Rajalakshmi Engineering College

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 3_MCQ

Attempt : 1 Total Mark : 25 Marks Obtained : 21

Section 1: MCQ

1. Which method is used to add multiple items to the end of a list?

Answer

extend()

Status: Correct Marks: 1/1

2. What is the output of the following Python code?

a = "Hello" b = "World" c = a + " " + b print(c) Answer

Hello World

Status: Correct Marks: 1/1

3. What does the following code output?

lst = [10, 20, 30, 40, 50] print(lst[-4:-1])

Answer

[20, 30, 40]

Status: Correct Marks: 1/1

4. If you have a list lst = [1, 2, 3, 4, 5, 6], what does the slicing operation lst[-3:] return?

Answer

The last three elements of the list

Status: Correct Marks: 1/1

5. Suppose list1 is [2, 33, 222, 14, 25], What is list1[:-1]?

Answer

[25, 14, 222, 33, 2]

Status: Wrong Marks: 0/1

6. Which method in Python is used to create an empty list?

Answer

list()

Status: Correct A Marks: 1/1

7. What is the output of the following Python code?

text = "Python" result = text.center(10, "*") print(result)

Answer

Python

Status: Correct Marks: 1/1

8. Suppose list1 is [4, 2, 2, 4, 5, 2, 1, 0], Which of the following is the correct syntax for slicing operation?

Answer

all of the mentioned options

Status: Correct Marks: 1/1

9. What is the output of the following code?

 $my_list = [1, 2, 3]$ my_list *= 2 print(len(my_list))

Answer

Status: Correct Marks: 1/

10. What will be the output of the following code?

numbers = [1, 2, 3, 4, 5] numbers.remove(6) print(numbers)

Answer

ValueError: list.remove(x): x not in list

Marks : 1/1 Status : Correct

11. What will be the output of the following code?

my_list = [1, 2, 2, 3]
print(my_list.count(2))

Answer

Marks: 0/1 Status: Wrong

12. What is the output of the following Python code?

txt = "My Classroom" print(txt.find("o")) print(txt.index("o"))

Answer

99

Status: Correct Marks: 1/1

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13. Which of the following is a valid way to use the '%' operator to concatenate strings in Python?

Answer

"%s %s" % (string1, string2)

Status: Correct Marks: 1/1

14. What does the append() method do in Python?

Answer

Adds a new element to the end of the list

Marks: 1/1 Status: Correct

15. What is the output of the following Python code?

```
string1 = "Hello"
string2 = "World"
result = string1 + string2
print(result)
Answer
HelloWorld
```

Status: Correct Marks: 1/1

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16. What is the output of the following Python code?

b = "Projects!" print(b[2:5])

Answer

oje

Status: Correct Marks: 1/1

17. What is the output of the following Python code?

word = "Python" result = word[::-1] print(result)

Answer

nohtyP

Status: Correct Marks: 1/1

18. What does negative indexing in Python lists allow you to do?

Answer

Access elements in the list from the end

Status: Correct Marks: 1/1

211624070155 19. What is the output of the following code?

Answer

None of the mentioned options

Status: Wrong Marks: 0/1

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20. What will be the output of the following program?

numbers = [1, 2, 3, 4, 5] numbers.append(6, 7) print(numbers)

Answer

Compile Time Error

Status: Correct Marks: 1/1

21. What is the result of the slicing operation lst[-5:-2] on the list lst = [1, 2, 3, 4, 5, 6]?

Answer

[3, 4, 5]

Status: Wrong Marks: 0/1

22. What is the output of the following Python code?

name = "John" age = 25message = "My name is %s and I am %d years old." % (name, age) print(message)

Answer

My name is John and I am 25 years old.

Marks: 1/1 Status: Correct

23. Suppose list1 is [2, 33, 222, 14, 25], What is list1[-1]?

Answer

25

Marks: 1/1 Status: Correct

24. What is the output of the following Python code?

text = " Python " answer = text.strip() print(answer)

Answer

Python

Status: Correct Marks: 1/1

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25. What is the output of the following Python code?

word = "programming" answer = word.index("gram") print(answer)

Answer

3

Status: Correct Marks: 1/1

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 3_COD

Attempt : 1 Total Mark : 50 Marks Obtained : 50

Section 1: Coding

1. Problem Statement

Alex is working on a Python program to manage a list of elements. He needs to append multiple elements to the list and then remove an element from the list at a specified index.

Your task is to create a program that helps Alex manage the list. The program should allow Alex to input a list of elements, append them to the existing list, and then remove an element at a specified index.

Input Format

The first line contains an integer n, representing the number of elements to be appended to the list.

