4 FUNCTION CALCULATOR

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(1) ADDITION

(2) SUBTRACTION

(3) MULTIPLICATION

(4) DIVISION

Choice: 2

a: 3

b: 55

Answer = -52

4 FUNCTION CALCULATOR

+-+-+-+-+-+-+-+-+-+-+

(1) ADDITION

(2) SUBTRACTION

(3) MULTIPLICATION

(4) DIVISION

Choice:

(1) Create a 4 Function Calculator using Functions.

Namely:-

1. ADDITION
2. SUBTRACTION
3. MULTIPLICATION
4. DIVISION

def calc (a:int,b:int,ch:int) -> int:

if ch == 1:

return a + b

elif ch == 2:

return a - b

elif ch == 3:

return a \* b

elif ch == 4:

return a/b

while True:

print('''

4 FUNCTION CALCULATOR

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(1) ADDITION

(2) SUBTRACTION

(3) MULTIPLICATION

(4) DIVISION

''')

try:

ch = int(input('Choice: '))

a = int(input('a: '))

b = int(input('b: '))

except ValueError:

continue

print('Answer = ',calc(a,b,ch))

String: 'CentiTyph 556&$$^H^K

LENGTH OF STRING : 19

ALPHABETS IN STRING : 9

NUMBERS IN STRING : 3

SYMBOLS IN STRING : 7

WORDS IN STRING : 3

String:

(2) Write a program using functions to show the stats of a string :

def length(string:str) -> int:

a = 0

for i in string:

a += 1

return a

def alpha\_count(string:str) -> int:

a = 0

for i in string:

if i.isalpha():

a += 1

return a

def num\_count(string:str) -> int:

a = 0

for i in string:

if i.isdigit():

a += 1

return a

def symbol\_count(string:str) -> int:

a = 0

for i in string:

if not i.isalnum():

a += 1

return a

def word\_count(string:str) -> int:

a = 0

for i in string:

if i.isspace():

a += 1

return a + 1

while True:

instr = input('String: ')

print(f'''

LENGTH OF STRING : {length(instr)}

ALPHABETS IN STRING : {alpha\_count(instr)}

NUMBERS IN STRING : {num\_count(instr)}

SYMBOLS IN STRING : {symbol\_count(instr)}

WORDS IN STRING : {word\_count(instr)}

''')

PHONEBOOK

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(1) ADD A CONTACT

(2) MODIFY A CONTACT

(3) DELETE A CONTACT

(4) SEARCH FOR A CONTACT

(5) VIEW ALL CONTACTS

Enter your choice: 5

John : 8876773583

James : 9989786799

Nicole : 7857674999

PHONEBOOK

-+-+-+-+-+-

(1) ADD A CONTACT

(2) MODIFY A CONTACT

(3) DELETE A CONTACT

(4) SEARCH FOR A CONTACT

(5) VIEW ALL CONTACTS

Enter your choice: 2

Name: james

New Number: 998772889

SUCCESS

PHONEBOOK

-+-+-+-+-+-

(1) ADD A CONTACT

(2) MODIFY A CONTACT

(3) DELETE A CONTACT

(4) SEARCH FOR A CONTACT

(5) VIEW ALL CONTACTS

Enter your choice:

(3) Write a program to operate a phonebook using functions :

phoneBook = {

'john' : 8876773583,

'james' : 9989786799,

'nicole' : 7857674999,

}

def add\_contact(name:str,number:int):

if name.lower() in phoneBook:

return 'CONTACT ALREADY EXISTS'

else:

phoneBook[name.lower()] = number

return 'SUCCESS'

def modify\_contact(name:str,newnum:int):

if name.lower() in phoneBook:

phoneBook[name.lower()] = newnum

return 'SUCCESS'

else:

return 'CONTACT DOES NOT EXIST'

def search(name:str):

if name.lower() in phoneBook:

return phoneBook[name.lower()]

else:

return 'COULD NOT FIND CONTACT'

def delete\_contact(name:str):

if name.lower() in phoneBook:

del phoneBook[name.lower()]

return 'SUCCESS'

else:

return 'CANNOT DELETE NONEXISTENT CONTACT'

def display():

for name in phoneBook:

print()

print(f'{name.capitalize()}\t: {phoneBook[name]}')

while True:

print('''

