Lab 2 Python

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Calculations Program

CODE

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print("Lab 2 Python")
print("Mishan Regmi 1841030 5 BCA 'A'\n")
print("Calculations \n")

import math

print(" 1. Simple Calculator\n 2. Scientific Calc
ulator\n 3. Company Program\n Type 'done' if you
are done")
m = 0
while m < 1:
  ch = input("\nChoose your calculation. ")
  if ch != 'done':
    if ch == '1':
      print("A Simple Calculator\n")
      def add(n1, n2):
          return n1 + n2

      def sub(n1, n2):
          return n1 - n2
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      def mult(n1, n2):
          return n1 * n2

      def div(n1, n2):
          return n1 / n2

      print("Please select operation:\n")
      print(" 1. Add\n 2. Subtract\n 3. Multiply\
n 4. Divide\n \nEnter 'done' if you are done.")
      i = 0

      while i < 1:
        choice = input("\nSelect operations:")
        if choice != 'done':
          num1 = int(input("\nEnter first number:
 "))
          num2 = int(input("Enter second number:
"))

          if choice == 1:
            print("Result:", num1, "+", num2, "="
, add(num1, num2))

          elif choice == 2:
            print("Result:", num1, "-
", num2, "=", sub(num1, num2))

          elif choice == 3:
            print("Result:", num1, "*", num2, "="
,  mult(num1, num2))
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          elif choice == 4:
            print("Result:", num1, "/", num2, "="
, div(num1, num2))
          else:
            print("Invalid input. Please enter ag
ain.")
        else:
          i = i + 1
          break
    elif ch == '2':
      print ("\nA Simple Scientific Calculator")
      print('''
      Operator Available
      ^     for power
      r     for root
      %     for modulus
      pie   for Pie
      sin   for sin (trig)
      cos   for cos (trig)
      tan   for tan (trig)
      !     for factorial
      ln    for ln (natural log)
      ''')
      firstNumber = float(input("Enter first numb
er: "))
      op = input("Enter the operator: ").lower()
      secondNumber = float(input("Enter second nu
mber: "))

      if op == "^":
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            print (firstNumber, "^", secondNumber,
"=", firstNumber ** secondNumber )
        elif op == "r":
            print (firstNumber, "root", secondNumbe
r, "=", secondNumber ** (1 / firstNumber) )
        elif op == "%":
            print (firstNumber, "%", secondNumber,
"=", firstNumber % secondNumber )
        #factorial
        elif op == "!":
            theNumber = firstNumber = secondNumber
            secondNumber = 1
            while firstNumber > 1:
                secondNumber *= firstNumber
                firstNumber = firstNumber - 1
            print ("n!(", theNumber, ")=", secondNu
mber )
        elif op == "sin":
            print ("sin(", secondNumber, ")=", math
.sin(secondNumber ))
        elif op == "cos":
            print ("cos(", secondNumber, ")=", math
.cos
            (secondNumber ))
        elif op == "tan":
            print ("tan(", secondNumber, ")=", math
.tan(secondNumber ))
        elif op == "pie" or op == "pi":
            print ("Pie =", math.pi)
        elif op == "ln":
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          print ("ln(", secondNumber , ")= ", mat
h.log(secondNumber))
      else:
          print ("incorrect operator")

    elif ch == '3':
      print("\nBank Application\n")
      rev = float(input("Enter company's year rev
enue."))
      sales = float(input("Enter the sales of the
 year."))
      exp = float(input("Enter the total expenses
 of the year."))
      i = 0

      while i < 1:
        print("\n 1. Calculate yearly profit and
Quaterly\n 2. Check Growth \nType 'done' if your
work is finished")
        che = int(input("\nChoose what you want t
o do."))
        if che != 'done':
          if che == 1:
            profit = rev - exp
            print("\nYour profit of this year is"
, profit)
            firstQ = profit/4
            print("\nYour company made a profit o
f Rs.", firstQ ,"in the first quarter.")
          elif che == 2:
            if (profit < exp):
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              print("\nCompany is growing keep wo
rking hard.")
            else:
              print("\nNeed more inprovemnt in fi
nance management.")
          else:
            print("Invalid choice.")
            pass
        else:
          i = i + 1
          break
      else:
        print("Invalid Input")
  else:
    m = m + 1
    print("\nThank You Program Closed")
    break
```