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CE-38-b

Al Decision Support System

LAB Report

# Question:

Write a simple calculator program. Follow the steps below:

Declare and define a function name “Menu” which displays a list of choices for user such as addition, subtraction, multiplication etc. It takes the choice from user as an input and return.

Define and declare a separate function for each choice.

In the main body of the program call respective function depending on user’s choice. Program should not terminate till user chooses last option that is “Quit”.

## Code:

def askNumber():  
 num1 = input(**"Enter first Number: "**)  
 num2 = input(**"Enter second Number: "**)  
 return int(num1), int(num2)  
  
  
def add(num1, num2):  
 return num1 + num2  
  
  
def mul(num1, num2):  
 return num1 \* num2  
  
  
def Menu():  
 return input(**"Press the Operation to want: "**)  
  
  
def main():  
 operator = Menu()  
 if (operator == **"+"**):  
 num1, num2 = askNumber()  
 return add(num1,num2)  
 elif(operator == **"\*"**):  
 num1, num2 = askNumber()  
 return mul(num1,num2)  
 else:  
 print(**"Sorry Software does not support the operator."**)  
 return -1

interrupt = 1  
while (interrupt):  
 calculated\_Res = main()  
 print(**"Your answer is: "**, calculated\_Res)  
 interrupt = input(**"Want to quit? enter 0, else enter 1"**)  
 interrupt = int(interrupt)

## Result:

Press the Operation to want: \*

Enter first Number: 3

Enter second Number: 5

Your answer is: 15

Want to quit? enter 0, else enter 1

# Question:

Write a method to calculate Fibonacci series up to ‘n’ points. After calculating the series, the method should return it to main.

## Code:

def fib (n):  
 list =[0, 1]  
 for i in range(n-1):  
 fibn1 = list[-2]  
 fibn2 = list[-1]  
 list.append(fibn1 + fibn2)  
 return list

data = input(**"enter number for Fibonacci: "**)  
print(fib(int(data)))

## Result:

enter number for Fibonacci: 9

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34]

# Question:

Write a method to calculate factorial of a number entered by the user.

## Code:

import math as m  
  
  
def factorial (data):  
 return m.factorial(data)

data = input(**"Enter number for Factorial: "**)  
print(**"Factorial is: "**, factorial(int(data)))

## Result:

Enter number for Factorial: 6

Factorial is: 720

# Question:

Write a program that lets the user enter in some English text, then converts the text to Pig-Latin.

To review, Pig-Latin takes the first letter of a word, puts it at the end, and appends “ay”. The only exception is if the first letter is a vowel, in which case we keep it as it is and append “hay” to the end.

E.g. “hello” -> “ellohay”, and “image” -> “imagehay”

## Code:

def ToPigLatin(english):  
 wordlist = english.split()  
 vowels = [**'a'**, **'e'**, **'i'**, **'o'**, **'u'**]  
  
 for i in range(len(wordlist)):  
 if (wordlist[i][0] in vowels):  
 wordlist[i] = wordlist[i] + **'hay'** else:  
 wordlist[i] = wordlist[i][1:] + wordlist[i][0] + **'ay'** return wordlist

english = input(**"Write some english dude: "**)  
print(  
ToPigLatin(english))

## Result:

Write some english dude: hi i am hashir shoaib

['ihay', 'ihay', 'amhay', 'ashirhay', 'hoaibsay']