The next n lines contain integers, representing the elements to be appended to the list.

The third line of input consists of an integer M, representing the index of the element to be popped from the list.

Output Format

The first line of output displays the original list.

The second line of output displays the list after popping the element of the index M.

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The third line of output displays the popped element.

Refer to the sample output for the formatting specifications.

Sample Test Case

```
Input: 5
64
98
-1
5
26
Output: List after appending elements: [64, 98, -1, 5, 26]
List after popping last element: [64, 98, -1, 26]
Popped element: 5
Answer
# You are using Python
n=int(input())
list=∏
for i in range(n):
  e=int(input())
  list.append(e)
m=int(input())
print("List after appending elements: ",list)
if 0 \le m \le len(list):
  popped_element=list.pop(m)
  print("List after popping last element: ",list)
  print("Popped element: ",popped_element)
```

```
print("Error: Invalid index")
  print(list)
  print("None")
```

Status: Correct Marks: 10/10

Problem Statement

Given a list of positive and negative numbers, arrange them such that all negative integers appear before all the positive integers in the array. The 2116240701553 order of appearance should be maintained.

Example

Input:

[12, 11, -13, -5, 6, -7, 5, -3, -6]

Output:

List = [-13, -5, -7, -3, -6, 12, 11, 6, 5]

Explanation:

2116240701553 The output is the arranged list where all the negative integers appear before the positive integers while maintaining the original order of appearance.

Input Format

The input consists of a single line containing a list of integers enclosed in square brackets separated by commas.

Output Format

The output displays "List = " followed by an arranged list of integers as required, separated by commas and enclosed in square brackets. 27162,40701553 Refer to the sample output for the formatting specifications.

Sample Test Case

Input: [12, 11, -13, -5, 6, -7, 5, -3, -6]

Output: List = [-13, -5, -7, -3, -6, 12, 11, 6, 5]

Answer

You are using Python str1=input() arr=list(map(int,str1.strip('[]').split(';'))) negatives=[x for x in arr if x<0] non_negatives=[x for x in arr if x>=0] r=negatives+non_negatives print("List= ",r)

Status: Correct Marks: 10/10

3. Problem Statement

Ram is working on a program to manipulate strings. He wants to create a program that takes two strings as input, reverses the second string, and then concatenates it with the first string.

Ram needs your help to design a program.

Input Format

The input consists of two strings in separate lines.

Output Format

The output displays a single line containing the concatenated string of the first string and the reversed second string.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: hello

word

Output: hellodrow

Answer

You are using Python n=str(input()) p=str(input()) s=p[::-1] print(n+s)

Status: Correct Marks: 10/10

You have a string containing a phone number in the format "(XXX) XXX-XXXX". You need to extract the area code from the phone number create a new string that contains only in the contains on the contains on the contains on the contains on th

Write a Python program for the same.

Note

(XXX) - Area code

XXX-XXXX - Phone number

Input Format

The input consists of a string, representing the phone number in the format "(XXX) XXX-XXXX".

Output Format

The output displays "Area code: " followed by a string representing the area code for the given phone number.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: (123) 456-7890 Output: Area code: 123

Answer

You are using Python n=input() area_code=n[1:4] print("Area code: ",area_code)

Status: Correct Marks: 10/10

5. Problem Statement

Dhruv wants to write a program to slice a given string based on userdefined start and end positions.

The program should check whether the provided positions are valid and then return the sliced portion of the string if the positions are within the string's length.

Input Format

The first line consists of the input string as a string.

The second line consists of the start position (0-based index) as an integer.

The third line consists of the end position (0-based index) as an integer.

Output Format

The output displays the following format:

If the start and end positions are valid, print the sliced string.

If the start and end positions are invalid, print "Invalid start and end positions".

Refer to the sample output for formatting specifications.

Sample Test Case

```
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                                                 2116240701553
      Input: pythonprogramming
      Output: python
      Answer
      # You are using Python
      n=str(input())
      a=int(input())
      b=int(input())
      if 0<=a<=b<len(n):
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        print (n[a:b+1])
      else:
        print("Invalid start and end positions")
Status : Correct
                                                                      Marks : 10/10
```

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 3_CY

Attempt : 1 Total Mark : 30 Marks Obtained : 30

Section 1: Coding

1. Problem Statement

You have two strings str1 and str2, both of equal length.

Write a Python program to concatenate the two strings such that the first character of str1 is followed by the first character of str2, the second character of str1 is followed by the second character of str2, and so on.

For example, if str1 is "abc" and str2 is "def", the output should be "adbecf".

