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|---:|:---|
| **Started on** | Friday, 25 April 2025, 8:26 AM |
| **State** | Finished |
| **Completed on** | Friday, 25 April 2025, 8:41 AM |
| **Time taken** | 15 mins 33 secs |
| **Grade** | **80.00** out of 100.00 |

Question **1**

Correct

Mark 20.00 out of 20.00

Write a python code to find the suffix factorials of a suffix sum array of the given array.

[Hint: input: arr[] = {1, 2, 3, 4}
Output: {3628800, 362880, 5040, 24}
Explanation: *The suffix sum of the given array is {10, 9, 7, 4}.*
*Therefore, suffix factorials of the obtained suffix sum array is {10!, 9!, 7!, 4!} ]*

**For example:**

| Test | Input | Result |
|------|-------|--------|
| N = int(input())<br>arr=createList(N)<br>print('The given array: ',arr)<br>suffixFactorialArray(arr) | 4<br>1<br>2<br>3<br>4 | The given array:  [1, 2, 3, 4]<br>The suffix sum array:  [10, 9, 7, 4]<br>Factorial of suffix sum array:,3628800 362880 5040 24 |

**Answer:**  (penalty regime: 0 %)

```python
1  def suffixFactorialArray(A):
2      for i in range(len(A)-2, -1, -1):
3          A[i] += A[i + 1]
4      print('The suffix sum array: ', A)
5      fact = [0 for _ in range(A[0] + 1)]
6      fact[0] = 1
7      for i in range(1, A[0] + 1):
8          fact[i] = i * fact[i - 1]
9      for i in range(0, N):
10         A[i] = fact[A[i]]
11     print('Factorial of suffix sum array:',end=',')
12     for i in range(0, N):
13         print(A[i], end=" ")
14 def createList(N):
15     l=[0 for i in range(N)]
16     for i in range(N):
17         l[i]=int(input())
18     return l
```

| | Test | Input | Expected | Got | |
|---|------|-------|----------|-----|---|
| ✔ | N = int(input())<br>arr=createList(N)<br>print('The given array: ',arr)<br>suffixFactorialArray(arr) | 4<br>1<br>2<br>3<br>4 | The given array:  [1, 2, 3, 4]<br>The suffix sum array:  [10, 9, 7, 4]<br>Factorial of suffix sum array:,3628800 362880 5040 24 | The given array:  [1, 2, 3, 4]<br>The suffix sum array:  [10, 9, 7, 4]<br>Factorial of suffix sum array:,3628800 362880 5040 24 | ✔ |
| ✔ | N = int(input())<br>arr=createList(N)<br>print('The given array: ',arr)<br>suffixFactorialArray(arr) | 3<br>5<br>3<br>2 | The given array:  [5, 3, 2]<br>The suffix sum array:  [10, 5, 2]<br>Factorial of suffix sum array:,3628800 120 2 | The given array:  [5, 3, 2]<br>The suffix sum array:  [10, 5, 2]<br>Factorial of suffix sum array:,3628800 120 2 | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

Write a Python program to find the cube of all elements in a list using list comprehension

**For example:**

| Input | Result |
|---|---|
| 3<br>11.5<br>22<br>33.23 | [11.5, 22.0, 33.23]<br>[1520.875, 10648.0, 36693.65926699999] |

**Answer:**  (penalty regime: 0 %)

```
1  a=int(input())
2  l=[]
3  for i in range(a):
4      l.append(float(input()))
5  cube=[i**3 for i in l]
6  print(l)
7  print(cube)
```

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 3<br>11.5<br>22<br>33.23 | [11.5, 22.0, 33.23]<br>[1520.875, 10648.0, 36693.65926699999] | [11.5, 22.0, 33.23]<br>[1520.875, 10648.0, 36693.65926699999] | ✔ |
| ✔ | 5<br>2<br>3.5<br>6<br>9<br>45 | [2.0, 3.5, 6.0, 9.0, 45.0]<br>[8.0, 42.875, 216.0, 729.0, 91125.0] | [2.0, 3.5, 6.0, 9.0, 45.0]<br>[8.0, 42.875, 216.0, 729.0, 91125.0] | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a Python program to filter the numbers that are divisible by 7 and 5 in a list using filter ( )

**For example:**

| Input | Result |
|-------|--------|
| 5<br>105<br>35<br>140<br>77<br>62 | [105, 35, 140] |

**Answer:**  (penalty regime: 0 %)

```
1  n=int(input())
2  l=[int(input()) for i in range(n)]
3
4  L= list(filter(lambda x: (x%7==0) and (x%5==0),l))
5  print(L)
```

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ✔ | 5<br>105<br>35<br>140<br>77<br>62 | [105, 35, 140] | [105, 35, 140] | ✔ |

Passed all tests!  ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Write a Python program to multiply two matrices with equal number of rows and columns (N X N).

