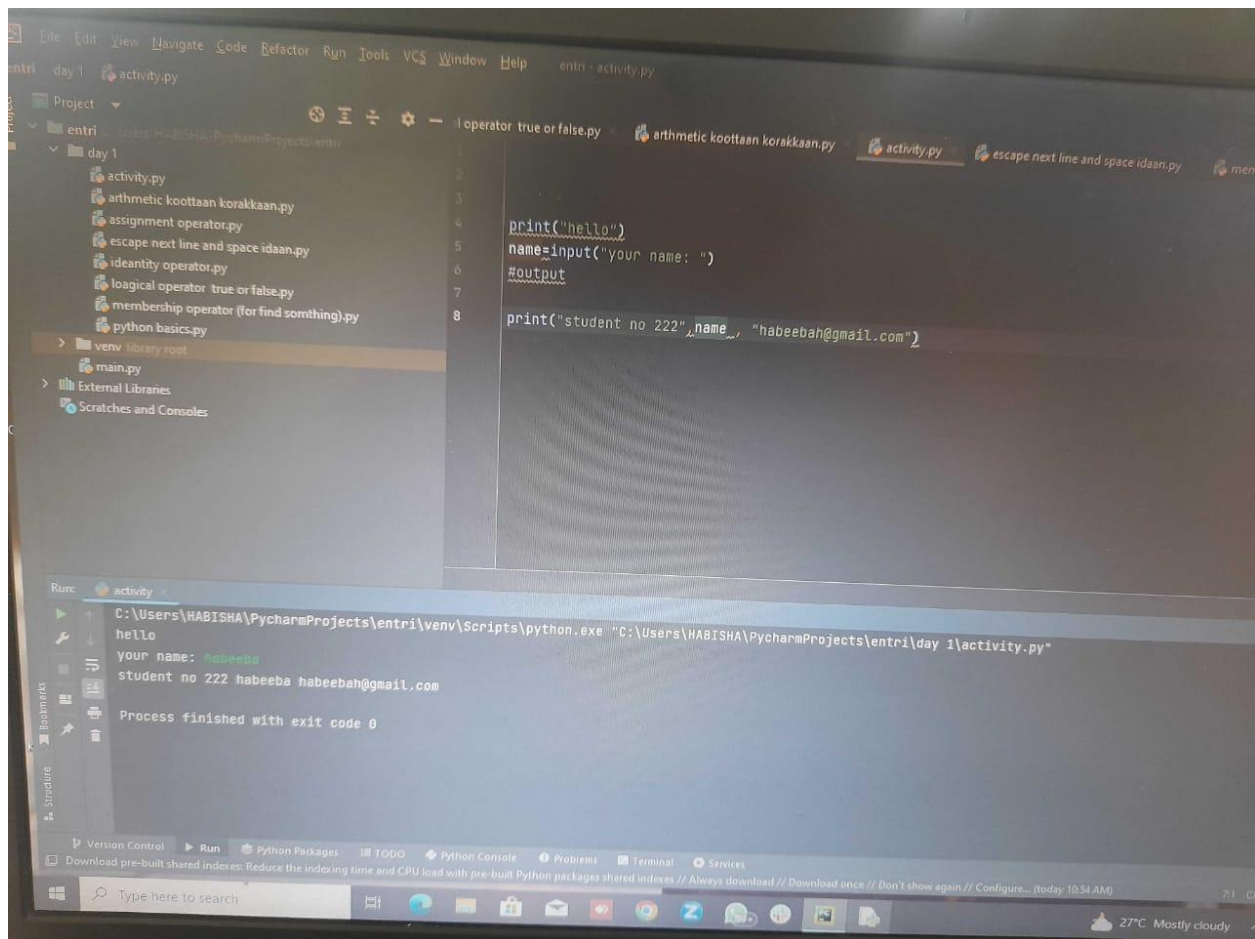


## Tasks - 09/09/2023

### Task 2:

Write Python code that prints your name, student number and email address using input and output functions



The screenshot shows the PyCharm IDE interface. The main editor window displays a Python script named `activity.py` with the following code:

```
1  
2  
3  
4 print("hello")  
5 name=input("your name: ")  
6 #output  
7  
8 print("student no 222",name, "habeebah@gmail.com")
```

