=0
    if candidate==len(gas) or remaining+prev_remaining<0:
        return -1
    else:
        return candidate

result=gas_station(gas,cost)
print("result is ",result)
```

Ln: 1 Col: 20

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\gasstation.py ==========
Enter number of gas elements
10
Enter gas elements
1
5
3
3
5
3
1
3
4
5
[1, 5, 3, 3, 5, 3, 1, 3, 4, 5]
Enter number of cost elements
10
Enter cost elements
5
2
2
8
2
4
2
5
1
2
[5, 2, 2, 8, 2, 4, 2, 5, 1, 2]
result is  8
>>>
```

Ln: 34 Col: 0

kthpermutation.py - C:\Users\Sneha Gungi\Documents\kthpermutation.py (3.11.2)

File Edit Format Run Options Window Help

```
n=int(input("Enter n value \n"))
k=int(input("Enter k value \n"))
def Kth_permutation(n,k):
    permutation=[]
    unused=list(range(1,n+1))
    fact=[1]*(n+1)
    for i in range(1,n+1):
        fact[i]=i*fact[i-1]
    k-=1
    while n>0:
        part_length=fact[n]//n
        i=k//part_length
        permutation.append(unused[i])
        unused.pop(i)
        n-=1
        k%=part_length
    return ''.join(map(str,permutation))
result=Kth_permutation(n,k)
print("output ",result)
```

Ln: 2 Col: 29

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\kthpermutation.py ==========
Enter n value
3
Enter k value
3
output  213
>>>
```

Ln: 10 Col: 0

couseschedule.py - C:\Users\Sneha Gungi\AppData\Local\Programs\Python\Python311\couseschedule.py (3.11.2)

File Edit Format Run Options Window Help

```
from collections import deque
n=int(input("Enter the Value of n:\n"))
prerequisites=[[0,1],[3,0],[1,3],[2,1],[4,1],[4,2],[5,3],[5,4]]
print(prerequisites)
prerequisites1=[[3,0],[1,3],[2,1],[4,1],[4,2],[5,3],[5,4]]
def course_schedule(n,prerequisites):
    graph=[[]for i in range(n)]
    indegree=[0 for i in range(n)]
    for pre in prerequisites:
        graph[pre[1]].append(pre[0])
        indegree[pre[0]]+=1
    order=[]
    queue=deque([i for i in range(n) if indegree[i]==0])
    while queue:
        vertex=queue.popleft()
        order.append(vertex)
        for neighbor in graph[vertex]:
            indegree[neighbor]-=1
            if indegree[neighbor]==0:
                queue.append(neighbor)
    return len(order)==n
result=course_schedule(n,prerequisites)
print("Output :",result)
print(prerequisites1)
result1=course_schedule(n,prerequisites1)
print("Output :",result1)
```

Ln: 24 Col: 21

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\Sneha Gungi\AppData\Local\Programs\Python\Python311\couseschedule.py
Enter the Value of n:
6
[[0, 1], [3, 0], [1, 3], [2, 1], [4, 1], [4, 2], [5, 3], [5, 4]]
Output : False
[[3, 0], [1, 3], [2, 1], [4, 1], [4, 2], [5, 3], [5, 4]]
Output : True
>>>
```

Ln: 11 Col: 0

largestrectangle.py - C:\Users\Sneha Gungi\Documents\largestrectangle.py (3.11.2)

File Edit Format Run Options Window Help

```
m=int(input("Enter number of heights :\n"))
heights=[]
print("Enter heights")
for i in range(m):
    l=int(input())
    heights.append(l)
print(heights)
def largest_rectangle(heights):
    heights=[-1]+heights+[-1]
    max_area=0
    stack=[(0,-1)]
    for i in range(1,len(heights)):
        start=i
        while stack[-1][1]>heights[i]:
            top_index,top_height=stack.pop()
            max_area=max(max_area,top_height*(i-top_index))
            start=top_index
        stack.append((start,heights[i]))
    return max_area

result=largest_rectangle(heights)
print("Output : ",result)
```

Ln: 20 Col: 0

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\largestrectangle.py ==========
Enter number of heights :
16
Enter heights
3
2
4
5
7
6
1
3
8
9
10
11
10
7
5
2
[3, 2, 4, 5, 7, 6, 1, 3, 8, 9, 10, 11, 10, 7, 5, 2]
Output :  42
>>>
```

Ln: 26 Col: 0

parentheses.py - C:\Users\Sneha Gungi\Documents\parentheses.py (3.11.2)

File Edit Format Run Options Window Help

```
n=int(input("Enter Value of n \n"))
def generate(n):
    def rec(n,diff,comb,combs):
        if diff<0 or diff>n:
            return
        elif n==0:
            if diff==0:
                combs.append("".join(comb))
        else:
            comb.append('(')
            rec(n-1,diff+1,comb,combs)
            comb.pop()
            comb.append(')')
            rec(n-1,diff-1,comb,combs)
            comb.pop()
    combs=[]
    rec(2*n,0,[],combs)
    return combs

result=generate(n)
print("Output : ",result)
```

Ln: 4 Col: 24

IDLE Shell 3.11.2

File Edit Shell Debug Options Window Help

```
Python 3.11.2 (tags/v3.11.2:878ead1, Feb  7 2023, 16:38:35) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\Sneha Gungi\Documents\parentheses.py ==========
Enter Value of n
3
Output :  ['((()))', '(()())', '(())()', '()(())', '()()()']
>>>
```

Ln: 8 Col: 0