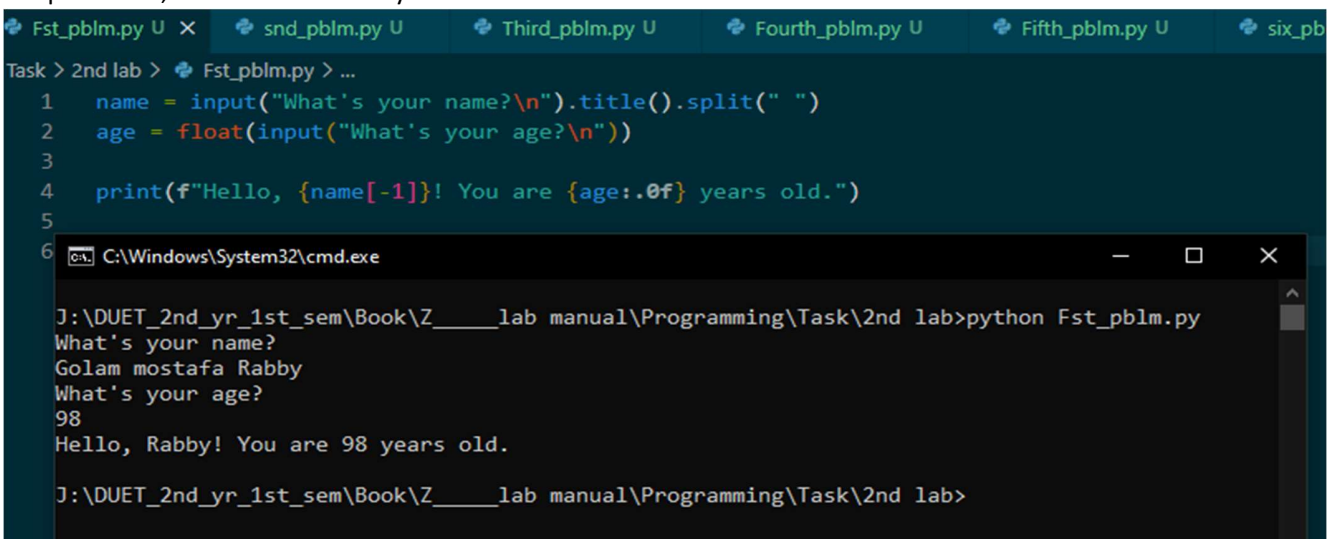
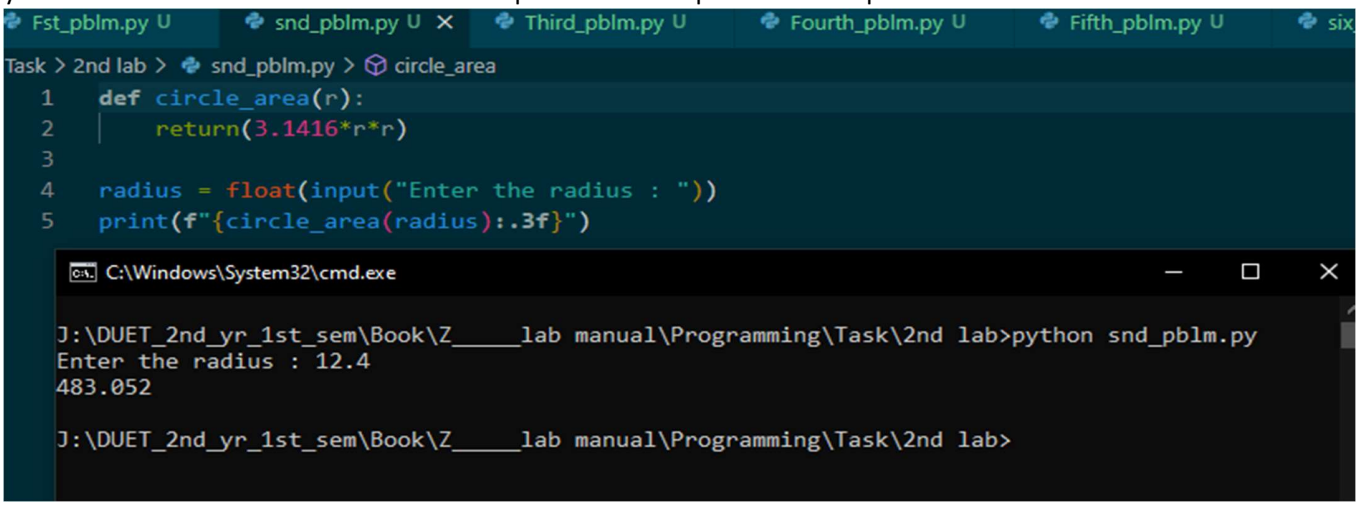
1. Write a python program that takes user's name (full name) and age as input and prints it in following format

