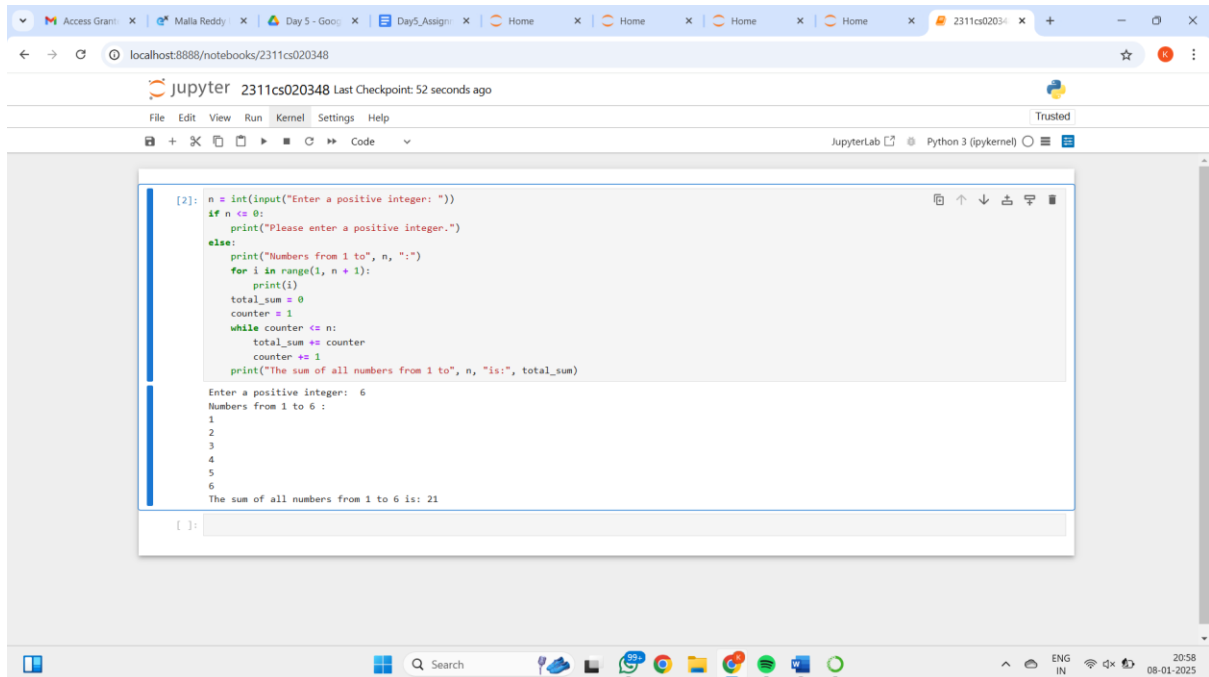


1) Write a Python program that performs the following tasks:

1. Ask the user to enter a positive integer `n`.
2. Use a `for` loop to print all numbers from `1` to `n` on separate lines.
3. Use a `while` loop to calculate the sum of all numbers from `1` to `n` and print the result.



The screenshot shows a JupyterLab interface with a Python 3 (ipykernel) environment. The code in the cell is as follows:

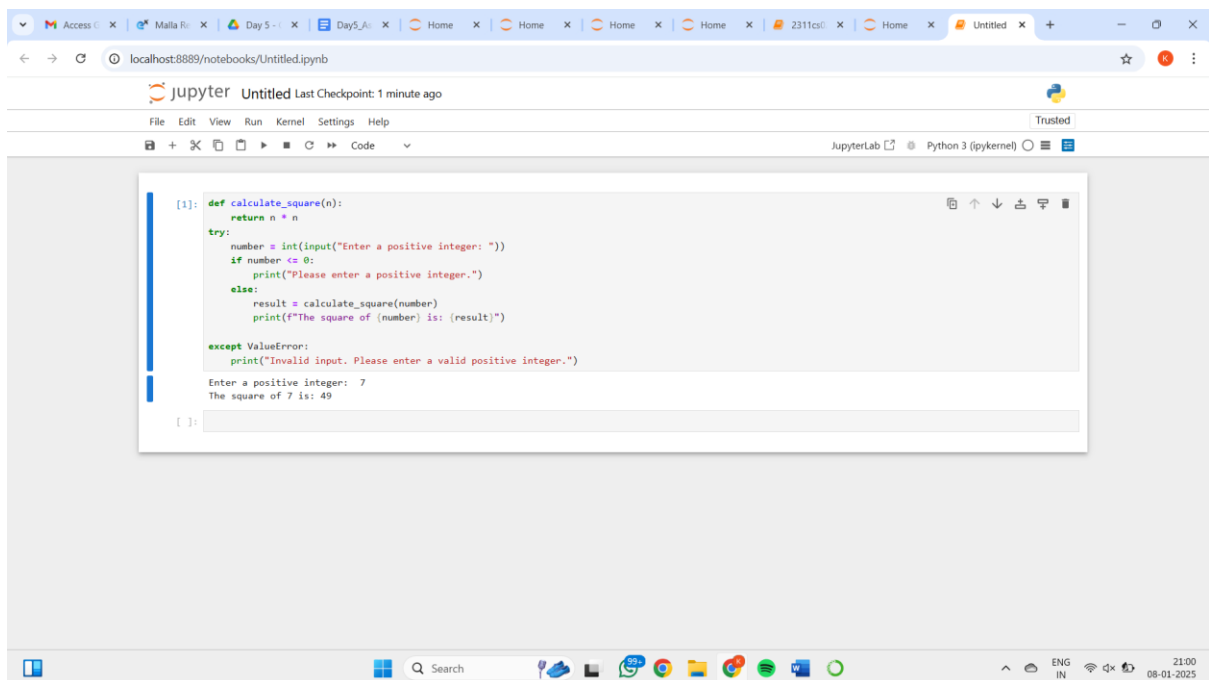
```
[2]: n = int(input("Enter a positive integer: "))
if n <= 0:
    print("Please enter a positive integer.")
else:
    print("Numbers from 1 to", n, ":")
    for i in range(1, n + 1):
        print(i)
    total_sum = 0
    counter = 1
    while counter <= n:
        total_sum += counter
        counter += 1
    print("The sum of all numbers from 1 to", n, "is:", total_sum)
```

The output of the code is:

```
Enter a positive integer: 6
Numbers from 1 to 6 :
1
2
3
4
5
6
The sum of all numbers from 1 to 6 is: 21
```

2) Write a Python program that includes a user-defined function to perform the following tasks:

1. Define a function named `calculate_square` that takes a single argument `n` and returns the square of `n`.
2. In the main program, ask the user to input a positive integer.
3. Call the `calculate_square` function with the user-provided number and display the result.



The screenshot shows a JupyterLab interface with a code editor and a console. The code defines a function `calculate_square` and prompts the user for input. The console shows the output of the program.

```
[1]: def calculate_square(n):  
      return n * n  
      try:  
          number = int(input("Enter a positive integer: "))  
          if number <= 0:  
              print("Please enter a positive integer.")  
          else:  
              result = calculate_square(number)  
              print(f"The square of {number} is: {result}")  
      except ValueError:  
          print("Invalid input. Please enter a valid positive integer.")  
      Enter a positive integer: 7  
      The square of 7 is: 49  
      [ ]:
```

The console output shows the user inputting 7 and the program outputting "The square of 7 is: 49".