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#1. Write a program in Python to perform the following operation:
# If a number is divisible by 3 it should print “Consultadd” as a string
# If a number is divisible by 5 it should print “Python Training” as a string
# If a number is divisible by both 3 and 5 it should print “Consultadd - Python Training”
as astring

data = eval(input("Enter a number"))
if data % 3 == 0 and data % 5 == 0:
        print("Consultadd - Python Training")
elif data % 5 == 0:
    print("Python Training")
elif data % 3 == 0:
    print("Consultadd")
else:
    print("choose another number")

#2.Write a program in Python to perform the following operator based task:
#Ask user to choose the following option first:
#If User Enter 1 - Addition
#If User Enter 2 - Subtraction
#If User Enter 3 - Division
#If User Enter 4 - Multiplication
#If User Enter 5 - Average

option = eval(input("enter an option between 1 to 5"))
num1 = eval(input("enter a number"))
num2 = eval(input("enter 2nd number"))
if option <=5 and option >=0:
    if option ==1:
        add = num1+num2
        print(num1,"+",num2,"=",add)
    elif option == 2:
        minus = num1-num2
        print(num1,"-",num2,"=",minus)
    elif option == 3:
        division = num1/num2
        print(num1,"/",num2,"=",division)
    elif option == 4:
        product = num1*num2
        print(num1,"*",num2,"=",product)
    elif option == 5:
        num = eval(input("enter number for average"))
        num3 = eval(input("enter number for average"))
        avrg = (num1+num2+num+num3)/4
        print("average of",num1,num2,num,"and",num3,"is:",avrg)
    elif avrg or product or division or minus or add <=0:
        print("NEGATIVE")

#3.Write a program in Python to implement the given flowchart:

a,b,c = 10,20,30
avg = (a+b+c)/3
print("avg =",avg)
if avg > a and avg>b and avg>c:
    print("avg is higher than a,b,c")
elif avg > a and avg>b:
    print("avg is higher than a,b")
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elif avg > a and avg>c:
    print("avg is higher than a,c")
elif avg>b and avg>c:
    print("avg is higher than b,c")
elif avg > a:
    print("avg is just higher than a")
elif avg > b:
    print("avg is just higher than b")
elif avg > c:
    print("avg is just higher than c")

#4.Write a program in Python to break and continue if the following cases occurs:
#If user enters a negative number just break the loop and print “It’s Over”
#If user enters a positive number just continue in the loop and print “Good Going”

while True:
    number = eval(input("enter a number"))
    if number % 2 == 0:
        print ("Good Going")
        continue

    if number %2 != 0:
        print("it's over")
        break
    print("it's over")

#5.Write a program in Python which will find all such numbers which are divisible by 7
#but are not a multiple of 5, between 2000 and 3200.

nl=[]
for x in range(2000,3200):
    if (x%7==0) and (x % 5 != 0):
        nl.append(str(x))
print ((nl))

#6. What is the output of the following code examples?

#a)
x=123
for i in x:
    print(i)
    #ans: 'int' object is not iterable

#b)
i = 0
while i < 5:
    print(i)
    i += 1
    if i == 3:
        break
    else:
        print("error")

#ans:
#0
#error
#1
#error
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#2

#c)
count = 0
while True:
    print(count)
    count += 1
    if count >= 5:
        break

#ans:
#0
#1
#2
#3
#4

#7. Write a program that prints all the numbers from 0 to 6 except 3 and 6.
#Expected output: 0 1 2 4 5
#Note: Use 'continue' statement

for i in range(0,6):
    if i == 3 or i == 6:continue
    print(i)


#8. Write a program that accepts a string as an input from the user and calculate the
number of digits and letters.
#Sample input: consul72
#Expected output: Letters 6 Digits 2

digits = letters = 0
raw = input("enter a string:")
for c in raw:
    if c.isdigit():
        digits = digits + 1
    elif c.isalpha():
        letters = letters + 1
print("Letters", letters)
print("Digits", digits)


#9. Read the two parts of the question below:

#a)Write a program such that it asks users to "guess the lucky number". If the correct
number is guessed the program stops,
#otherwise it continues forever.
lucky_num = 4
while True:
    number = eval(input("guess the lucky number"))
    if number != lucky_num:continue
    else:
        print("Congratulations!! you have guessed it correct :)")
    break

#b) Modify the program so that it asks users whether they want to guess again each time.
#Use two variables, 'number' for the number and 'answer' for the answer to the question
whether they want to continue guessing.
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#The program stops if the user guesses the correct number or answers “no”.
#(The program continues as long as a user has not answered “no” and has not guessed the
correct number)

lucky_num = 4
while True:
    number = eval(input("guess the lucky number"))
    if number != lucky_num:
        print("sorry!! you have guessed it wrong.")
        answer = eval(input("enter 1 if you want to guess again, otherwise enter 0"))
        if answer == 0:break
        elif answer == 1: continue
    else:
        print("Congratulations!! you have guessed it correct :)")
    break


#10. Write a program that asks five times to guess the lucky number. Use a while loop and
a counter, such as:
#The program asks for five guesses (no matter whether the correct number was guessed or
not).
#If the correct number is guessed, the program outputs “Good guess!”, otherwise it
outputs “Try again!”.
#After the fifth guess it stops and prints “Game over!”.

counter=1
lucky_num = 4
while counter <= 6:
    print("Type in the", counter, "number")
    number = eval(input("guess the lucky number"))
    counter=counter+1
    if counter == 6:
            print("game over!")
            break
    elif number != lucky_num:
        print("Try again!")
    else:
        print("Good guess!")


#11. In the previous question, insert break after the “Good guess!” print statement.
#break will terminate the while loop so that users do not have to continue guessing after
they found the number.
#If the user does not guess the number at all, print “Sorry but that was not very
successful”.

counter=1
lucky_num = 4
while counter <= 6:
    print("Type in the", counter, "number")
    number = eval(input("guess the lucky number"))
    counter=counter+1
    if counter == 6:
            print("Sorry but that was not very successful")
            break
    elif number != lucky_num:
        print("Try again!")
    else:
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        print("Good guess!")
        break
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