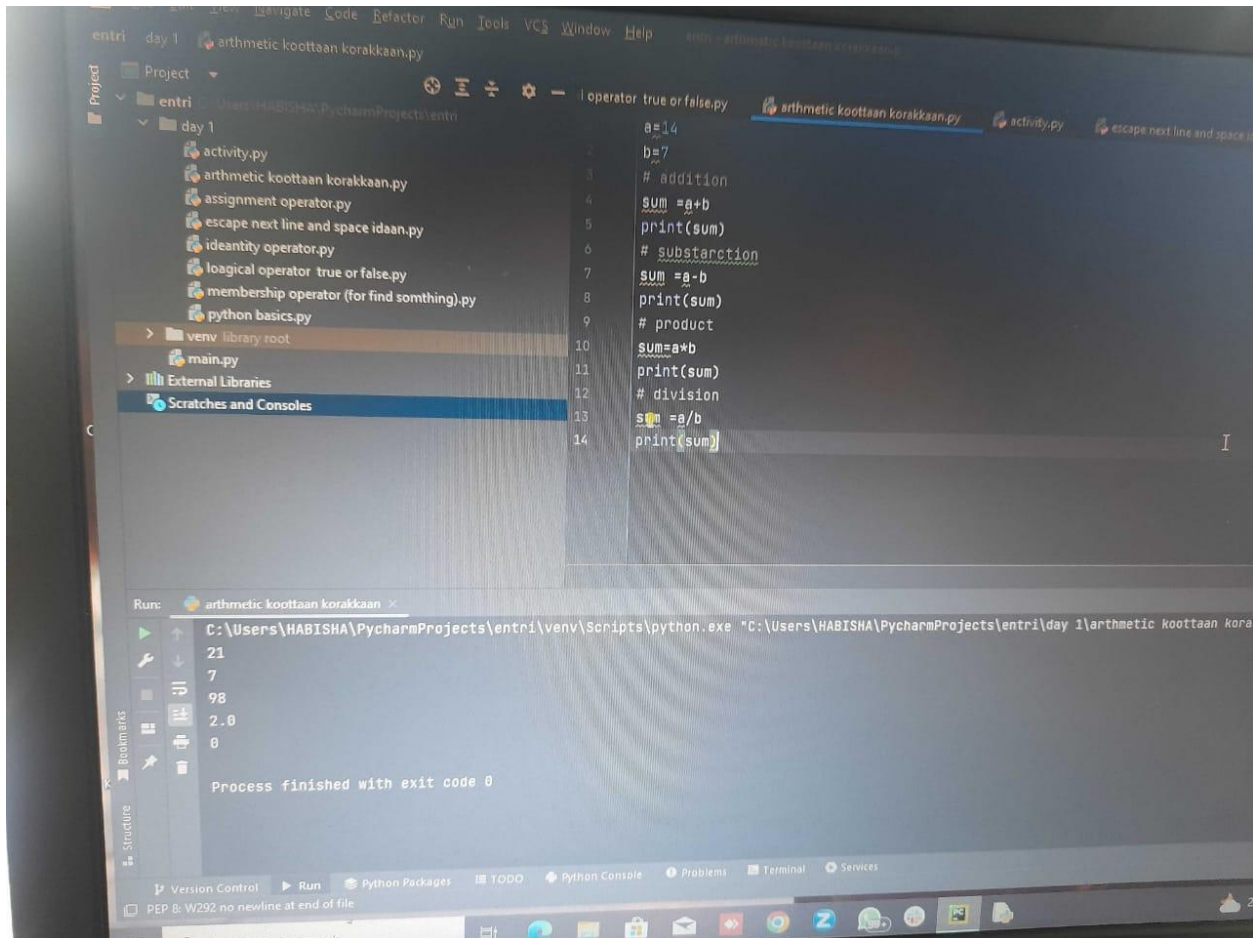
The left sidebar shows the project structure with a folder named `day 1` containing several Python files, including `activity.py`. The bottom panel shows the Run console output:

```
Run: activity  
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 1\activity.py"  
hello  
your name: habeebah  
student no 222 habeebah habeebah@gmail.com  
Process finished with exit code 0
```

The Windows taskbar at the bottom shows the system clock as 7:11 and the weather as 27°C, Mostly cloudy.

### Task 3:

Write Python code that add, subtract, multiply and divide the two numbers. You can use the two numbers 14 and 7.



## Tasks - 19/09/2023

1) A three-day festival is the official celebration.

There are two categories of tickets: individual cost is £68, under sixteen is £32.25. Write a program that asks the user for total numbers in each category, calculate and display the breakdown of each and total prices.

To get more idea please see the execution of the program below:

Doctor Who Festival - Price Calculator

Note: enter 0 if none

Enter total number of individuals : 3

Enter total number of under 16s: 2

Category Price Breakdown:

Price is £204 for 3 individuals

Price is £64.5 for 2 under 16s

```
1 adults = int(input("enter the no of above 16's: "))
2 kids = int(input("enter the no of below 16's:"))
3
4 fare_adults = 68
5 fare_kids = 32.25
6
7 total_adults = fare_adults * adults
8 total_kids = fare_kids * kids
9 total = total_kids + total_adults
10 print(f"price is {total_adults} for {adults} individuals")
11 print(f"price is {total_kids} for {kids} kids")
12 print("total: ", total)
```

Run: task 1

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day3\task 1.py"
enter the no of above 16's: 3
enter the no of below 16's: 2
price is 204 for 3 individuals
price is 64.5 for 2 kids
total: 268.5

Process finished with exit code 0
```

2) Define the variables below. Print the types of each variable. What is the sum of your variables? (Hint:use a type conversion function.) What datatype is the sum?

num=23

textnum="57"

decimal=98.3

