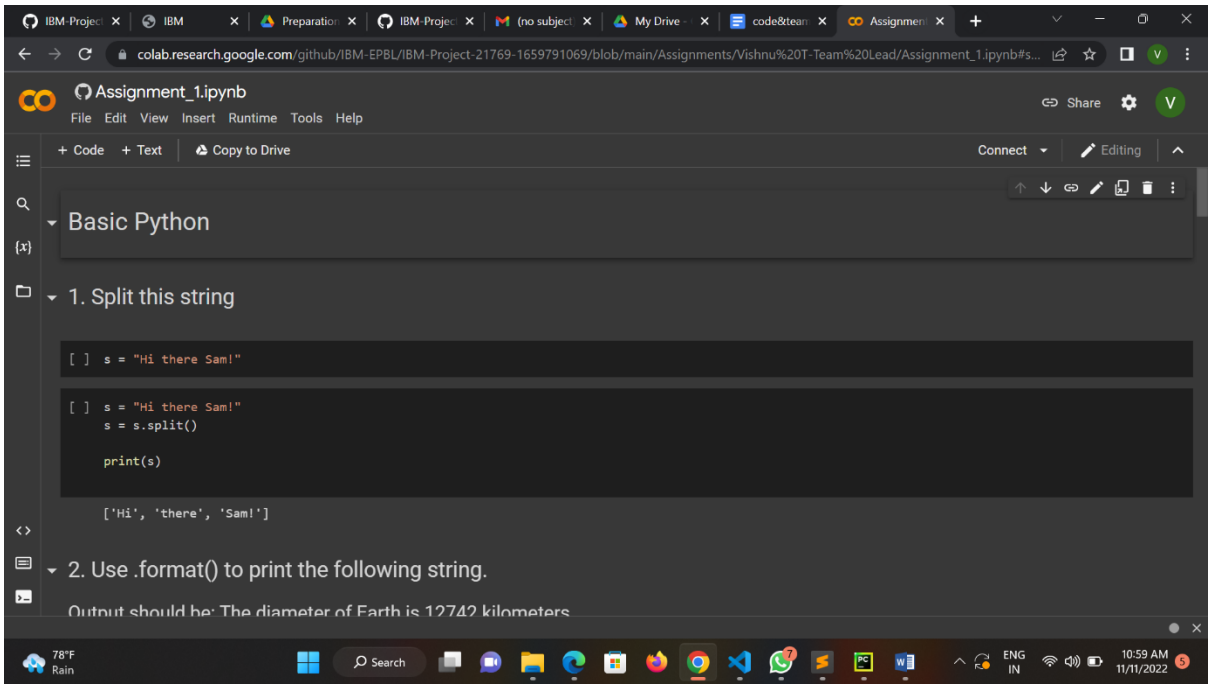
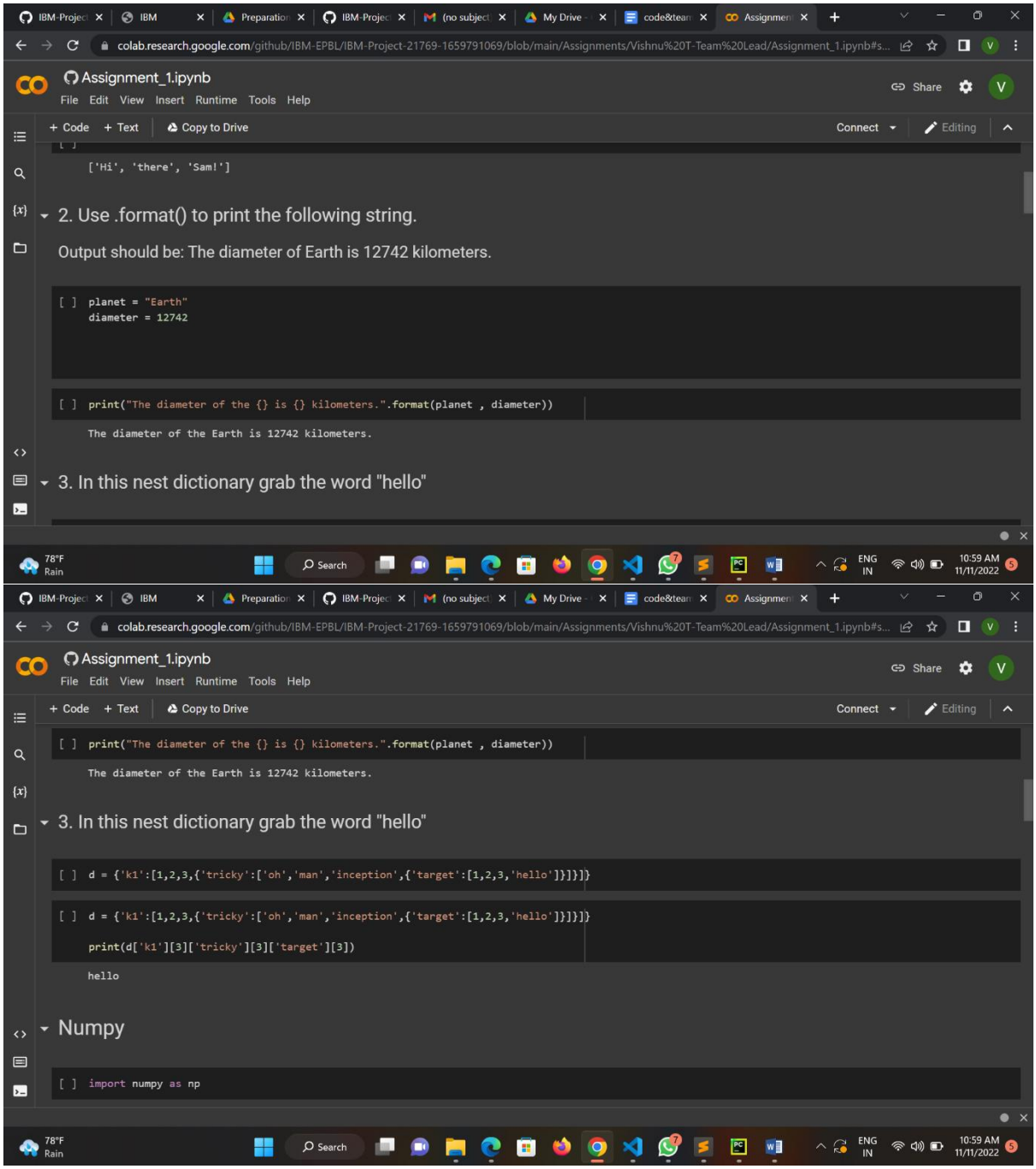
Assignment -1

Python Programming

Assignment Date	19 September 2022
Student Name	VISHNU T
Student Roll Number	113119UG03119
Maximum Marks	2 Marks

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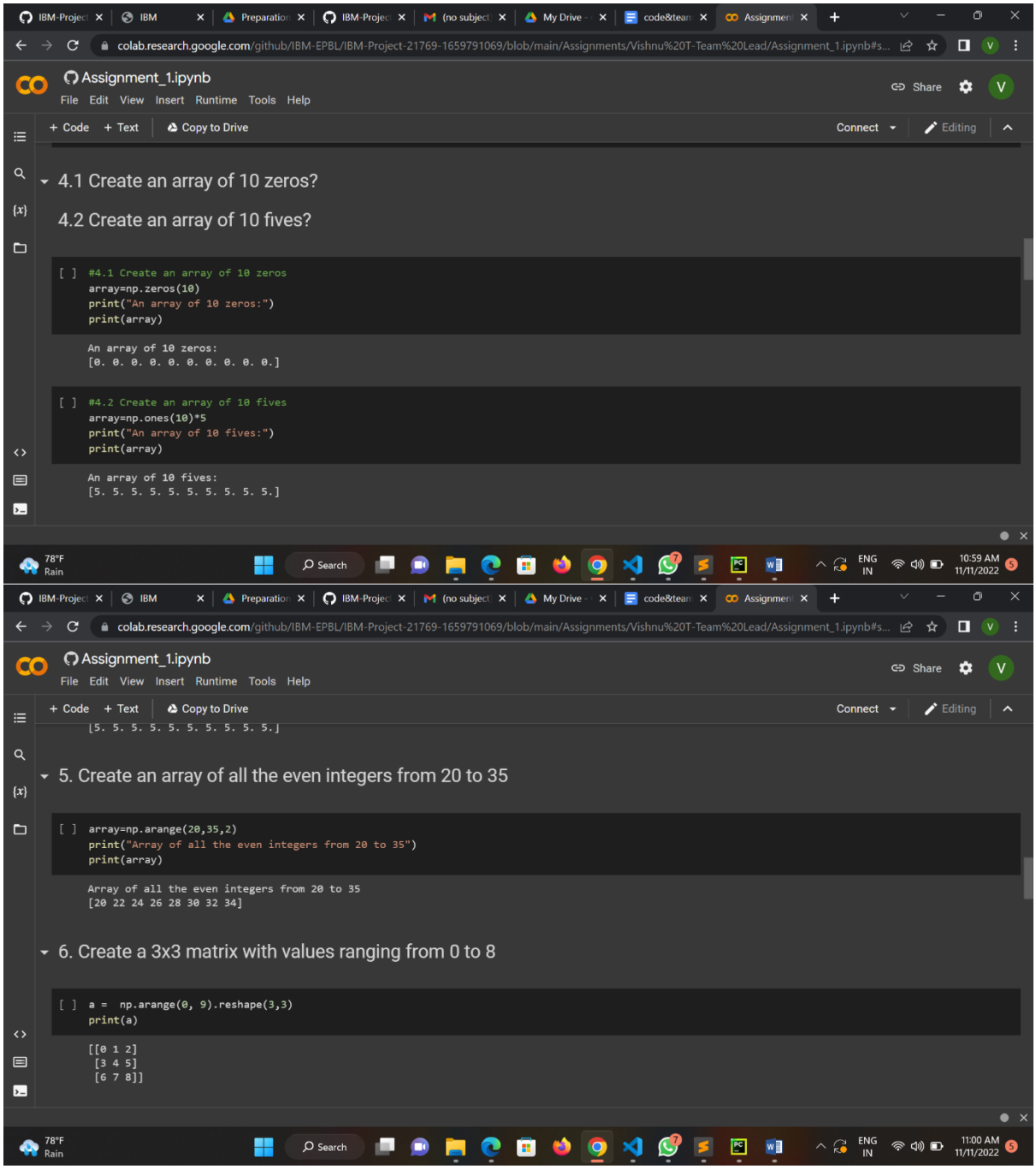
['Hi', 'there', 'Sam!']
2. Use .format() to print the following string.
Output should be: The diameter of Earth is 12742 kilometers.
planet = "Earth"
diameter = 12742
print("The diameter of the {} is {} kilometers.".format(planet , diameter))
The diameter of the Earth is 12742 kilometers.
3. In this nest dictionary grab the word "hello"
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
print(d['k1'][3]['tricky'][3]['target'][3])
hello
Numpy