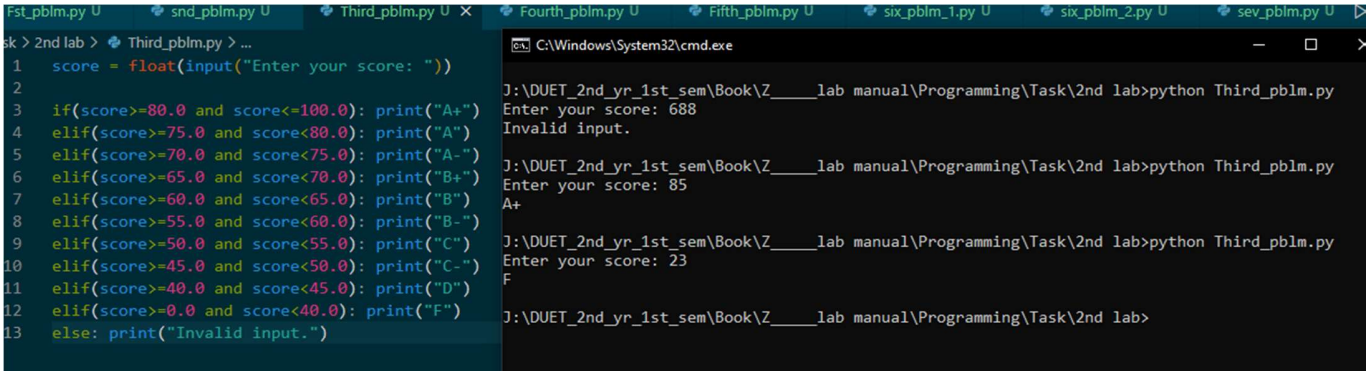
Sample Output: What's your name?
Fazlur rahim
What's your age?
62
Output: Hello, Rahim! You are 62 years old.



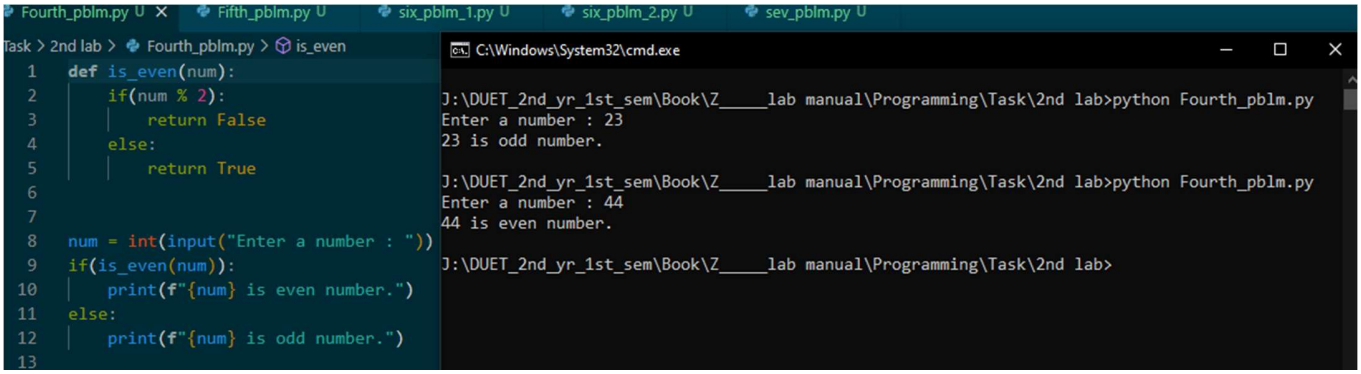
2. Write a Python program that calculates the area of a circle based on the radius entered by the user. Define your own function for area calculation. And print the area up to 3 decimal points.