Input Format

The input consists of two strings in each line.

Output Format

The output displays the concatenated string in the mentioned format.

Refer to the sample output for formatting specifications.

Sample Test Case

```
Input: abc
def
Output: adbecf

Answer

def alternate_concatenate(s1,s2):
    result=""
    for i in range(len(s1)):
        result+=s1[i]+s2[i]
    return result
s1=str(input())
s2=str(input())
o=alternate_concatenate(s1,s2)
print(o)
```

Status: Correct Marks: 10/10

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2. Problem Statement

Write a program to check if a given string is perfect.

A perfect string must satisfy the following conditions:

The string starts with a consonant. The string alternates between consonants and vowels. Each consonant appears exactly once. Vowels can occur consecutively multiple times but should not be followed immediately by a consonant.

If the string satisfies all these conditions, print "True"; otherwise, print "False".

Input Format

The input consists of a string.

Output Format

The output prints "True" if the string is perfect. Otherwise, print "False".

Refer to the sample output for formatting specifications.

```
Sample Test Case
```

```
Input: capacitor
Output: True
```

Answer

```
# You are using Python
def is_perfect_string(s):
  vowels="aeiouAEIOU"
  consonants="bcdfghjklmnpgrstvwxyzBCDFGHJKLMNPQRSTVWXYZ"
  if s[0] not in consonants:return False
  consonant_seen=set()
  for i in range(len(s)):
    if s[i] in consonants:
      if s[i] in consonant_seen:return False
      consonant_seen.add(s[i])
      if i< len(s)-1 and s[i+1] in consonants:return False
      elif s[i] in vowels and i < len(s)-1 and s[i+1] in vowels; continue
      elif s[i] in vowels and i < len(s)-1 and s[i+1] in consonants:continue
  return True
s=input()
print("True"if is_perfect_string(s)else"False")
```

Status: Correct Marks: 10/10

3. Problem Statement

A company is creating email accounts for its new employees. They want to use a naming convention for email addresses that consists of the first letter of the employee's first name, followed by their last name, followed by @company.com.

The company also has a separate email domain for administrative

Write a program that prompts the user for their first name, last name, role, and company and then generates their email address using the appropriate naming convention has a limited to the second se in the below examples.

Note:

The generated email address should consist of the first letter of the first name, the last name in lowercase, and a suffix based on the role and company, all in lowercase.

Input Format

The first line of input consists of the first name of an employee as a string.

The second line consists of the last name of an employee as a string.

The third line consists of the role of the employee as a string.

The last line consists of the company name as a string.

Output Format

The output consists of a single line containing the generated email address for 2176240701553 the employee, following the specified naming convention.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: John Smith admin iamNeo

Output: jsmith@admin.iamneo.com

Answer

You are using Python f=input().strip()

l=input().strip() c=input().strip().lower().replace(" ","")
email_prefix=f[0].lower()+1.lover() if r=="admin": domain=f"admin.{c}.com" else: domain=f"{c}.com" email=f"{email_prefix}@{domain}" print(email)

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NeoColab_REC_CS23221_Python Programming

REC_Python_Week 3_PAH

Attempt : 1 Total Mark : 60 Marks Obtained : 60

Section 1: Coding

1. Problem Statement

Kyara is analyzing a series of measurements taken over time. She needs to identify all the "peaks" in this list of integers.

A peak is defined as an element that is greater than its immediate neighbors. Boundary elements are considered peaks if they are greater than their single neighbor.

Your task is to find and list all such peaks using list comprehension.

Example

Input

132415761028

Output

Peaks: [3, 4, 7, 10, 8]

Explanation

3 is a peak because it's greater than 1 and 2.

4 is a peak because it's greater than 2 and 1.

7 is a peak because it's greater than 5 and 6.

10 is a peak because it's greater than 6 and 2.

8 is a peak because it is an boundary element and it is greater than 2.

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Input Format

The input consists of several integers separated by spaces, representing the measurements.

Output Format

The output displays "Peaks: " followed by a list of integers, representing the peak elements in the list.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 1 3 2 4 1 5 7 6 10 2 8 Output: Peaks: [3, 4, 7, 10, 8]

Answer

```
# You are using Python
n=input()
nums=[int(x) for x in n.split()]
p=[nums[i] for i in range (len(nums)) if (i==0 and len(nums)>1 and nums[i]>nums[i]+1])or(i==len(nums)-1 and len(nums)>0 and (len(nums)==1 or
nums[i]>nums[i-1]))or (0<i<len(nums)-1 and nums[i]>nums[i-1] and
nums[i]>nums[i+1])]
print("Peaks: ",p)
```

Marks : 10/10 Status: Correct

Problem Statement

Neha is learning string operations in Python and wants to practice using built-in functions. She is given a string A, and her task is to:

Find the length of the string using a built-in function. Copy the content of A into another string B using built-in functionality.

