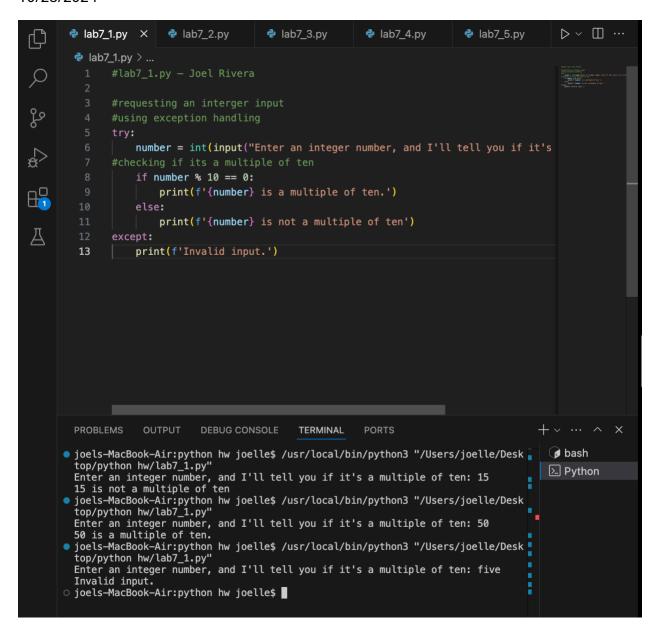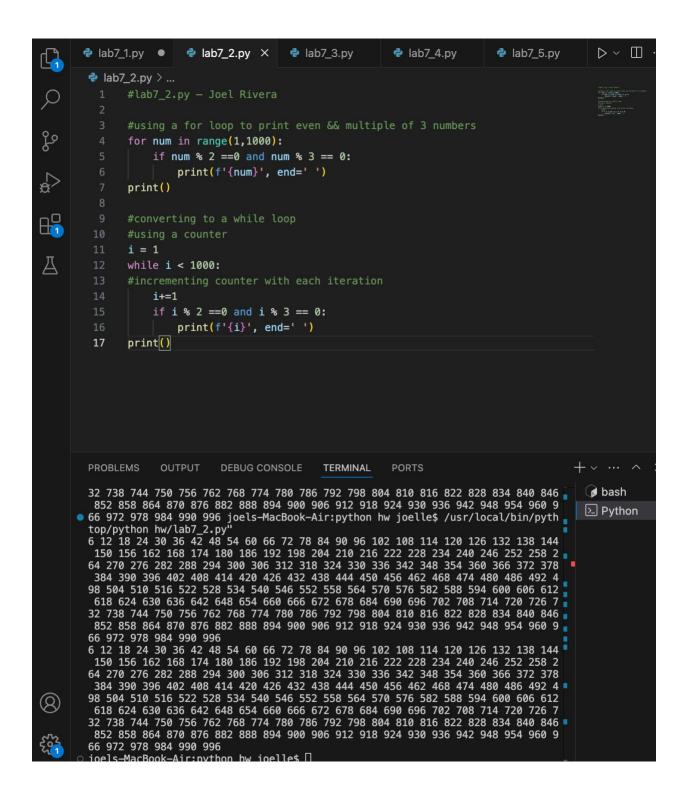Joel Rivera

Et-574 F2F4L

Lab 7

10/28/2024

```python
#lab7_2.py - Joel Rivera

#using a for loop to print even && multiple of 3 numbers
for num in range(1,1000):
    if num % 2 ==0 and num % 3 == 0:
        print(f'{num}', end=' ')
print()

#converting to a while loop
#using a counter
i = 1
while i < 1000:
#incrementing counter with each iteration
    i+=1
    if i % 2 ==0 and i % 3 == 0:
        print(f'{i}', end=' ')
print()
```

```python
#lab7_3.py - Joel Rivera

#using a for loop to calculate the sum of 1-100
total= []
for num in range(1,101):
    total.append(num)
print(f'Sum = {sum(total)}')

#using a while loop for the sum of all even
total=[]
i=1
while i <101:
#checking if even
    if i % 2 == 0:
        total.append(i)
    i+=1
print(f'Sum = {sum(total)}')
```

```python
#lab7_4.py - Joel Rivera

#implement a while loop
i = 9
while i>0:
    print(f'{i}')
    i-=1
print(f'Happy New Year!')

#converting to a for loop
for num in range(9,0,-1):
    print(f'{num}')
print(f'Happy New Year!')
```

```python
#lab7_5.py — Joel Rivera
import random

#requesting an integer
number = int(input('Enter the number of grades in the list: '))

#use a loop to generate random grades
grades = []
for num in range(number):
    r=random.randint(1,100)
    grades.append(r)

#requesting the passing grade
passingNum=int(input('Enter the passing grade: '))

passGrades=[]
for n in grades:
    if n >= passingNum:
        passGrades.append(n)
print(f'Updated List: {passGrades}\nOriginal List: {grades}')
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS

```
n1 = n2

joels-MacBook-Air:python hw joelle$ /usr/local/bin/python3 "/Users/joelle/Desk
top/python hw/lab7_5.py"
Enter the number of grades in the list: 10
Enter the passing grade: 65
Updated List: [95, 96, 89]
Original List: [32, 95, 33, 4, 96, 12, 89, 31, 52, 57]
joels-MacBook-Air:python hw joelle$
```

```python
#lab7_6.py - Joel Rivera

#requesting two numbers from console
nOne = int(input('Enter a number n1: '))
nTwo = int(input('Enter a number n2: '))

#use a while loop to print if n1 < n2
if nOne < nTwo:
    while nOne < nTwo+1:
        print(f'{nOne}', end='|')
        nOne += 1

#using a for loop to print if n1 > n2
elif nOne > nTwo:
    for num in range(nOne, nTwo-1, -1):
        print(f'{num}', end='|')

#if equal
else:
    print(f'n1 = n2')
print()
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS

```
Users/joelle/Desktop/python hw/lab7_6.py"'
joels-MacBook-Air:python hw joelle$ /usr/local/bin/python3 "/Users/joelle/Desk
top/python hw/lab7_6.py"
Enter a number n1: 1
Enter a number n2: 11
1|2|3|4|5|6|7|8|9|10|11|
joels-MacBook-Air:python hw joelle$ /usr/local/bin/python3 "/Users/joelle/Desk
top/python hw/lab7_6.py"
Enter a number n1: 11
Enter a number n2: 1
11|10|9|8|7|6|5|4|3|2|1|
joels-MacBook-Air:python hw joelle$ /usr/local/bin/python3 "/Users/joelle/Desk
top/python hw/lab7_6.py"
Enter a number n1: 11
Enter a number n2: 11
n1 = n2
```

bash
Python

```python
#lab7_7.py - Joel Rivera

#implement a while loop to request numbers and append to a list
lst=[]
numbers =  eval(input('Enter a number or 0 to stop: '))
while numbers > 0 or numbers < 0:
    lst.append(numbers)
    numbers =  eval(input('Enter a number or 0 to stop: '))
    #if 0 is entered, stop loop and dont append
    if numbers == 0:
        break

sum = sum(lst)
average = sum/len(lst)
print()
print(f'Sum = {sum:.2f}\nAverage = {average:.2f}\nNumber(s) entered:')
for e in lst:
    print(e, end=" ")
print()
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

joels-MacBook-Air:python hw joelle$ /usr/local/bin/python3 "/Users/joelle/Desk
top/python hw/lab7_7.py"
Enter a number or 0 to stop: 1
Enter a number or 0 to stop: -10
Enter a number or 0 to stop: 2.34
Enter a number or 0 to stop: 56.78
Enter a number or 0 to stop: 123
Enter a number or 0 to stop: 0

Sum = 173.12
Average = 34.62
Number(s) entered:
1 -10 2.34 56.78 123
joels-MacBook-Air:python hw joelle$
```

8. I faced two challenges in this week's lab. The first I encountered when I got to question 5, I couldn't figure out how to generate a random number. I looked online and I kept seeing random.randint() being used but I wasn't sure if there was another way. However, while looking through the example problems, I saw an example where I saw random was being imported and used so I decided to use it here. The second challenge I faced came from question 7. Originally, I was having an issue with having a 0 being appended to the list if it was the first integer inputted. I realized my mistake was having lst.append(numbers) right after line 5 in my code. I removed this line and it fixed my error.