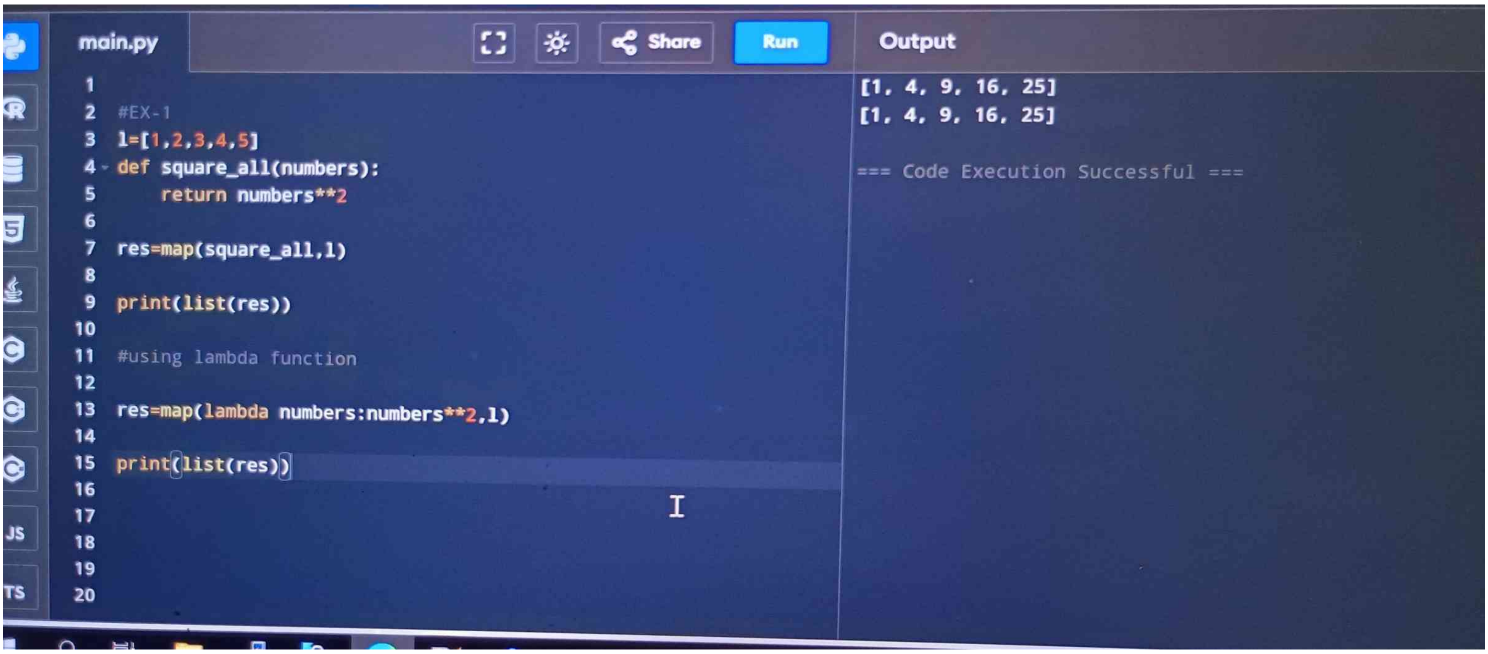
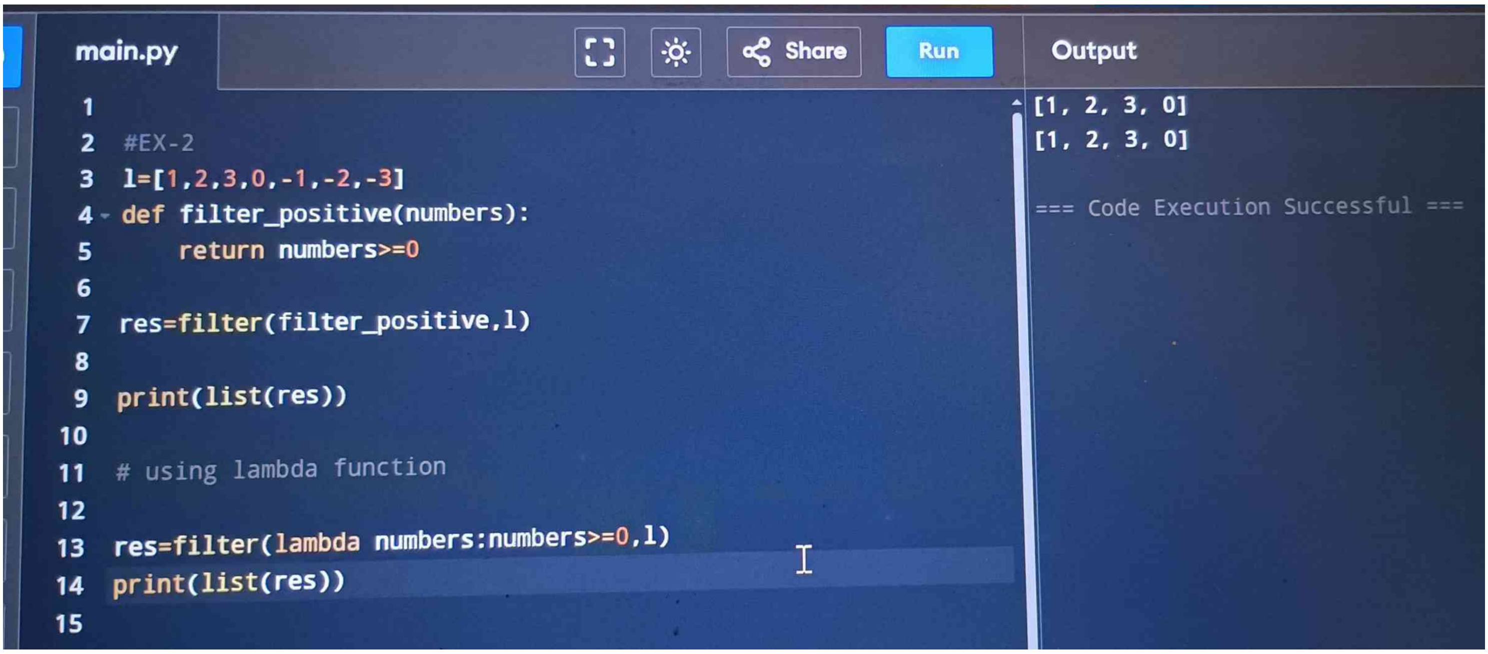


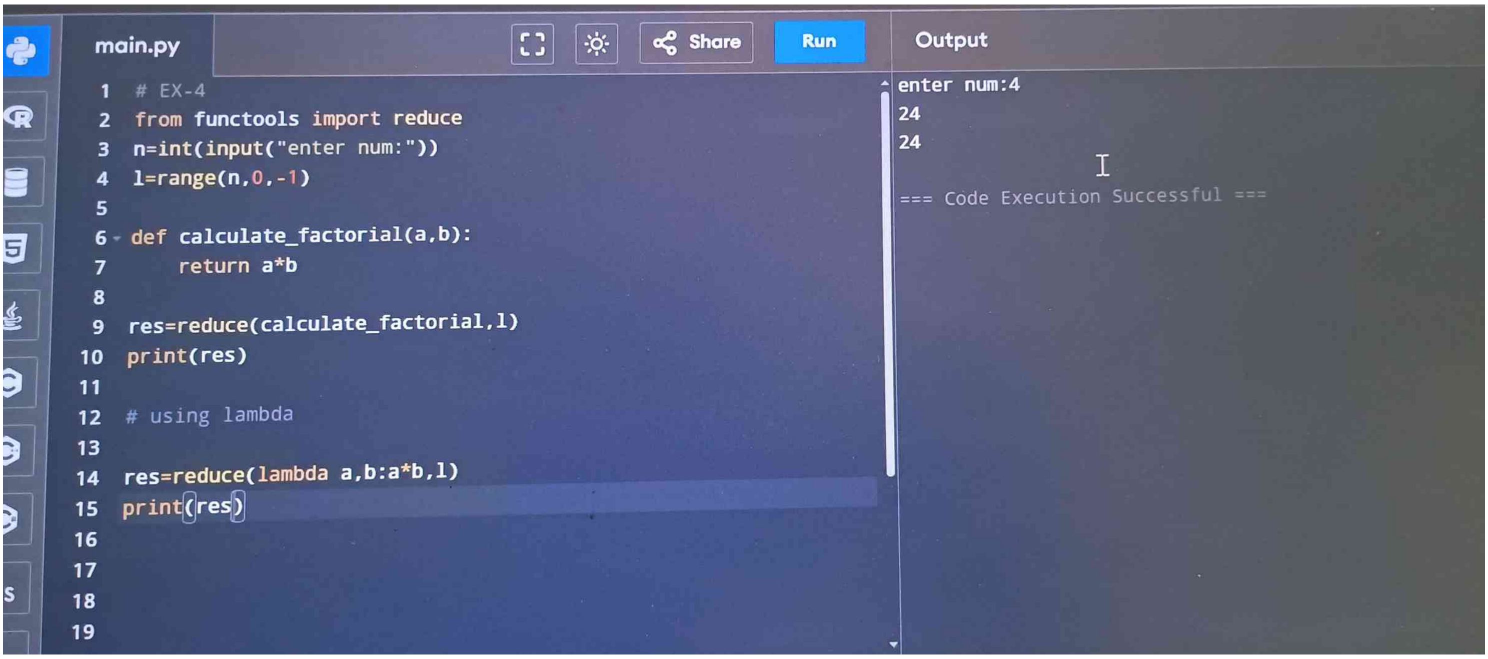
```python

#EX-1
l=[1,2,3,4,5]
def square_all(numbers):
    return numbers**2

res=map(square_all,l)

print(list(res))

#using lambda function

res=map(lambda numbers:numbers**2,l)

print(list(res))
```

```
[1, 4, 9, 16, 25]
[1, 4, 9, 16, 25]

=== Code Execution Successful ===
```



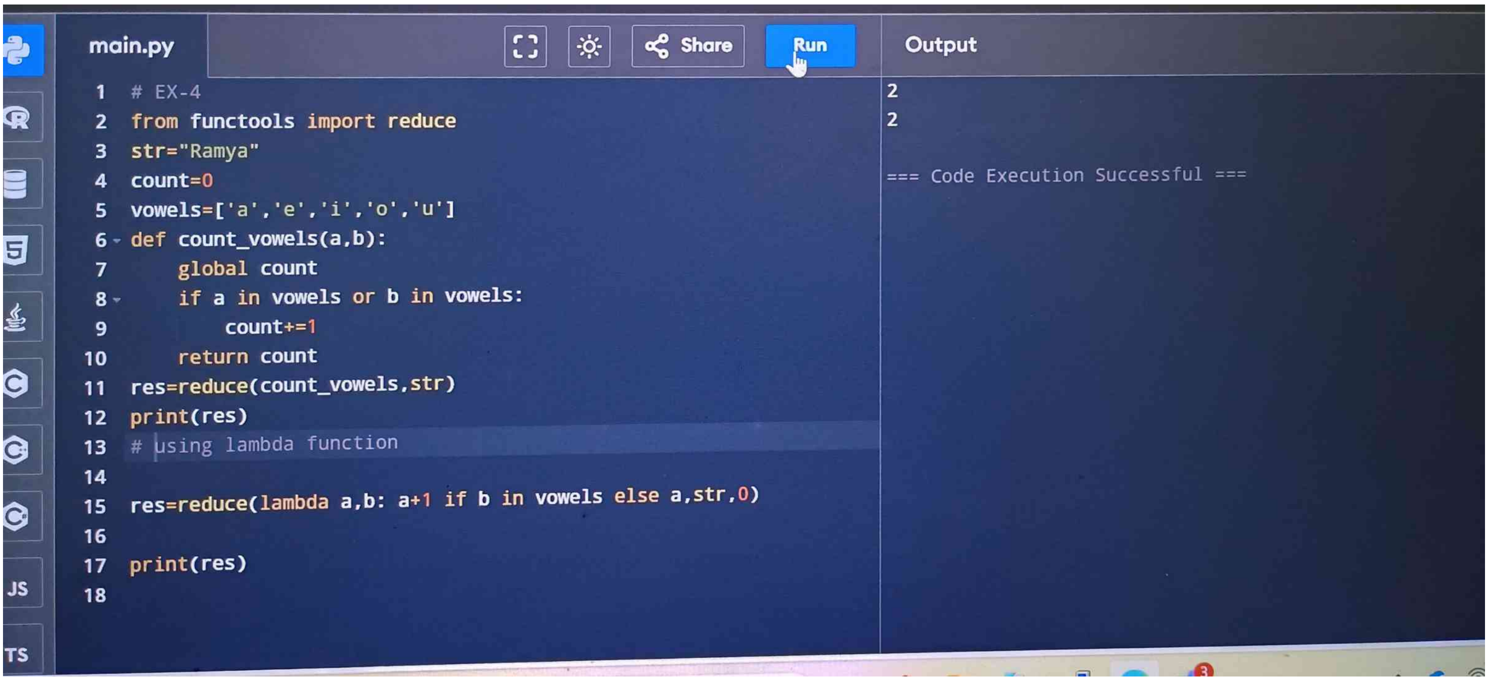
```python

#EX-2
l=[1,2,3,0,-1,-2,-3]
def filter_positive(numbers):
    return numbers>=0

res=filter(filter_positive,l)

print(list(res))

# using lambda function

res=filter(lambda numbers:numbers>=0,l)
print(list(res))

```

```
[1, 2, 3, 0]
[1, 2, 3, 0]

=== Code Execution Successful ===
```



```python
# EX-4
from functools import reduce
n=int(input("enter num:"))
l=range(n,0,-1)

def calculate_factorial(a,b):
    return a*b

res=reduce(calculate_factorial,l)
print(res)

# using lambda

res=reduce(lambda a,b:a*b,l)
print(res)
```

```
enter num:4
24
24

=== Code Execution Successful ===
```



```python
# EX-4
from functools import reduce
str="Ramya"
count=0
vowels=['a','e','i','o','u']
def count_vowels(a,b):
    global count
    if a in vowels or b in vowels:
        count+=1
    return count
res=reduce(count_vowels,str)
print(res)
# using lambda function

res=reduce(lambda a,b: a+1 if b in vowels else a,str,0)

print(res)

```

```
2
2


=== Code Execution Successful ===
```