import numpy as np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4.1 Create an array of 10 zeros?
4.2 Create an array of 10 fives?
#4.1 Create an array of 10 zeros
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
An array of 10 zeros:
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
#4.2 Create an array of 10 fives
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
An array of 10 fives:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]

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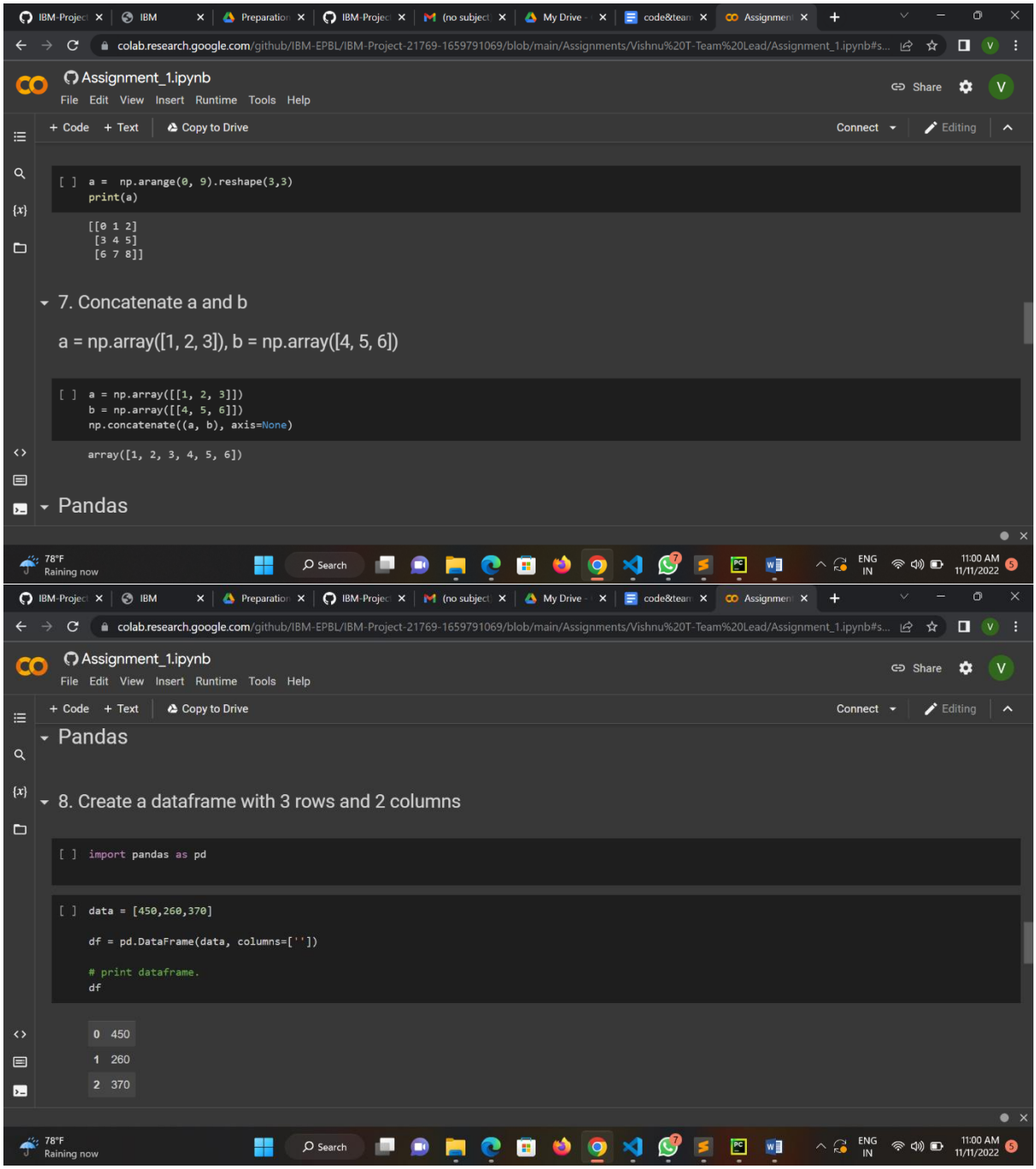
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
5. Create an array of all the even integers from 20 to 35
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35")
print(array)
Array of all the even integers from 20 to 35