```
1 num = 23
2 textnum = "57"
3 decimal = 98.3
4
5 print(type(num))
6 print(type(textnum))
7 print(type(decimal))
8
9 sum = float(num) + float(textnum) + decimal
10 print(sum)
11 print(type(sum))
```

Run: task 2

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day3\task 2.py"
<class 'int'>
<class 'str'>
<class 'float'>
178.3
<class 'float'>

Process finished with exit code 0
```

### 3) Name your file: MonthNames.py

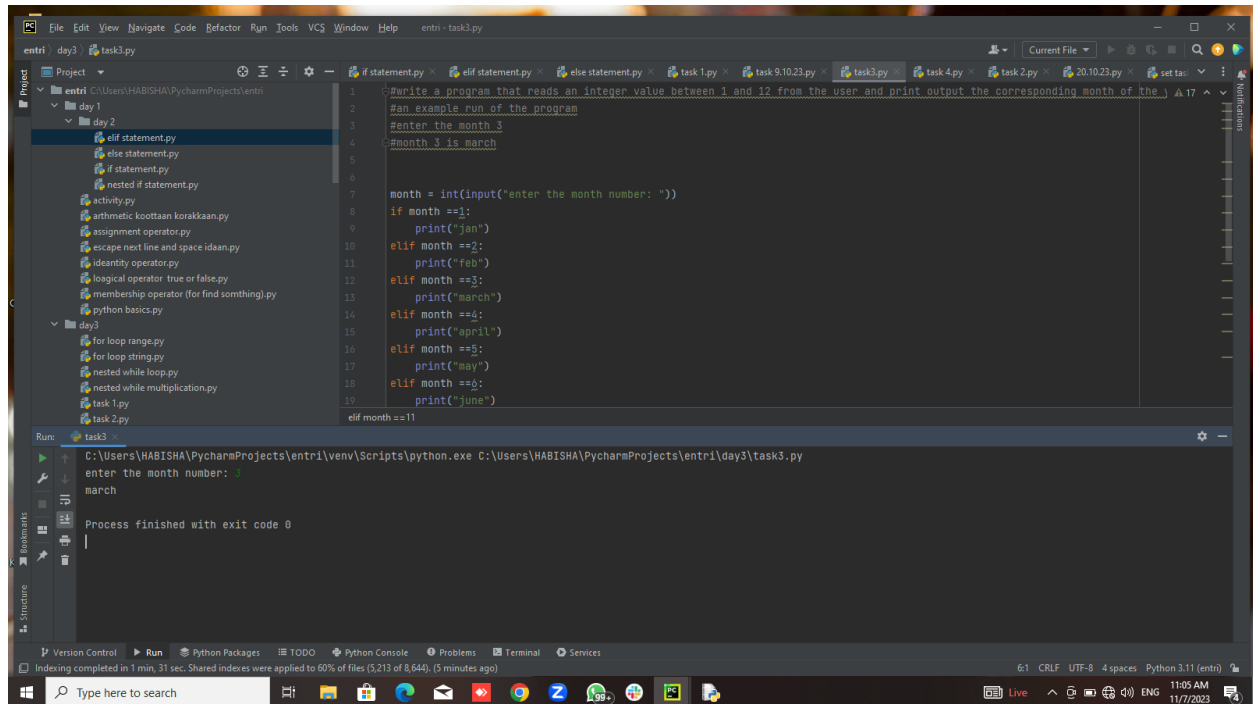
Write a program that reads an integer value between 1 and 12 from the user and prints output the corresponding month of the year.