**For example:**

| Input | Result |
|-------|--------|
| 3<br>1 1 1<br>2 2 2<br>3 3 3<br>2 2 2<br>2 2 2<br>2 2 2 | Matrix:<br>1 1 1<br>2 2 2<br>3 3 3<br>Matrix:<br>2 2 2<br>2 2 2<br>2 2 2<br>Matrix:<br>6 6 6<br>12 12 12<br>18 18 18 |

**Answer:**  (penalty regime: 0 %)

```python
1  n = int(input())
2  A = [list(map(int, input().split())) for _ in range(n)]
3  B = [list(map(int, input().split())) for _ in range(n)]
4
5  def print_matrix(matrix):
6      print("Matrix:")
7      for row in matrix:
8          print(*row)
9
10 def multiply(A, B):
11     return [[sum(A[i][k] * B[k][j] for k in range(n)) for j in range(n)] for i in range(n)]
12
13 print_matrix(A)
14 print_matrix(B)
15 print_matrix(multiply(A, B))
```

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ✔ | 3<br>1 1 1<br>2 2 2<br>3 3 3<br>2 2 2<br>2 2 2<br>2 2 2 | Matrix:<br>1 1 1<br>2 2 2<br>3 3 3<br>Matrix:<br>2 2 2<br>2 2 2<br>2 2 2<br>Matrix:<br>6 6 6<br>12 12 12<br>18 18 18 | Matrix:<br>1 1 1<br>2 2 2<br>3 3 3<br>Matrix:<br>2 2 2<br>2 2 2<br>2 2 2<br>Matrix:<br>6 6 6<br>12 12 12<br>18 18 18 | ✔ |

| | Input | Expected | Got | |
|---|---|---|---|---|
| ✔ | 2<br>1 2<br>3 4<br>2 4<br>3 6 | Matrix:<br>1 2<br>3 4<br>Matrix:<br>2 4<br>3 6<br>Matrix:<br>8 16<br>18 36 | Matrix:<br>1 2<br>3 4<br>Matrix:<br>2 4<br>3 6<br>Matrix:<br>8 16<br>18 36 | ✔ |

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Incorrect

Mark 0.00 out of 20.00

**Write a Python Program to divide a list of n students into two groups. Divide the two groups into subgroups of maximum group size 2 in alphabetical order using tree recursion.**

**For example:**

| Input | Result |
|-------|--------|
| 8<br>joe<br>abel<br>veni<br>anu<br>naveen<br>malathi<br>netti<br>soori | ['abel', 'anu', 'joe', 'malathi', 'naveen', 'netti', 'soori', 'veni']<br>['abel', 'anu', 'joe', 'malathi'] ['naveen', 'netti', 'soori', 'veni']<br>['abel', 'anu'] ['joe', 'malathi']<br>['naveen', 'netti'] ['soori', 'veni'] |

**Answer:** (penalty regime: 0 %)

```
1  a=int(input())
2  l=[]
3  for i in range(a):
4      i=input().append(l)
5
```

| | Input | Expected | Got | |
|---|-------|----------|-----|---|
| ✖ | 8<br>joe<br>abel<br>veni<br>anu<br>naveen<br>malathi<br>netti<br>soori | ['abel', 'anu', 'joe', 'malathi', 'naveen', 'netti',<br>'soori', 'veni']<br>['abel', 'anu', 'joe', 'malathi'] ['naveen', 'netti',<br>'soori', 'veni']<br>['abel', 'anu'] ['joe', 'malathi']<br>['naveen', 'netti'] ['soori', 'veni'] | ***Run error***<br>Traceback (most recent call last):<br>  File "__tester__.python3", line 4, in<br><module><br>    i=input().append(l)<br>AttributeError: 'str' object has no<br>attribute 'append' | ✖ |

Testing was aborted due to error.

Your code must pass all tests to earn any marks. Try again.

Show differences

**Incorrect**

Marks for this submission: 0.00/20.00.