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ROLL.N0:62
SE-4-D

EXPERIMENT N0-1

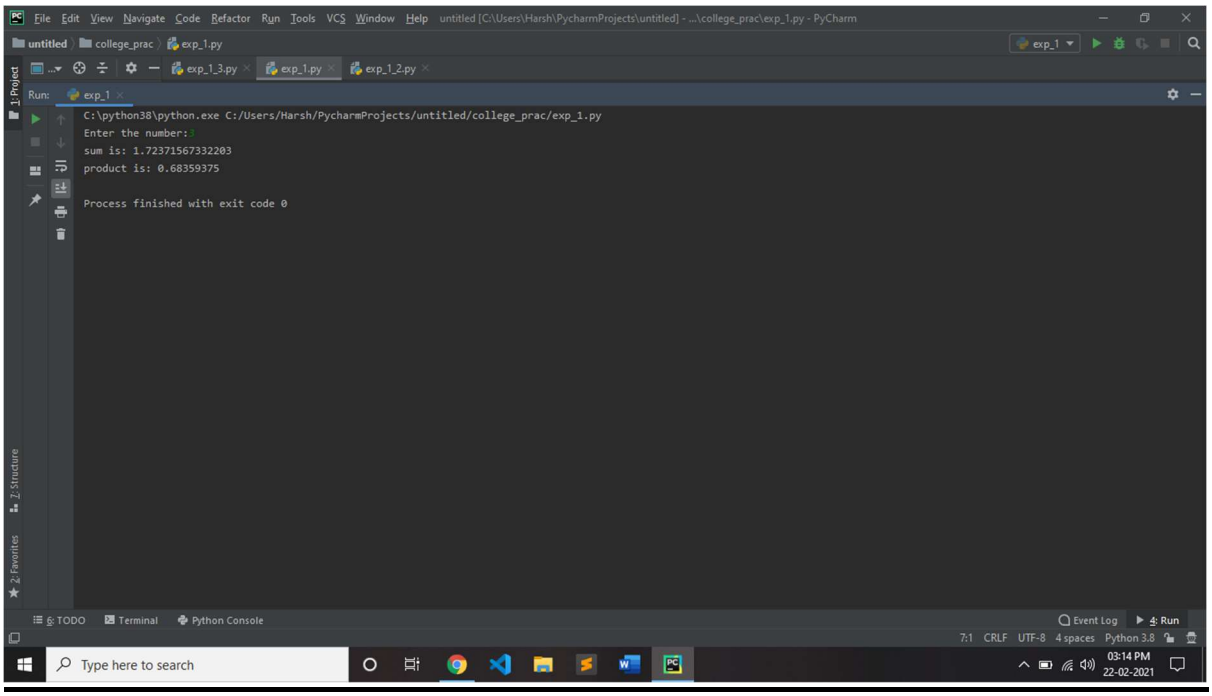
1-A) Implement functions of n that calculate the following series. The sine function is part of the math module, so you need to say import math in the first line of your script. π is also in the math module and accessible as math.pi.

Code:

```
import math
def series(n):
    s=0
    p=1
    for i in range(1,n+1):
        s=s+(math.sin(i/math.pi))
        p = p * (1-(1/(4*i*i)))
    print(f"sum is: {s}")
    print(f"product is: {p}")

if __name__ == '__main__':
    n = int(input("Enter the number:"))
    series(n)
```

Output:



1-B) given the list of numbers, calculate arithmetic mean, geometric mean and harmonic mean

Code:

```
import statistics
l=[]
n=int(input("enter the number: "))
for i in range(0,n):
    a=int(input(f"enter the value: "))
    l.append(a)
print("values are:")
for e in l:
    print(e," ",end = ' ')

are=statistics.mean(l)
geo=statistics.geometric_mean(l)
har=statistics.harmonic_mean(l)
print()
print(f"arithmetic mean is: {are}")
print(f"geometric mean is: {geo}")
print(f"harmonic mean is: {har}")
```

output: