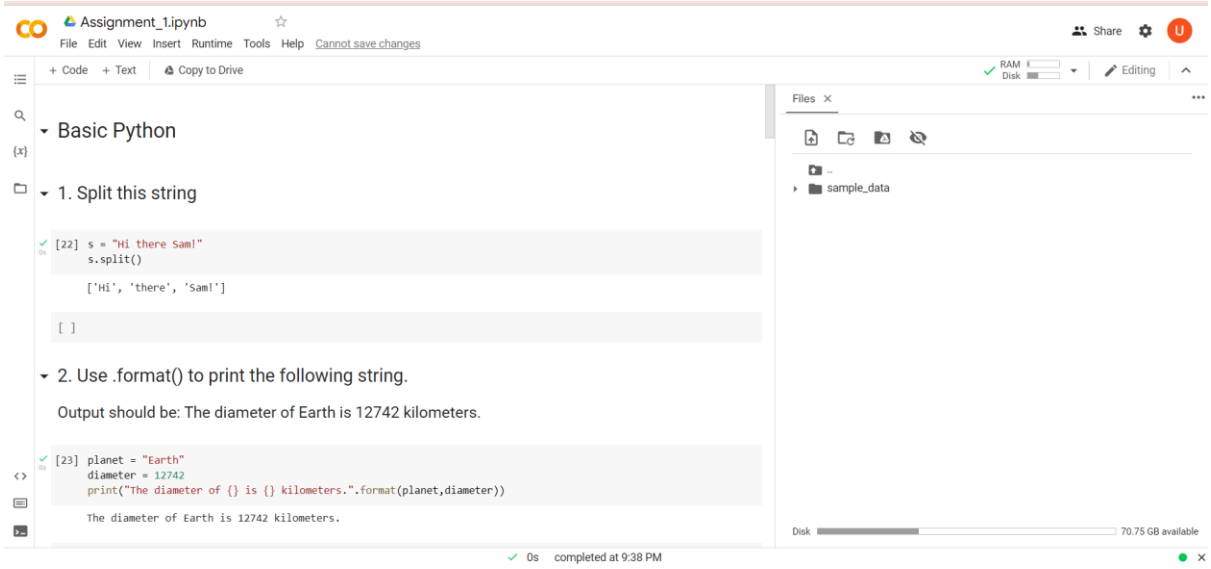
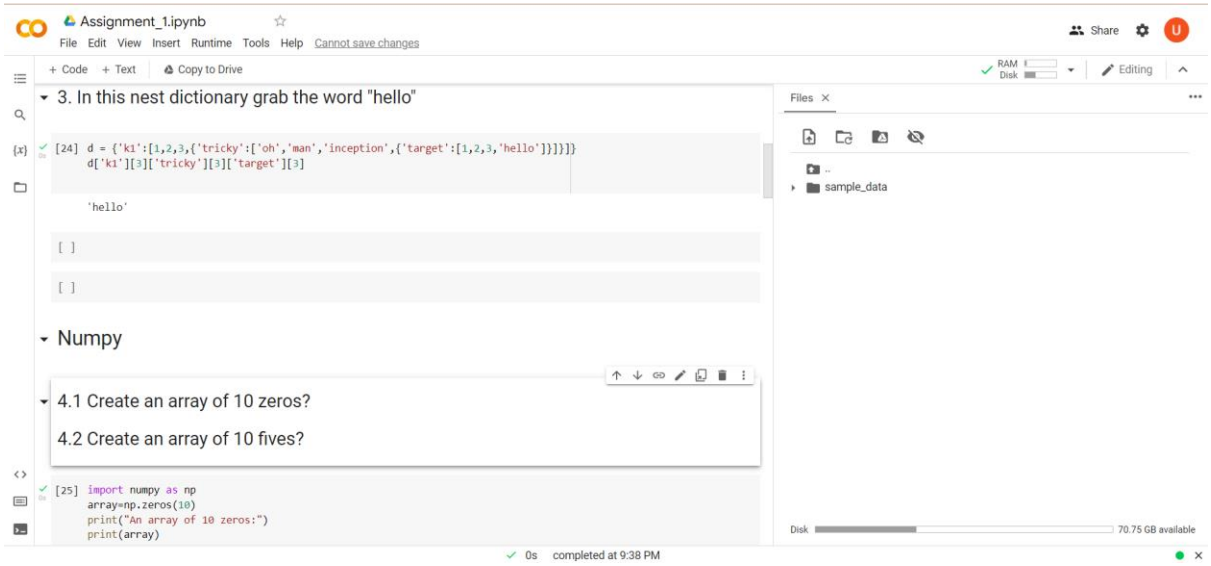
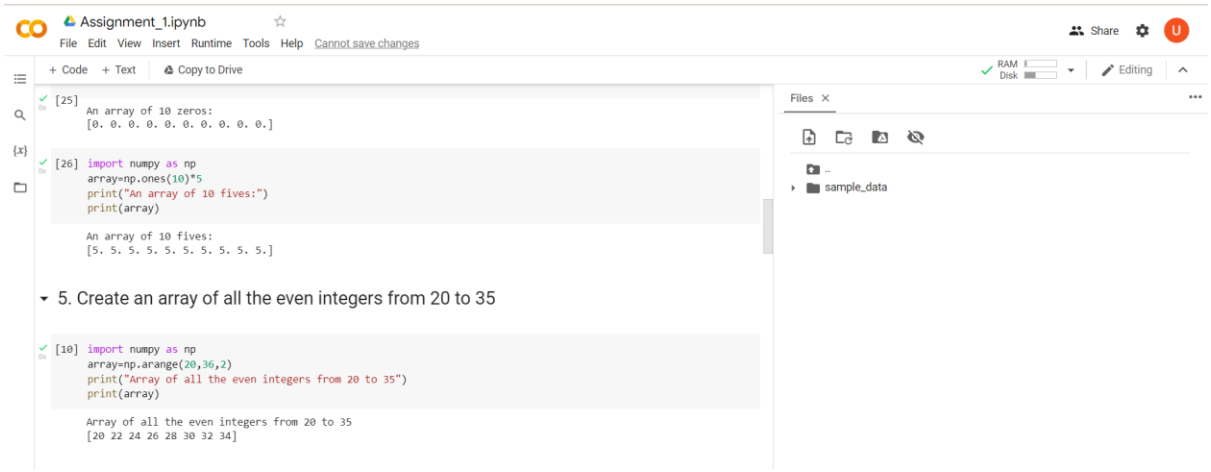
ASSIGNMENT 1

Basic Python Program:






Assignment_1.ipynb
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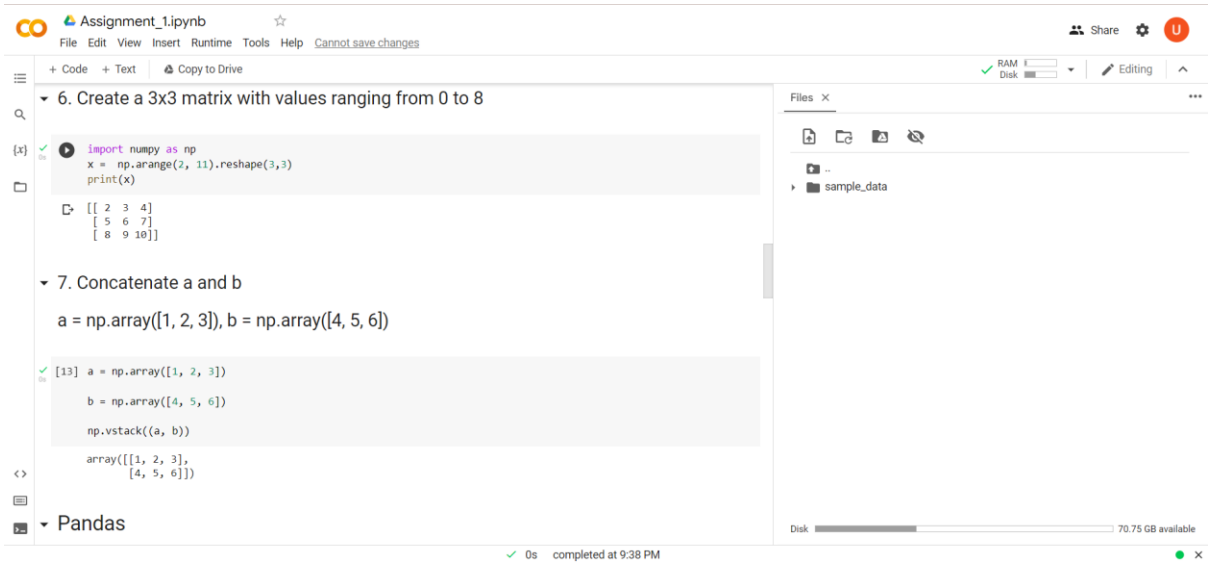
Editing
[25]
An array of 10 zeros:
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
[26] import numpy as np
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
