**EXERCISE No. 1**

Write a python script to generate a “Faulty Calculator” which takes input from the user as which operation to perform and the operands on which operation is to perform. But in the case specified below it gives faulty calculation.

**Cases:**

1. **56+9=77 (b) 45\*3=555 (c) 56/6=4**

print("................Faulty Calculator...................\n")

num1=0

num2=0

operator=0

if((num1==56)and(num2==9)and(operator==1)):

print("56 + 9 = 77")

elif((num1==45)and(num2==3)and(operator==3)):

print("45 X 3 = 555")

elif((num1==56)and(num2==6)and(operator==4)):

print("56 / 6 = 4")

else:

def calculate(num1,num2,operator):

print("\nEnter your choice for the operation\n1 for Addition\n2 for Subtraction\n3 for Multiplication\n4 for Division\n5 for Exponent\n6 for Modulation\n")

operator=int(input())

print("Enter your choice for operands")

num1=int(input("Enter first operand "))

num2=int(input("Enter second operand "))

if((num1==56)and(num2==9)and(operator==1)):

print("56 + 9 = 77")

elif((num1==45)and(num2==3)and(operator==3)):

print("45 X 3 = 555")

elif((num1==56)and(num2==6)and(operator==4)):

print("56 / 6 = 4")

elif(operator==1):

print("Addition of numbers : ",num1+num2)

elif(operator==2):

print("Subtraction of numbers : ",num1-num2)

elif(operator==3):

print("Multiplication of numbers : ",num1\*num2)

elif(operator==4):

print("Division of numbers : ",num1/num2)

elif(operator==5):

print("Exponent of numbers : ",num1\*\*num2)

elif(operator==6):

print("Modulation of numbers : ",num1%num2)

else:

print("Incorrect input")

calculate(num1,num2,operator)

choice=True

while(choice==True):

x=int(input("Enter 1 to Quit Calculator?"))

if(x==1):

break

else:

calculate(num1,num2,operator)

**EXERCISE No. 2**

Write a python script to create a game in which user has to **find or guess a number** which has already given in the program in **definite number of attempts**. In each attempt the user should know for **which attempt it is playing** and if he guess a number smaller than given number he should receive a message **“Try for greater numbers”**. Similarly for guessing a number greater than the given number it should receive message **“Try with some smaller numbers”** and if he guesses the right one message should be **“Congrats! You won the game”**. If number of attempts expires the message should be **“Game Over”.**

print("Let's play a game to guess a number which I have thought for you")

answer=29

for i in range(1, 7):

if(i==6):

print("Game Over")

break

print("Attempt number : ",i)

num=int(input("Enter a number \n"))

if(num>answer):

print("Try with some smaller numbers")

#break

elif(num<answer):

print("Try with some greater numbers")

#break

else:

print("Congo!!! You got it right.")

break

**EXERCISE No. 3**

Write a python script to print pattern of stars for desired number of lines upward triangle for TRUE as input or downward triangle for False as input

print("enter 1 for upright pattern or 2 for normal pattern\n")

choice=int(input("Enter here : "))

if(choice==2):

n = int(input("Enter number of rows for the pattern : "))

for i in range(0,n+1):

for j in range(0,i):

print("\* ",end="")

print("\r")

elif(choice==1):

n = int(input("Enter number of rows for the pattern : "))

for i in range(n+1,0,-1):

for j in range(0,i):

print("\* ",end="")

print("\r")

else:

print("Enter a valid input choice as 1 or 2")

**EXERCISE No. 4**

Write a python script to create a **“Health Management System”** using function. Create 6 files individually for Harry, Rohan and Hammad……Clients. 3 files for their **Food intake** and **Exercises** respectively they are doing. Each time you have to take input as *(1) for Harry, (2) for Rohan and (3) for Hammad.* For each user takes the choice what to input *(a) as Food Intake and (b) as Exercise*. Ask for options from user **Record the data** or **To fetch the Data** and code accordingly.

Use **File Functions** and **date function** def getdate():

import datetime

return datetime.datetime.now()

print("......................Health Management System....................")  
def getdate():  
 import datetime  
 return datetime.datetime.now()  
  
def choose\_person():  
 a=["Harry", "Rohan", "Hammad"]  
 print("Enter 0 for Harry\nEnter 1 for Rohan\nEnter 2 for Hammad\n")  
 x=int(input("Enter choice for person "))  
 print("Details for the person : ",a[x])  
 return x  
def take():  
 a=choose\_person()  
  
