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|  | ‘’’  Q.1  Write a program to reverse a string. |
|  | Sample data: “1234abcd” |
|  | Expected Output: “dcba4321” |
|  | ‘’’  #First\_way |
|  | str = "1234abcd" |
|  | print(str[::-1]) |
|  | #second\_way |
|  | def reverse(str): #function\_defination |
|  |  |
|  | newstring = '' |
|  | n = len(str) |
|  | while index > n: |
|  | newstring += str[n-1] |
|  | n = n - 1 |
|  | print(newstring) |
|  |  |
|  | reverse("1234abcd") #function\_call |
|  |  |
|  | ------------------------------------------------------------------------------ |
|  | ‘’’Q.2. Write a function that accepts a string and calculate the number of uppercase letters and lowercase letters. |
|  | Expected Output: |
|  | No. of Upper case characters : 2 |
|  | No. of Lower case Characters : 10 |
|  | ‘’’ |
|  | def check(str): |
|  |  |
|  | upper = 0 |
|  | lower = 0 |
|  |  |
|  | for i in str: |
|  | if i.isupper(): |
|  | upper += 1 |
|  | elif i.islower(): |
|  | lower += 1 |
|  |  |
|  | print("No. of Upper Case : ", upper) |
|  | print("No. of Lower Case : ", lower) |
|  |  |
|  | check("Sajiri Mendjoge") |
|  | ------------------------------------------------------------------------------ |
|  |  |
|  | #Q.3. Create a function that takes a list and returns a new list with unique elements of the first list. |
|  |  |
|  | def mylist(lt): |
|  | temp = [] |
|  | for i in lt: |
|  | if i not in temp: |
|  | temp.append(i) |
|  | return temp |
|  |  |
|  | print(mylist([1,2,2,2,2,3,4,4,4,5,6,6,66,7,8,8,8,])) |
|  | ------------------------------------------------------------------------------ |
|  |  |
|  | ‘’’ Q.4 Write a program that accepts a hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence |
|  | after sorting them alphabetically. |
|  | ‘’’ |
|  | mylist = [1,265,23,65,12,2,3,4,5,6,6,7,8,9,10] |
|  | mylist.sort() |
|  | print(mylist) |
|  |  |
|  | value = input("Enter the number separated by comma:") |
|  |  |
|  | items=[n for n in value.split('-')] |
|  | print(items) |
|  |  |
|  | items.sort() |
|  |  |
|  | print('-'.join(items)) |
|  | ------------------------------------------------------------------------------ |
|  | ‘’’  Q.5. Write a program that accepts a sequence of lines as input and prints the lines after making all characters in the sentence capitalized. |
|  | Sample input: |
|  | Hello world |
|  | Practice makes perfect |
|  |  |
|  | Expected Output: |
|  | HELLO WORLD |
|  | PRACTICE MAKES PERFECT  ‘’’ |
|  |  |
|  | mylist = [] |
|  |  |
|  | while True: |
|  | val = input("Enter the input") |
|  | if val: |
|  | lines.append(val.upper()) |
|  | else: |
|  | Break |
|  |  |
|  | for val in mylist: |
|  | print(val) |
|  | ------------------------------------------------------------------------------ |
|  |  |
|  | #6. Define a function that can receive two integral numbers in string form and compute their sum and print it in console. |
|  | Def printsum(): |
|  | S1 = input("Enter the first Number :")  S2 = input(“Enter the second number”) |
|  |  |
|  | sum = int(s1)+int(s2) |
|  |  |
|  | print(sum) |
|  | printsum() |
|  | ------------------------------------------------------------------------------ |
|  | #7. Define a function that can accept two strings as input and print the string with maximum length in console. |
|  | # If two strings have the same length, then the function should print all strings line by line. |