[20 22 24 26 28 30 32 34]
6. Create a 3x3 matrix with values ranging from 0 to 8
a = np.arange(0, 9).reshape(3,3)
print(a)
[[0 1 2]
[3 4 5]
[6 7 8]]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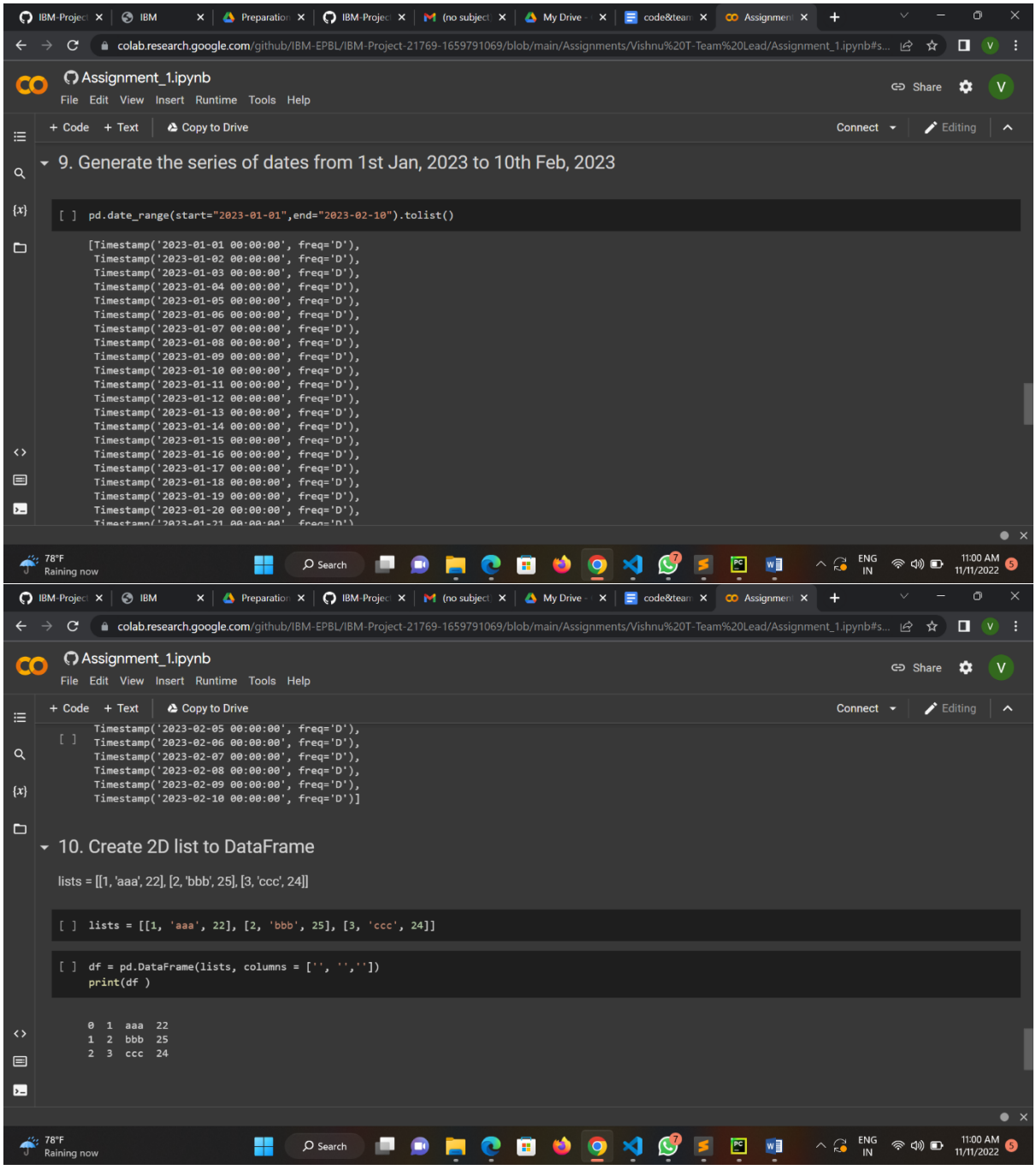
[ ] a = np.arange(0, 9).reshape(3,3)
print(a)
[[0 1 2]
[3 4 5]
[6 7 8]]
7. Concatenate a and b
a = np.array([1, 2, 3]), b = np.array([4, 5, 6])
[ ] a = np.array([[1, 2, 3]])
b = np.array([[4, 5, 6]])
np.concatenate((a, b), axis=None)
array([1, 2, 3, 4, 5, 6])
Pandas
8. Create a dataframe with 3 rows and 2 columns
[ ] import pandas as pd
[ ] data = [450,260,370]
df = pd.DataFrame(data, columns=[''])
# print dataframe.
df
0 450
1 260
2 370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9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023