 if(a==0):  
 option=int(input("Enter 1 for Food entry\nEnter 2 for Exercise entry"))  
 if(option==1):  
 f=open("Harry\_Food.txt","a+")  
 data=input("Write the data here : ")  
 f.write(str([str(getdate())])+" : "+data+"\n")  
 f.close()  
 elif(option==2):  
 f = open("Harry\_Exercise.txt", "a+")  
 data = input("Write the data here : ")  
 f.write(str([str(getdate())]) + " : " + data + "\n")  
 f.close()  
 elif(a==1):  
 option = int(input("Enter 1 for Food entry\nEnter 2 for Exercise entry"))  
 if (option == 1):  
 f = open("Rohan\_Food.txt", "a+")  
 data = input("Write the data here : ")  
 f.write(str([str(getdate())]) + " : " + data + "\n")  
 f.close()  
 elif (option == 2):  
 f = open("Rohan\_Exercise.txt", "a+")  
 data = input("Write the data here : ")  
 f.write(str([str(getdate())]) + " : " + data + "\n")  
 f.close()  
 elif(a==2):  
 option = int(input("Enter 1 for Food entry\nEnter 2 for Exercise entry"))  
 if (option == 1):  
 f = open("Hammad\_Food.txt", "a+")  
 data = input("Write the data here : ")  
 f.write(str([str(getdate())]) + " : " + data + "\n")  
 f.close()  
 elif (option == 2):  
 f = open("Hammad\_Exercise.txt", "a+")  
 data = input("Write the data here : ")  
 f.write(str([str(getdate())]) + " : " + data + "\n")  
 f.close()  
 else:  
 print("Invalid entry")  
  
def retrieve():  
 a = choose\_person()  
  
 if (a == 0):  
 option = int(input("Enter 1 for Food entry\nEnter 2 for Exercise entry"))  
 if (option == 1):  
 f = open("Harry\_Food.txt")  
 data = f.read()  
 print(data)  
 f.close()  
 elif (option == 2):  
 f = open("Harry\_Exercise.txt")  
 data=f.read()  
 print(data)  
 f.close()  
 elif (a == 1):  
 option = int(input("Enter 1 for Food entry\nEnter 2 for Exercise entry"))  
 if (option == 1):  
 f = open("Rohan\_Food.txt")  
 data = f.read()  
 print(data)  
 f.close()  
 elif (option == 2):  
 f = open("Rohan\_Exercise.txt")  
 print(f.read())  
 f.close()  
 elif (a == 2):  
 option = int(input("Enter 1 for Food entry\nEnter 2 for Exercise entry"))  
 if (option == 1):  
 f = open("Hammad\_Food.txt")  
 data = f.read()  
 print(data)  
 f.close()  
 elif (option == 2):  
 f = open("Hammad\_Exercise.txt")  
 print(f.read())  
 f.close()  
 else:  
 print("Invalid entry")  
choice=int(input("Enter 1 to take the updates\nEnter 2 to retrieve the updates "))  
if(choice==1):  
 take()  
elif(choice==2):  
 retrieve()  
else:  
 print("Invalid Input")  
def take\_update():  
 a=choose\_person()

**EXERCISE No. 5**

Make a Snake Water and Gun game. Take 5 chances to play. Make a score for you and computer and in the end display who won by what points.

import random

l=['snake','water','gun']

print("You and Computer will play this game for 5 times...Let's find who wins...?")

chance=1

user\_count=0

computer\_count=0

while(chance<6):

print(".............Chance number........... : ",chance)

print("Enter 1 to choose Snake\nEnter 2 to choose Water\nEnter 3 to choose Gun\n")

input\_choice=int(input("Enter your choice "))

#print(input\_choice)

r=random.choice(l)

if(input\_choice==1):

print("You choose Snake by selecting ",input\_choice)

print("Computer chooses ",r)

if(r==l[0]):

print("Chance Draw")

elif(r==l[1]):

user\_count= user\_count+1

print("You won the chance as you drank all the water")

elif(r==l[2]):

computer\_count=computer\_count+1

print("Ohh!!! You lost as Computer has Shot you with gun")

else:

print("wrong Choise")

if(input\_choice==2):

print("You choose Water by selecting ",input\_choice)

print("Computer chooses ",r)

if(r==l[0]):

print("Ohh!!! You lost as Computer has drank your water")

computer\_count=computer\_count+1

elif(r==l[1]):

print("It's a Draw")

elif(r==l[2]):

user\_count=user\_count+1

print("You won as Computer's gun has drown in water")

else:

print("wrong Choise")

if(input\_choice==3):

print("You choose Gun by selecting ",input\_choice)

print("Computer chooses ",r)

if(r==l[0]):

print("Wow!!! You won as you shot the computer's Snake")

user\_count=user\_count+1

elif(r==l[1]):

computer\_count=computer\_count+1

print("Ohh!!! Computer won as your gun has drown in water")

elif(r==l[2]):

print("It's a Draw")

else:

print("wrong Choise")

else:

print("Wrong Input")

print("user\_count ",user\_count)

print("computer\_count ",computer\_count)

chance=chance+1

if(user\_count>computer\_count):

print("You won by points ",user\_count, computer\_count)

else:

print("Computer won by points ",computer\_count, user\_count)