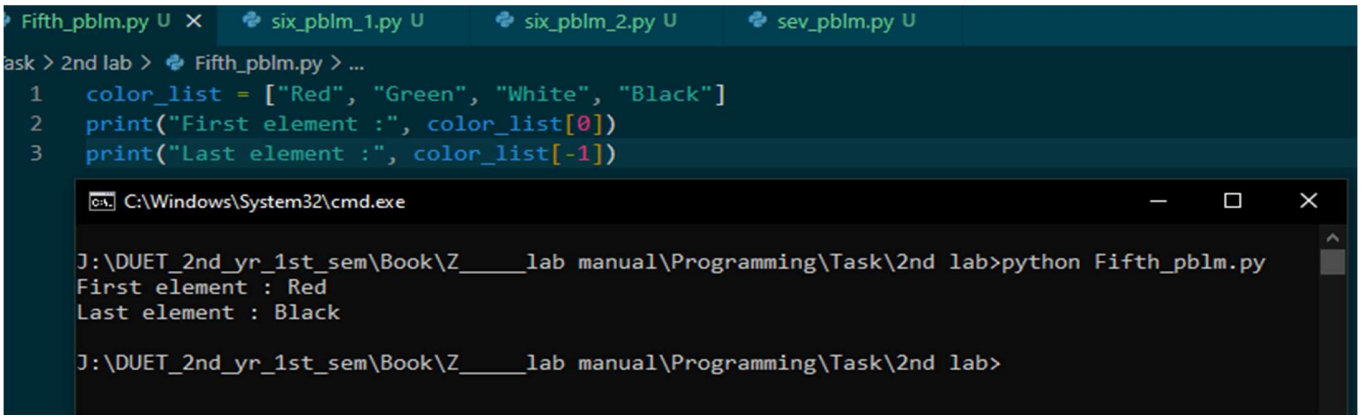
3. Write a Python program that take user's score and determine his/her grade.



4. Write a Python program that determines whether a given number (accepted from the user) is even or odd, and prints an appropriate message to the user. Define a function 'is_even' to check whether the number is even or odd.