[ ] pd.date_range(start="2023-01-01",end="2023-02-10").tolist()
[Timestamp('2023-01-01 00:00:00', freq='D'),
Timestamp('2023-01-02 00:00:00', freq='D'),
Timestamp('2023-01-03 00:00:00', freq='D'),
Timestamp('2023-01-04 00:00:00', freq='D'),
Timestamp('2023-01-05 00:00:00', freq='D'),
Timestamp('2023-01-06 00:00:00', freq='D'),
Timestamp('2023-01-07 00:00:00', freq='D'),
Timestamp('2023-01-08 00:00:00', freq='D'),
Timestamp('2023-01-09 00:00:00', freq='D'),
Timestamp('2023-01-10 00:00:00', freq='D'),
Timestamp('2023-01-11 00:00:00', freq='D'),
Timestamp('2023-01-12 00:00:00', freq='D'),
Timestamp('2023-01-13 00:00:00', freq='D'),
Timestamp('2023-01-14 00:00:00', freq='D'),
Timestamp('2023-01-15 00:00:00', freq='D'),
Timestamp('2023-01-16 00:00:00', freq='D'),
Timestamp('2023-01-17 00:00:00', freq='D'),
Timestamp('2023-01-18 00:00:00', freq='D'),
Timestamp('2023-01-19 00:00:00', freq='D'),
Timestamp('2023-01-20 00:00:00', freq='D'),

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Timestamp('2023-02-05 00:00:00', freq='D'),
Timestamp('2023-02-06 00:00:00', freq='D'),
Timestamp('2023-02-07 00:00:00', freq='D'),
Timestamp('2023-02-08 00:00:00', freq='D'),
Timestamp('2023-02-09 00:00:00', freq='D'),
Timestamp('2023-02-10 00:00:00', freq='D')]
10. Create 2D list to DataFrame
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
[ ] lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
[ ] df = pd.DataFrame(lists, columns = ['', '',''])
print(df)
0 1 aaa 22
1 2 bbb 25
2 3 ccc 24