An array of 10 fives:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
5. Create an array of all the even integers from 20 to 35
[10] import numpy as np
array=np.arange(20,36,2)
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]
Files
sample_data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6. Create a 3x3 matrix with values ranging from 0 to 8
import numpy as np
x = np.arange(2, 11).reshape(3,3)
print(x)
[[2 3 4]
[5 6 7]
[8 9 10]]
7. Concatenate a and b
a = np.array([1, 2, 3]), b = np.array([4, 5, 6])
[13] a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
np.vstack((a, b))
array([[1, 2, 3],
[4, 5, 6]])
Pandas
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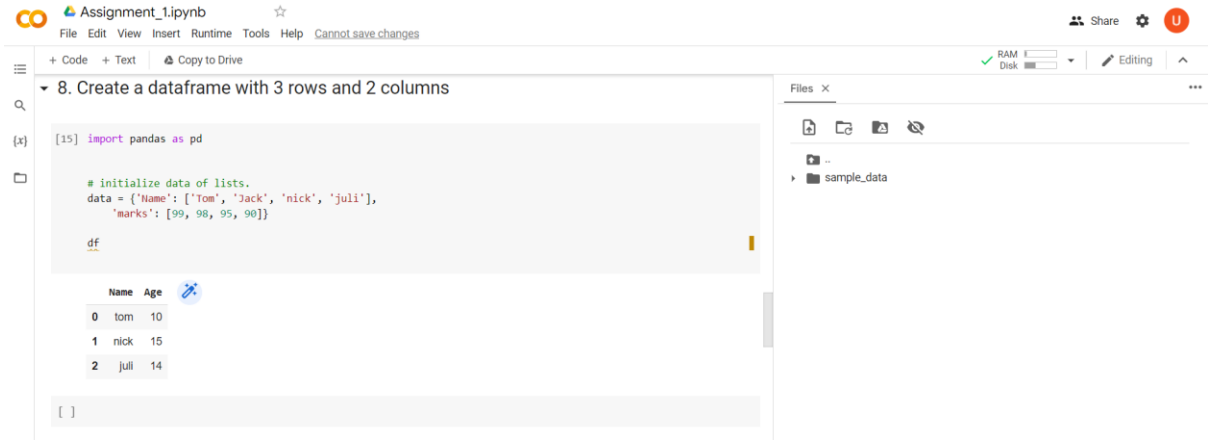
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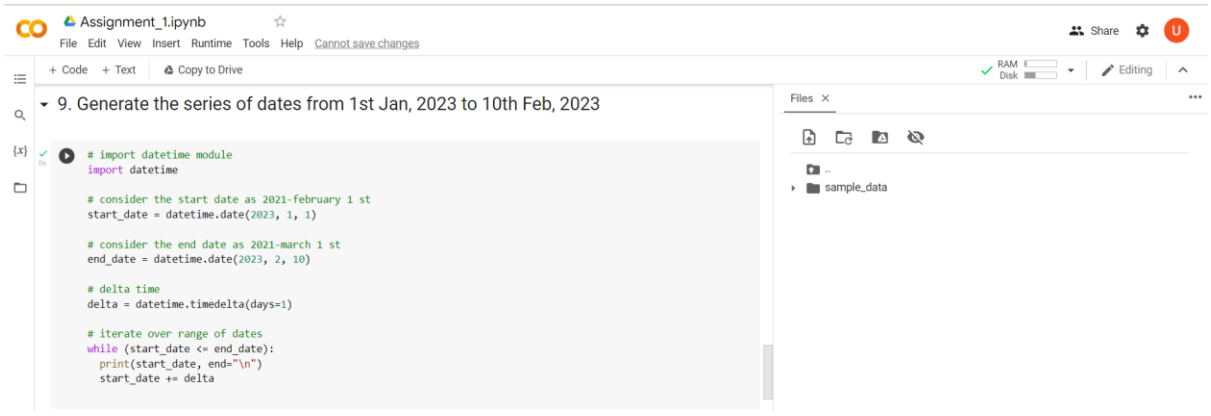