An example run of the program

Enter the month: 3

Month 3 is March

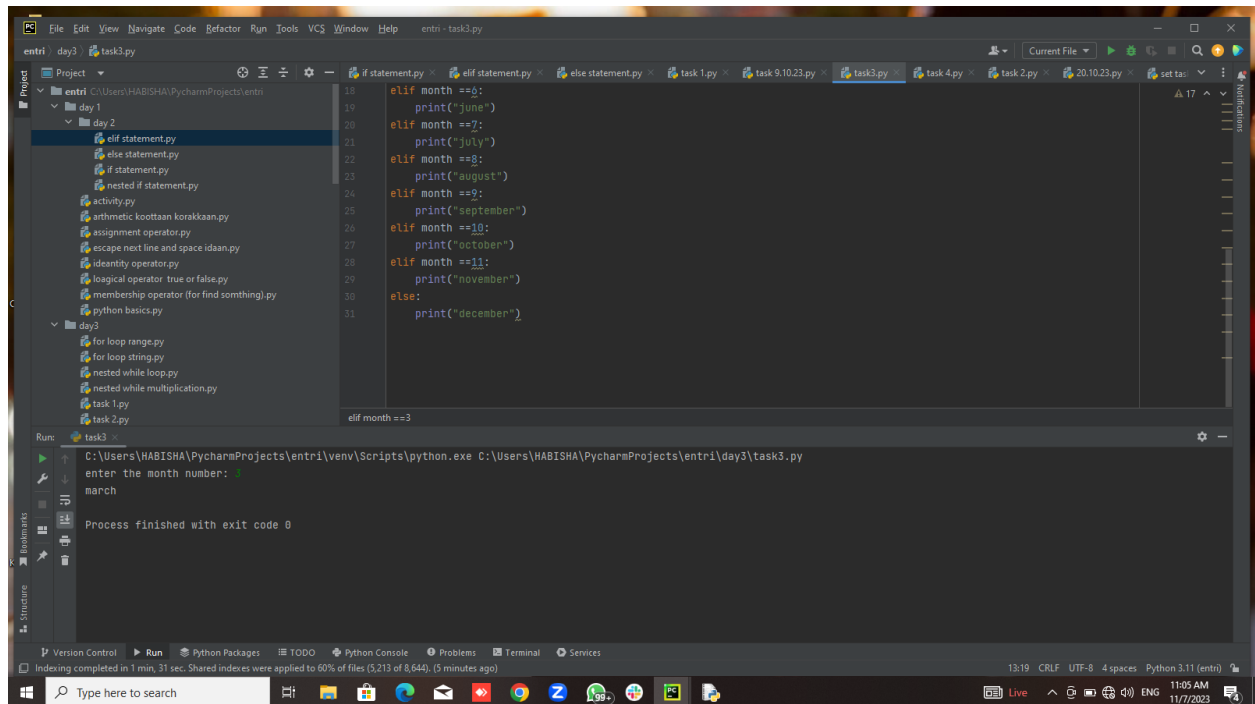
Name your file: EvenOddNumbers.py



The screenshot shows the PyCharm IDE with a project named 'entri'. The file explorer on the left shows a directory structure with 'day3' containing 'task3.py'. The main editor window displays the code for 'task3.py'.

```
1 #write a program that reads an integer value between 1 and 12 from the user and print output the corresponding month of the year
2 #an example run of the program
3 #enter the month 3
4 #month 3 is march
5
6
7 month = int(input("enter the month number: "))
8 if month ==1:
9     print("jan")
10 elif month ==2:
11     print("feb")
12 elif month ==3:
13     print("march")
14 elif month ==4:
15     print("april")
16 elif month ==5:
17     print("may")
18 elif month ==6:
19     print("june")
20 elif month ==11:
```

The Run window at the bottom shows the execution of 'task3.py' using the Python interpreter at 'C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe'. The input '3' was entered, and the output 'march' was printed. The process finished with exit code 0.

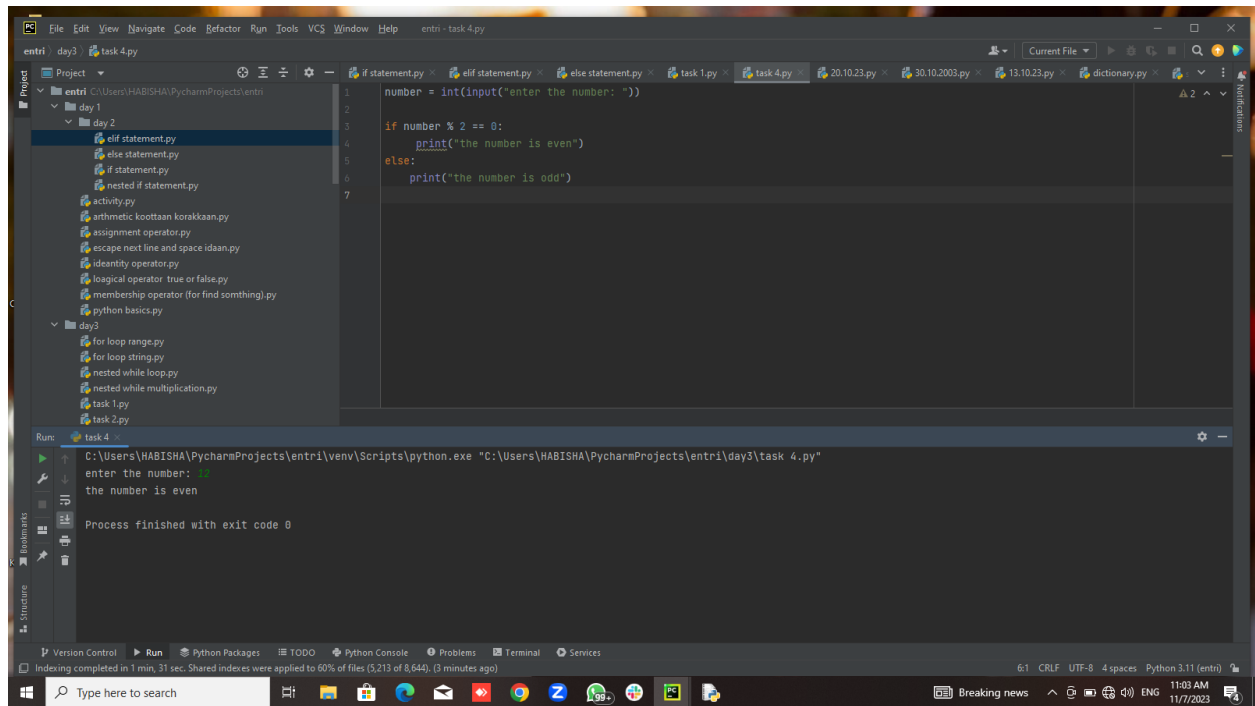


4) Write a program that reads an integer value from the user and prints output whether it is odd or even.