Help Neha implement a program that efficiently performs these operations.

Input Format

The input consists of a single line containing the string A (without spaces).

Output Format

The first line of output prints the length of the given string.

The second line prints the copied string without an extra newline at the end.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: technology-23

Output: Length of the string: 13 Copied string: technology-23

Answer

You are using Python a=str(input()) print("Length of the string: ",len(a)) print("Copied string: ",a)

Status: Correct Marks: 10/10

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3. Problem Statement

Accept an unsorted list of length n with both positive and negative integers, including 0. The task is to find the smallest positive number missing from the array. Assume the n value is always greater than zero.

Input Format

The first line consists of n, which means the number of elements in the array.

The second line consists of the values in the list as space-separated integers.

Output Format

2716240701553 The output displays the smallest positive number, which is missing from the array.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: 6

```
-520-1-102
Output: 1
Answer
a=list(map(int,s.split()))
a=[x for x in a if x>0]
a=set(a)
m=1
while m in a:
   m+=1
print(m)
```

Marks: 10/10 Status: Correct

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4. Problem Statement

Imagine you are developing a text analysis tool for a cybersecurity company. Your task is to analyze input strings to categorize and count the characters into four categories: uppercase letters, lowercase letters, digits, and special characters. The company needs this tool to process log files and identify potential security threats.

Input Format

The input consists of the log entry provided as a single string.

Output Format

The output consists of four lines:

The first line contains an integer representing the count of uppercase letters in the format "Uppercase letters: {uppercase count}".

The second line contains an integer representing the count of lowercase letters in the format "Lowercase letters: {lowercase count}".

The third line contains an integer representing the count of digits in the format "Digits: {digits count}".

The fourth line contains an integer representing the count of special characters in the format "Special characters: {special characters count}".

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: Hello123

Output: Uppercase letters: 1

Lowercase letters: 4

Digits: 3

Special characters: 0

Answer

You are using Python n=str(input()) c1=0 c2=0

```
c3=0
c4=0
for char in n:
    if 'A' <= char <='Z':
        c1+=1
    elif 'a' <= char <='z':
        c2+=1
    elif '0' <= char <='9':
        c3+=1
    else:
        c4+=1
print("Uppercase letters:",c1)
print("Lowercase letters:",c2)
print("Digits:",c3)
print("Special characters:",c4)
```

Status: Correct Marks: 10/10

5. Problem Statement

You are tasked with writing a program that takes n integers as input from the user and stores them in a list. After this, you need to transform the list according to the following rules:

The element at index 0 should be replaced with 0.For elements at even indices (excluding index 0), replace the element with its cube. For elements at odd indices, replace the element with its square.

Additionally, you should sort the list in ascending order before applying these transformations.

Input Format

The first line of input represents the size of the list, N.

The elements of the list are represented by the next N lines.

Output Format

The first line of output displays "Original List: " followed by the original list.

The second line displays "Replaced List: " followed by the replacement list as per

the given condition.

Refer to the sample output for the formatting specifications.

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Sample Test Case

```
Input: 5
5
1
2
3
Output: Original List: [1, 2, 3, 4, 5]
Replaced List: [0, 4, 27, 16, 125]
Answer
# You are using Python
n=int(input())
list=[]
for i in range(n):
  num=int(input())
  list.append(num)
list.sort()
print("Original List:",list)
list[0]=0
for i in range(1,n):
  if i%2==0:
     list[i]=list[i]**3
  else:
     list[i]=list[i]**2
print("Replaced List:",list)
```

Status: Correct Marks: 10/10

6. Problem Statement

Gowri was doing her homework. She needed to write a paragraph about modern history. During that time, she noticed that some words were

repeated repeatedly. She started counting the number of times a particular word was repeated.

Your task is to help Gowri to write a program to get a string from the user. Count the number of times a word is repeated in the string.

Note: Case-sensitive

Input Format

The first line of input consists of a string, str1.

The second line consists of a single word that needs to be counted, str2.

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Output Format

The output displays the number of times the given word is in the string.

If the second string str2 is not present in the first string str1, it prints 0.

Refer to the sample output for the formatting specifications.

Sample Test Case

Input: I felt happy because I saw the others were happy and because I knew I should feel happy happy

Output: 3

Answer

You are using Python s=input() m=input() print(s.count(m))

Status: Correct Marks: 10/10