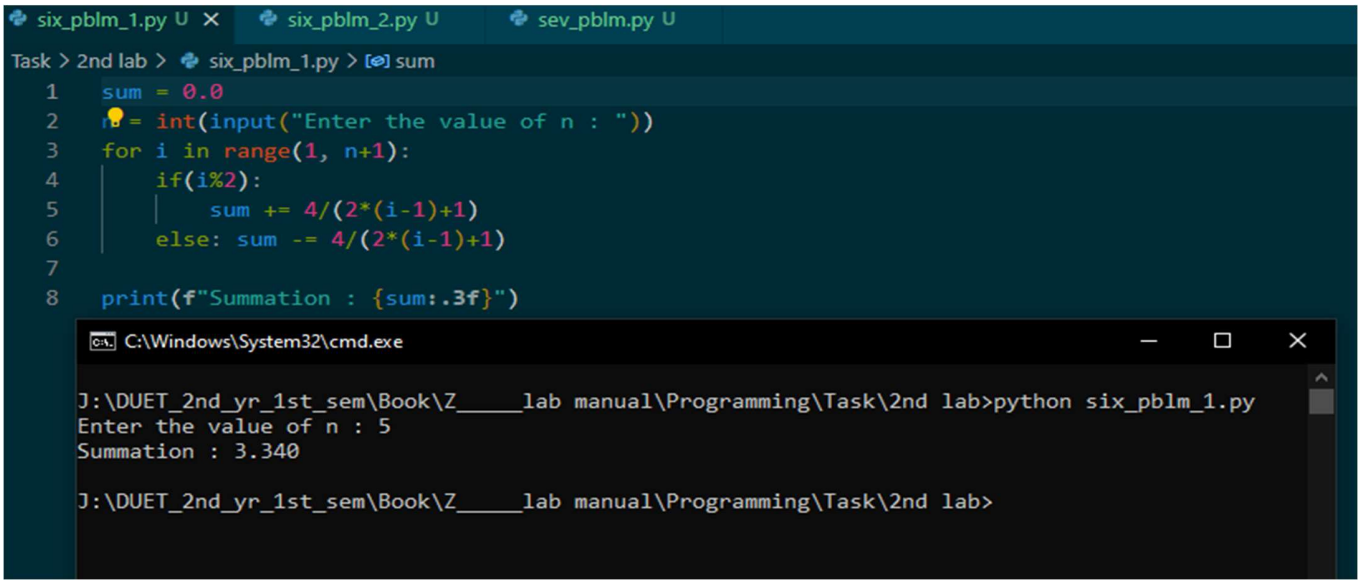


5. Write a Python program to display the first and last colors from the following list.
color_list = ["Red","Green","White" ,"Black"]



6. Write a python program to calculate the summations of the following series for given values of x and n:

i) 4 – 4/3 + 4/5 – 4/7+……. nth term .



ii) 1 + x/1! + x2 /2! + x3 /3! +…….. + xn /n!

Also compare the result with (i) the constant π , (ii) e^x .

six_pblm_2.py U sev_pblm.py U

Task > 2nd lab > six_pblm_2.py > fact

```python
def fact(n):
    result = 1
    for i in range(2, n+1):
        result *= i
    return result

x = int(input("Enter the value of x : "))
n = int(input("Enter the value of n : "))
sum = 0
for i in range(n):
    sum += ((x**i)/fact(i))
print(sum)
```

C:\Windows\System32\cmd.exe

```
J:\DUET_2nd_yr_1st_sem\Book\Z_____lab manual\Programming\Task\2nd lab>python six_pblm_2.py
Enter the value of x : 3
Enter the value of n : 4
13.0

J:\DUET_2nd_yr_1st_sem\Book\Z_____lab manual\Programming\Task\2nd lab>
```

7. Write a Python program which accepts a sequence of comma separated 4-digit binary numbers as its input and print the numbers that are divisible by 4 in a comma separated sequence.

Input : 0110,0011,1010,1001,1100

Expected Output : 1100

sev_pblm.py U

Task > 2nd lab > sev_pblm.py > ...

```python
num = input("Enter value : \n").split(",")
# num = "0110,0011,1010,1001,1100, 0100, 1000"
bin_num = list()
dec_num = list()

for i in num:
    dec_num.append(int(i , 2))

for i in dec_num:
    if(i%4==0):
        bin_num.append(bin(i)[2:])

for i in bin_num:
    print(f"Output : {(4-len(str(i)))*'0'}{i}" , end=" ")
```

C:\Windows\System32\cmd.exe

```
J:\DUET_2nd_yr_1st_sem\Book\Z_____lab manual\Programming\Task\2nd lab>python sev_pblm.py
Enter value :
0110,0011,1010,1001,1100, 0100, 1000
Output : 1100 Output : 0100 Output : 1000
J:\DUET_2nd_yr_1st_sem\Book\Z_____lab manual\Programming\Task\2nd lab>
```