An example run of the program (use modulus (%) operator)

Enter a number: 12

12 is "even"



[23.9.2023]

Window Help entri - dictionary.py

nested while multiplication.py × task 2.py × task 1.py × dictionary.py × list task

```
1 #task8
2 dict={"name": "john", "age": "25", "address": "newyork"}
3 print(dict)
4 dict.update({"phone": "1234567890"})
5 print(dict)
6
7
8
```

```
env\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\dictionary.py"
'newyork'}
'newyork', 'phone': '1234567890'}
```



for loop range.py  
for loop string.py  
nested while loop.py

dictionary x

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe"  
{'name': 'john', 'age': '25', 'address': 'newyork'}  
{'name': 'john', 'age': '25', 'address': 'newyork', 'phone': '1234567890'}
```

Process finished with exit code 0

Version Control Run Python Packages TODO Python Console Problems Terminal Services  
Download pre-built shared indexes. Reduce the indexing time and CPU load with pre-built Python packages shared indexes. Always download

Type here to search



VCS Window Help entri - list task 1.py

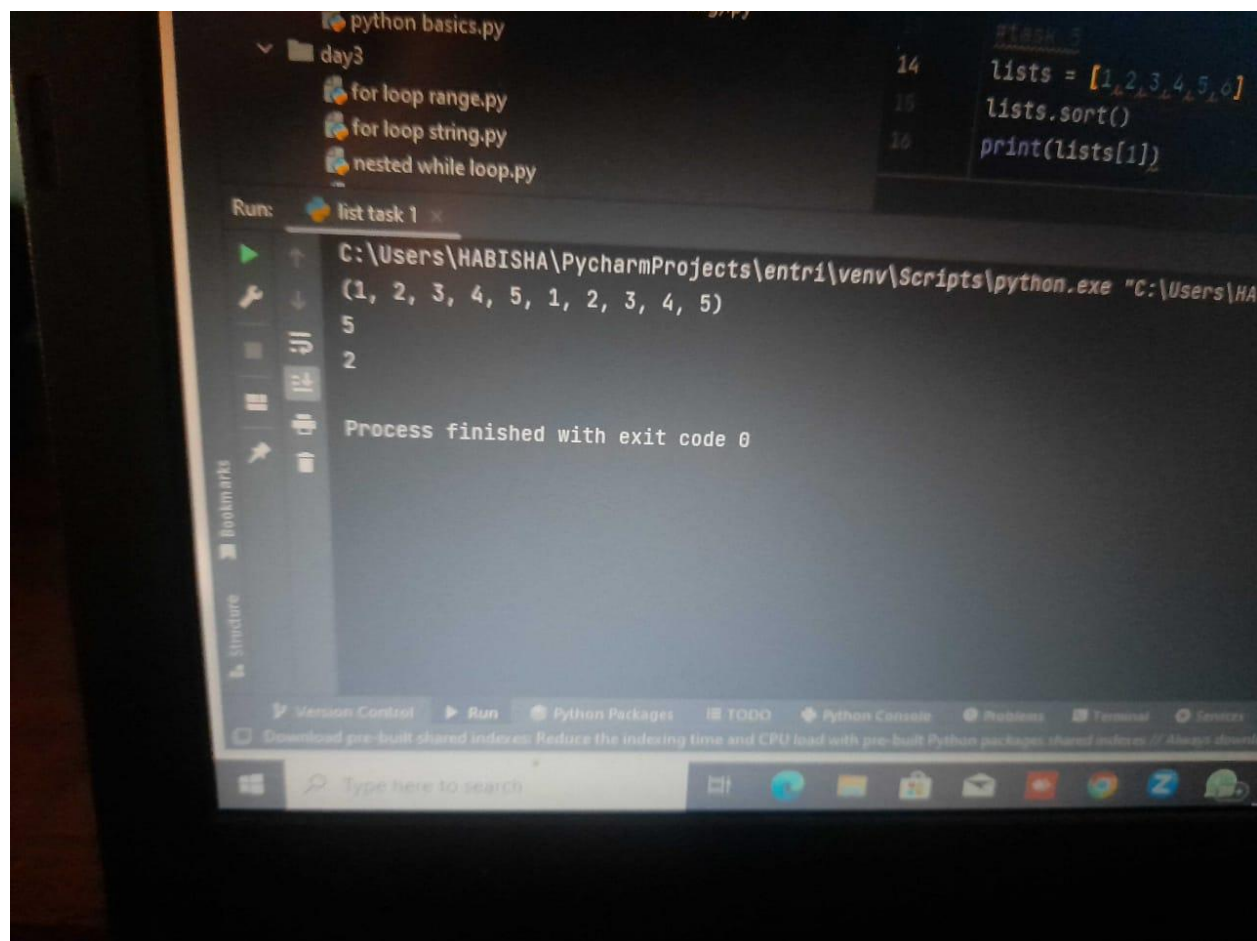
nested while multiplication.py × task 2.py × task 1.py × dictionary.py ×