8. Create a dataframe with 3 rows and 2 columns
[15] import pandas as pd
# initialize data of lists.
data = {'Name': ['Tom', 'Jack', 'nick', 'juli'],
'marks': [99, 98, 95, 90]}
df
Name Age
0 tom 10
1 nick 15
2 juli 14
[ ]
Files
sample_data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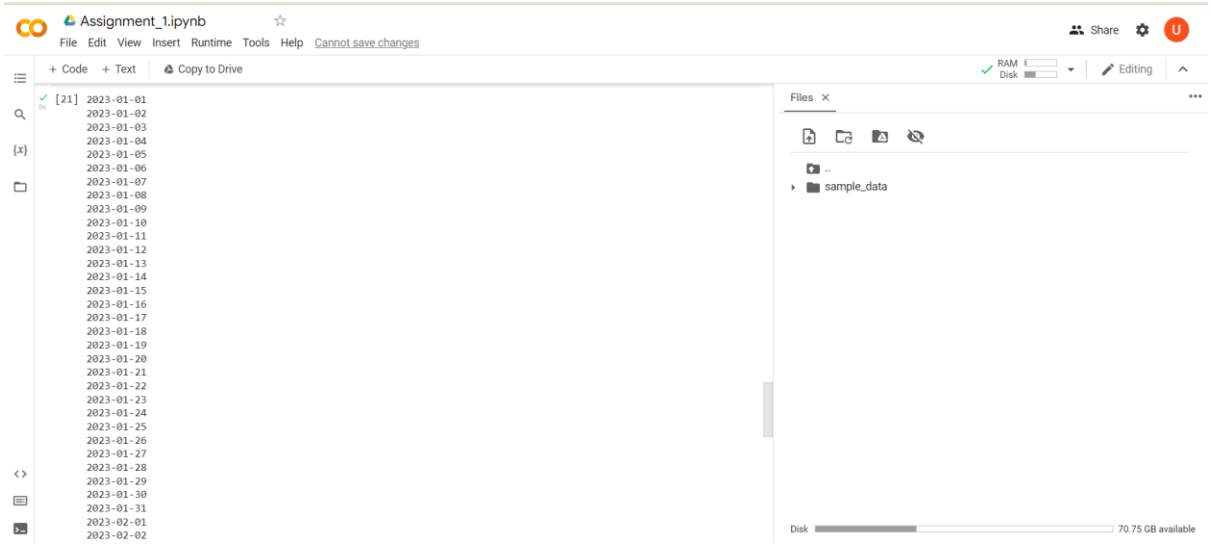
9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023
# import datetime module
import datetime
# consider the start date as 2021-february 1 st
start_date = datetime.date(2023, 1, 1)
# consider the end date as 2021-march 1 st
end_date = datetime.date(2023, 2, 10)
# delta time
delta = datetime.timedelta(days=1)
# iterate over range of dates
while (start_date <= end_date):
print(start_date, end="\n")
start_date += delta
Files
sample_data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[21] 2023-01-01
2023-01-02
2023-01-03
2023-01-04
2023-01-05
2023-01-06
2023-01-07
2023-01-08
2023-01-09
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2023-01-30