|  |  |
|  | s1,s2= input("Enetr the input").split() |
|  |  |
|  | def maxstring(s1,s2): |
|  |  |
|  | if len(s1) > len(s2): |
|  | print("Max. string :", s1) |
|  | elif len(s1) < len(s2): |
|  | print("Max. string :", s2) |
|  | elif len(s1) == len(s2): |
|  | print(s1) |
|  | print(s2) |
|  |  |
|  | maxstring(s1,s2) |
|  |  |
|  |  |
|  | ------------------------------------------------------------------------------  #8. Define a function which can generate and print a tuple where the value are square of numbers between 1 and 20. |
|  |  |
|  | def square(): |
|  |  |
|  | mylist = [] |
|  |  |
|  | for i in range(0,20): |
|  | mylist.append(i\*\*2) |
|  |  |
|  | print(tuple(mylist)) |
|  |  |
|  | square() |
|  |  |
|  | ------------------------------------------------------------------------------ |
|  | # 9. Write a function called showNumbers that takes a parameter called limit. It should print all the numbers |
|  | # between 0 and limit with a label to identify the even and odd numbers. Example: If the limit is 3 , it should print: |
|  | # 0 EVEN |
|  | # 1 ODD |
|  | # 2 EVEN |
|  | # 3 ODD |
|  |  |
|  | def shownumbers(limit): |
|  |  |
|  | for i in range(0,limit+1): |
|  |  |
|  | if i % 2 == 0: |
|  | print(i,": even") |
|  | else: |
|  | print(i,": odd") |
|  |  |
|  | shownumbers(3) |
|  |  |
|  | ------------------------------------------------------------------------------ |
|  | #10. Write a program which can filter() to make a list whose elements are even number between 1 and 20 ( both included) |
|  |  |
|  | Num = mylist(range(1,20)) |
|  | print(Num) |
|  |  |
|  | res = mylist(filter(lambda i:i%2==0, Num)) |
|  |  |
|  | print(res) |
|  |  |
|  | ------------------------------------------------------------------------------ |
|  | #11. Write a program which can map() and filter() to make a list whose elements are square of even number in [1,2,3,4,5,6,7,8,9,10] |
|  |  |
|  | even = list(filter(lambda x: x%2 == 0, [1,2,3,4,5,6,7,8,9,10])) |
|  |  |
|  | print(even) |
|  |  |
|  | square = list(map(lambda x: x\*\*2, even)) |
|  |  |
|  | print(square) |
|  |  |
|  | ------------------------------------------------------------------------------ |
|  | #12. Write a function to compute 5/0 and use try/except to catch the exceptions |
|  |  |
|  | def trydiv(x): |
|  |  |
|  | try: |
|  | div = x/0 |
|  | print(div) |
|  | except: |
|  | print("Can not divide by 0") |
|  |  |
|  | trydiv(5) |
|  | ------------------------------------------------------------------------------ |
|  | ‘’’ |
|  | Q.13.Flatten the list [[1,2,3],[4,5],[6,7,8]] into [1,2,3,4,5,6,7,8] using reduce |
|  | Goal : Turn [1,2,3,4,5,6,7] to 1234567 |
|  | ‘’’ |
|  | from functools import reduce |
|  |  |
|  | res = reduce(lambda x,y: x+y, [[1,2,3],[4,5],[6,7,8]]) |
|  |  |
|  | print(res) |
|  |  |
|  | goal = reduce(lambda x,y: x+y , res) |
|  |  |
|  | print(goal) |
|  |  |
|  | ------------------------------------------------------------------------------ |
|  | #14. What is the output of the following codes: |
|  |  |
|  | def foo(): |
|  | try: |
|  | return 1 |
|  | #print(1) |
|  | finally: |
|  | return 2 |
|  | #print(2) |
|  |  |
|  | print(foo()) |
|  |  |
|  | # output : 2 |
|  |  |
|  | def a(): |
|  | try: |
|  | f(x,4) |
|  | #print(1) |
|  | finally: |
|  | print('after f') |
|  | print('after f?') |
|  | a() |
|  |  |
|  | #output : NameError: name 'x' is not defined |
|  |  |
|  |  |