```
1 # task 2
2 list1 = 1 2 3 4 5
3 list2 = 1 2 3 4 5
4
5 lists=list1+list2
6 print(lists)
7
8 # task 4
9
10 list = 1 2 3 4 5 6,
11 print(max(list)- min(list))
12
13 #task 5
14 lists = [1 2 3 4 5 6]
15 lists.sort()
16 print(lists[1])
```

ects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\list task  
5)

code 0

Python Console Problems Terminal Services  
Following time and CPU load with pre-installed Python packages shared indexes is always downloaded. Download more. Don't show again. Check...



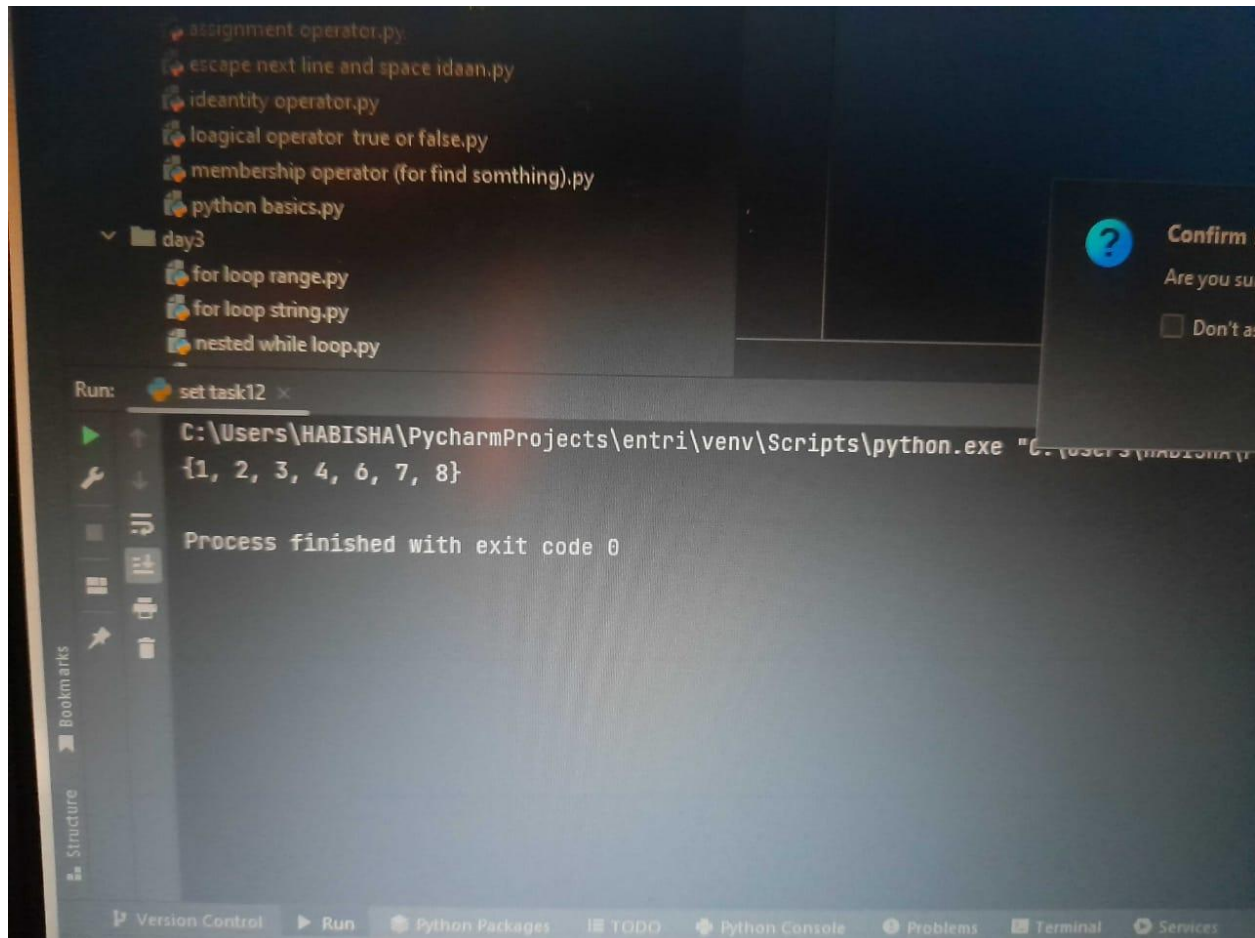
VCS Window Help entri - set task12.py

— nested while multiplication.py × task 2.py × task 1.py × dictionary.py ×

```
1 # task 12
2
3 set1={1,2,3,4}
4 set2={6,7,8}
5 union=set1.union(set2)
6 print(union)
```

```
ts\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\dictio
'address': 'newyork'}
'address': 'newyork', 'phone': '1234567890'}
```

de 8



[6.10.2023]