PHONEBOOK

-+-+-+-+-+-

(1) ADD A CONTACT

(2) MODIFY A CONTACT

(3) DELETE A CONTACT

(4) SEARCH FOR A CONTACT

(5) VIEW ALL CONTACTS

'''

ch = int(input('Enter your choice: '))

if ch == 1:print(add\_contact(input('Name: '),int(input('Number:'))))

elif ch == 2:print(modify\_contact(input('Name: '),int(input('New Number: '))))

elif ch == 3:print(delete\_contact(input('Name: ')))

elif ch == 4:print(search(input('Name: ')))

elif ch == 5: display()

Current list: []

(1) Append

(2) Insert

(3) Delete

(4) Extend

Choice: 4

Element: [1,2,3,4,5]

Current list: [1, 2, 3, 4, 5]

(1) Append

(2) Insert

(3) Delete

(4) Extend

Choice:

(4) Write a program to crate an interface for list creation using functions :

List = []

def append(elem):

List.append(elem)

def insert(elem,pos:int):

List.insert(pos,elem)

def delete(pos:int):

List.pop(pos)

def extend(string:str):

try:

l = eval(string)

List.extend(l)

except (NameError,SyntaxError) as e:

print(e)

while True:

print(f'''

Current list: {List}

(1) Append

(2) Insert

(3) Delete

(4) Extend

''')

try:

ch = int(input("Choice: "))

except ValueError:

continue

if ch == 1:append(int(input('Element: ')))

elif ch == 2:insert(int(input('Element: ')),int(input('Position: ')))

elif ch == 3:delete(int(input('Position: ')))

elif ch == 4:extend(input('Element: '))

(1) ADD ENTRY

(2) DELETE ENTRY

(3) SEARCH (BY NAME)

(4) DISPLAY ALL RECORDS

Choice: 1

AdmNo: 4435

Name: Joseph Chacko

Class: XII

Division: B

(1) ADD ENTRY

(2) DELETE ENTRY

(3) SEARCH (BY NAME)

(4) DISPLAY ALL RECORDS

Choice: 4

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AdmNo : 3445

Name : Jim Harris

Class : XII

Division : C

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AdmNo : 6664

Name : Jake Morrington

Class : XII

Division : C

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AdmNo : 2889

Name : Anne Cole

Class : XII

Division : C

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AdmNo : 9484

Name : Cris Parker

Class : XII

Division : C

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AdmNo : 9892

Name : Ophelia Dennis

Class : XII

Division : C

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----------------------------

AdmNo : 4435

Name : Joseph Chacko

Class : XII

Division : B

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(1) ADD ENTRY

(2) DELETE ENTRY

(3) SEARCH (BY NAME)

(4) DISPLAY ALL RECORDS

Choice:

(5) Create a student info portal using lists and functions :

studentDetails = {

3445 : {'Name':'Jim Harris','Class':'XII','Division':'C'},

6664 : {'Name':'Jake Morrington','Class':'XII','Division':'C'},

2889 : {'Name':'Anne Cole','Class':'XII','Division':'C'},

9484 : {'Name':'Cris Parker','Class':'XII','Division':'C'},

9892 : {'Name':'Ophelia Dennis','Class':'XII','Division':'C'},

}

def add\_entry(\_admNo:int,\_name:str,\_class:str,\_div:str) -> None:

studentDetails[\_admNo] = {'Name':\_name,'Class':\_class,'Division':\_div}

def delete\_entry(\_admNo:str) -> None:

del studentDetails[\_admNo]

def search(\_name:str) -> dict:

admno = 0

for i in studentDetails:

if studentDetails[i]['Name'] == \_name.title():

admno = studentDetails[i]

return studentDetails[admNo]

else:

return None

def display():

for i in studentDetails:

print(f'''----------------------------

AdmNo : {i}

Name : {studentDetails[i]['Name']}

Class : {studentDetails[i]['Class']}

Division : {studentDetails[i]['Division']}

----------------------------''')

while True:

print('''

(1) ADD ENTRY

(2) DELETE ENTRY

(3) SEARCH (BY NAME)

(4) DISPLAY ALL RECORDS

''')

try:

ch = int(input("Choice: "))

if ch == 1:add\_entry(int(input('AdmNo: ')),input('Name: '),input('Class: '),input('Division: '))

elif ch == 2:delete\_entry(int(input('AdmNo: ')))

elif ch == 3:search(input('Name: '))

elif ch == 4:display()

except ValueError:

continue