2023-01-31
2023-02-01
2023-02-02
Files
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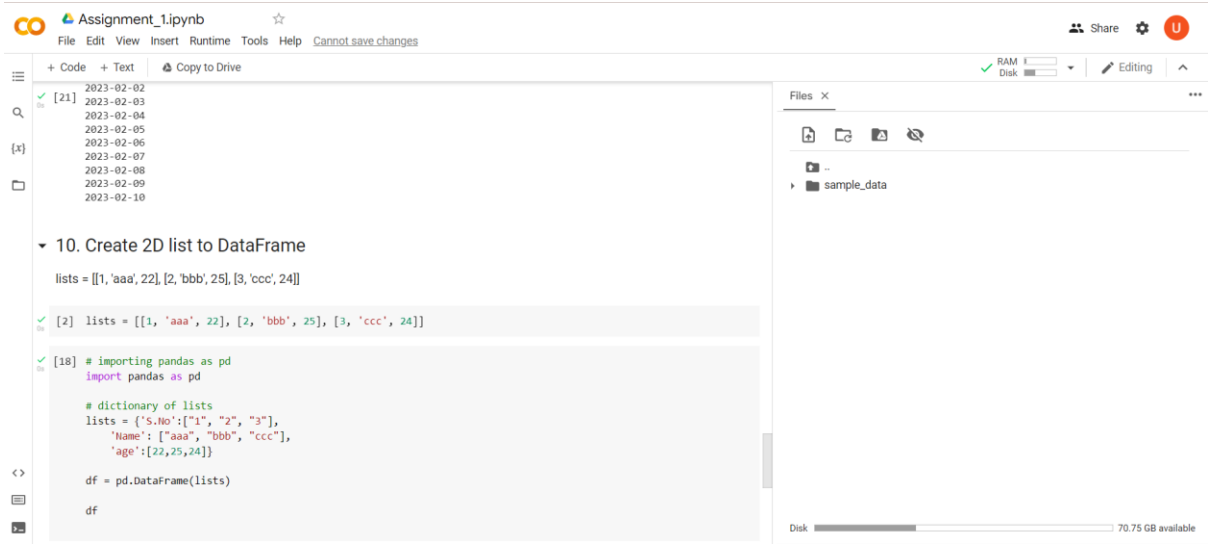
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2023-02-02
[21] 2023-02-03
2023-02-04
2023-02-05
2023-02-06
2023-02-07
2023-02-08
2023-02-09
2023-02-10
10. Create 2D list to DataFrame
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
[2] lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
[18] # importing pandas as pd
import pandas as pd
# dictionary of lists
lists = {'S.No':["1", "2", "3"],
'Name': ["aaa", "bbb", "ccc"],
'age':[22,25,24]}
df = pd.DataFrame(lists)
df
Files
sample_data
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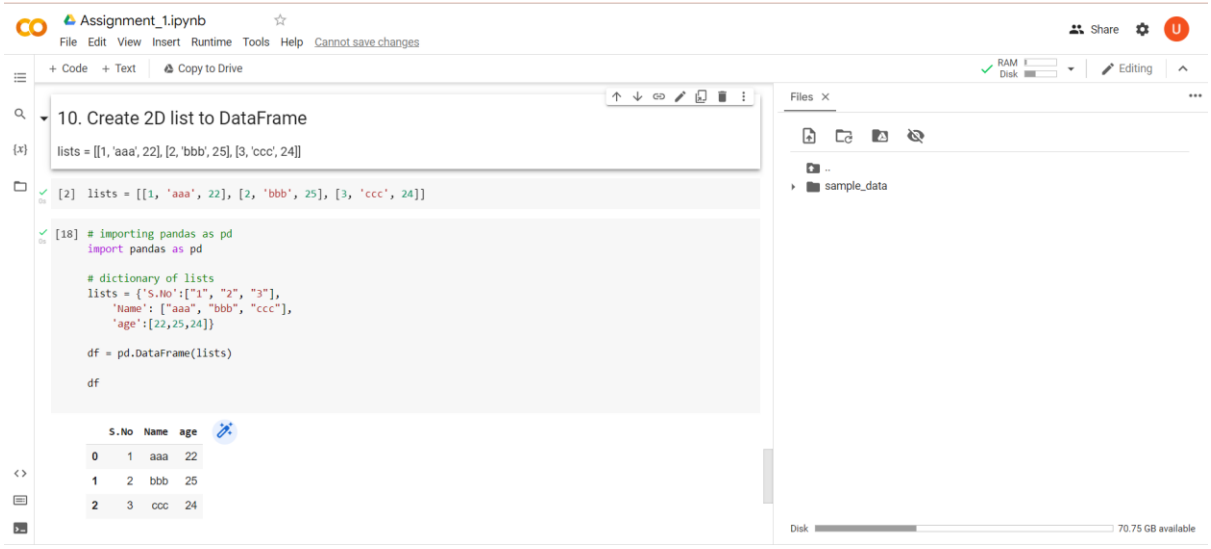
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df
S.No Name age
0 1 aaa 22
1 2 bbb 25
2 3 ccc 24
Files
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sample_data
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