```
1 #task1 - 6.10.23
2 #write a python program to count the number of strings where the string length is 2 or more and the first and last character are same
3 # sample list: ['abc', 'xyz', 'aba', 1221]
4 #expected result:2
5
6 string = ['abc', 'xyz', 'aba', 1221]
7 n = 0
8 for word in string:
9     if len(word) >= 2 and word[0] == word[-1]:
10         n += 1
11 print(n)
12
13
14 #task2
15 #write a python program to multiply all the items in a list.
16 list = [10, 20, 30, 40, 50]
17 print(list)
18 list[i**2 for i in list]
19 print(list)
```

Run: 6.10.23

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\6.10.23.py"
2
[10, 20, 30, 40, 50]
[100, 400, 900, 1600, 2500]
[24, 34, 12, 23, 50]
{24: 13824, 34: 39304, 12: 1728, 23: 12167, 50: 125000}
```

Process finished with exit code 0

```
18 list[i**2 for i in list]
19 print(list)
20
21 #task3
22 #create dictionary from a list where the keys are the elements of the list and value of the dictionary is result after dividing the element by 3
23 list = [24, 34, 12, 23, 50]
24 print(list)
25 dict = {x: x**3 for x in list}
26 print(dict)
27
28
29
30
```

Run: 6.10.23

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\6.10.23.py"
2
[10, 20, 30, 40, 50]
[100, 400, 900, 1600, 2500]
[24, 34, 12, 23, 50]
{24: 13824, 34: 39304, 12: 1728, 23: 12167, 50: 125000}
```

Process finished with exit code 0

[9.10.23]

```
1 #task1
2 #functions
3 #create a function that takes in an arbitrary number of arguments and print the sum of all the even numbers, if no even numbers are provided
4 def addition(*numbers):
5     sum = 0
6     for number in numbers:
7         if number % 2 == 0:
8             sum += number
9     print(sum)
10
11 addition(10,20,30,40)
12 addition(3,7,9)
13
14
15 #task2
16 #create a function that takes in two required arguments, one optional keyword argument with a default value of 1 and one arbitrary argument
17 #the function should print the product of the two required arguments
18 #multiplied by the optional keyword argument,
19 #multiplied by the product of all the values in the arbitrary arguments.
```

Run: task 9.10.23

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\task 9.10.23.py"
100
0
result : 24
result : 60
result : 40

Process finished with exit code 0
```

```
10 addition(10,20,30,40)
11 addition(3,7,9)
12
13
14
15 #task2
16 #create a function that takes in two required arguments, one optional keyword argument with a default value of 1 and one arbitrary argument
17 #the function should print the product of the two required arguments
18 #multiplied by the optional keyword argument,
19 #multiplied by the product of all the values in the arbitrary arguments.
20 def product(arg1,arg2,default=1,*arbt):
21     product1=arg1*arg2
22     product1*=default
23     for values in arbt:
24         product1*=values
25     print("result :",product1)
26 product(arg1=2,arg2=3,default=4)
27 product(arg1=3,arg2=4,default=5)
28 product(arg1=2,arg2=4,default=5)
```

Run: task 9.10.23

```
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\task 9.10.23.py"
100
0
result : 24
result : 60
result : 40

Process finished with exit code 0
```

[13.10.23]



```
1 #write a function to implement calculator
2
3 def addition(a,b):
4     sum = a+b
5     return sum
6
7 def subtraction(a,b):
8     sub = a-b
9     return sub
10
11 def multiplication(a,b):
12     mult = a*b
13     return mult
14
15 def division(a,b):
16     div = a/b
17     return div
18
19
20 print("press 1 for addition.\n press 2 for subtraction.\npress 3 for multiplication.\npress 4 for division")
21 a=int(input("enter number1: "))
22 b=int(input("enter number2: "))
23
24 n = int(input("enter your option: "))
25
26 if n==1:
27     print(f"addition of {a} and {b} is:{addition(a,b)}")
28
29 elif n==2:
30     print(f"subtraction of {a} and {b} is:{subtraction(a,b)}")
31
32 elif n==3:
33     print(f"multiplication of {a} and {b} is:{multiplication(a,b)}")
34
35 elif n==4:
36     print(f"division of {a} and {b} is:{division(a,b)}")
37
38 else:
```

```
21 a=int(input("enter number1: "))
22 b=int(input("enter number2: "))
23
24 n = int(input("enter your option: "))
25
26 if n==1:
27     print(f"addition of {a} and {b} is:{addition(a,b)}")
28
29 elif n==2:
30     print(f"subtraction of {a} and {b} is:{subtraction(a,b)}")
31
32 elif n==3:
33     print(f"multiplication of {a} and {b} is:{multiplication(a,b)}")
34
35 elif n==4:
36     print(f"division of {a} and {b} is:{division(a,b)}")
37
38 else:
39     print("wrong")
40
```

Run: C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\13.10.23.py"

```
press 1 for addition.
press 2 for subtraction.
press 3 for multiplication.
press 4 for division
enter number1:
```

[16.10.23]



```
File Edit View Navigate Code Refactor Run Tools VCS Window Help entri - 16.10.23.py
entri day 4 16.10.23.py
file handling.py if statement.py 20.10.23.py 16.10.23.py 27.10.23.py 30.10.2003.py 13.10.23.py dictionary.py set task12.py
1 # write a lambda function that takes in a parameter and return true
2 #if the parameter is even and false otherwise.
3 f=(lambda a:"true" if a%2==0 else "false")
4 print(f(6))
5 print((lambda a:"even" if a%2==0 else "odd")(5))
6
7
8 # write a python program to lambda function that adds 15 to a give number passed in as an argument,
9 #also create a lambda function that multiplies argument x with argument y and prints the result.
10 print((lambda x:x+15)(4))
11 print((lambda x,y:x*y)(6,5))
12
13 #write a python program to evaluate a given mathematical expression using the eval()
14 #expression = "3+5+2"
15
16 print(eval("3+5+2"))
17 #write a python program to evaluate a given python expression using the eval()function.
18 #expression ="[x * 2 for x in range(5)]"
19 print(eval("[x * 2 for x in range(5)]"))
20
Run 13.10.23 16.10.23
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\16.10.23.py"
true
odd
19
30
17
[0, 2, 4, 6, 8]
False
['e', 'i']
[]
Version Control Run Python Packages TODO Python Console Problems Terminal Services
Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built Python packages shared indexes // Always download // Download once // Don't show again // Configure... (6 minutes ago)
31:35 CRLF UTF-8 4 spaces Python 3.11 (entri)
Type here to search 25°C Heavy t-storms 6:54 PM 11/4/2023
```

```
File Edit View Navigate Code Refactor Run Tools VCS Window Help entri - 16.10.23.py
entri day 4 16.10.23.py
file handling.py if statement.py 20.10.23.py 16.10.23.py 27.10.23.py 30.10.2003.py 13.10.23.py dictionary.py set task12.py
16 print(eval("3+5+2"))
17 #write a python program to evaluate a given python expression using the eval()function.
18 #expression ="[x * 2 for x in range(5)]"
19 print(eval("[x * 2 for x in range(5)]"))
20
21 #write a python program to evaluate a given logical expression using the eval()function.
22 #expression = "5>2 and 3>4"
23 print(eval("5>2 and 3>4"))
24
25
26 #write a python program to filter out the vowels from a given list of characters using the filter() function
27
28 def vowel(x):
29     v = 'a','e','i','o','u'
30     return x in v
31 print(list(filter(vowel,'entri')))
32
33 #def prime_no(*numbers):
34 #write a python program to filter out the string with length greater than a give list of strings the filter() function.
Run 13.10.23 16.10.23
C:\Users\HABISHA\PycharmProjects\entri\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entri\day 4\16.10.23.py"
true
odd
19
30
17
[0, 2, 4, 6, 8]
False
['e', 'i']
[]
Version Control Run Python Packages TODO Python Console Problems Terminal Services
Download pre-built shared indexes: Reduce the indexing time and CPU load with pre-built Python packages shared indexes // Always download // Download once // Don't show again // Configure... (6 minutes ago)
31:35 CRLF UTF-8 4 spaces Python 3.11 (entri)
Type here to search 25°C Heavy t-storms 6:55 PM 11/4/2023
```

The screenshot shows a PyCharm IDE with a Python script in the editor. The script defines a function `filter_strng` that filters strings based on a given list of strings. The Run console shows the output of the script, which is a list of filtered strings: `['e', 'i']`.

```
entry day 4 16.10.23.py
v = 'a','e','i','o','u'
return x in v
print(list(filter(vowel,'entry')))

#def prime_no(*numbers):
#write a python program to filter out the string with length greater than a give list of strings the filter() function.
def filter_strng(str):
    if len(str)>5:
        return str
print(list(filter(filter_strng,['asdf','abcd','yuiop','ghik'])))
```

Run: 13.10.23 x 16.10.23 x  
C:\Users\HABISHA\PycharmProjects\entry\venv\Scripts\python.exe "C:\Users\HABISHA\PycharmProjects\entry\day 4\16.10.23.py"  
true  
odd  
19  
30  
17  
[0, 2, 4, 6, 8]  
False  
['e', 'i']  
[]

[20.10.23]

The screenshot shows a PyCharm IDE with a Python script in the editor. The script defines a function `string` that yields each word in a string, a function `even_numbers` that yields only the even numbers from a list, and a function `vowels_strings_starting` that yields only the strings that start with a vowel. The Run console shows the output of the script, which is a list of filtered strings: `['e', 'i']`.

```
entry day 4 20.10.23.py
# write a generator function that takes a string and yields each word in the string.
def string(string):
    yield string
    yield string
v = ("vjgfg","vjhclif","qvdfilf","vhmic")
for word in string(v):
    print(word)

# write a generator function that takes a list of integers and yield only the even numbers_numbers
def even_numbers(numbers):
    for number in numbers:
        if number % 2 == 0:
            yield number
numbers = [1, 2, 3, 4, 5, 6, 7, 8]
even_gen = even_numbers(numbers)
for x in even_gen:
    print(x)

#write a generator function that takes a list of strings and yeilds only the string that start with a vowel.
def vowels_strings_starting(strings):
    vowels = "aeio"
    for string in strings:
        if string and string[0] in vowels:
            yield string
list=["apple","banana","orange","kiwi"]
for word in vowels_strings_starting(list):
    print(word)
```

