Started on	Wednesday, 10 September 2025, 9:36 AM
State	Finished
Completed on	Wednesday, 10 September 2025, 11:59 AM
Time taken	2 hours 22 mins
Overdue	22 mins 50 secs
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 out of 20.00

Create a Pandas program to join two dataframes using keys from right dataframe only.

For example:

Input	Result

{'key1': ['K0', 'K0', 'K1', 'K2'],'key2': ['K0', 'K1', 'K0', 'K1'],'P': ['P0', 'P1', 'P2', 'P3'],'Q': ['Q0', 'Q1', 'Q2', 'Q3']}
{'key1': ['K0', 'K1', 'K1', 'K2'],'key2': ['K0', 'K0', 'K0', 'K0'],'R': ['R0', 'R1', 'R2', 'R3'],'S': ['S0', 'S1', 'S2', 'S3']}
	Original DataFrames:
	  key1 key2 P Q
	0 K0 K0 P0 Q0
	1 K0 K1 P1 Q1
	2 K1 K0 P2 Q2
	3 K2 K1 P3 Q3
	-------------------- 	
	  key1 key2 R S
	0 K0 K0 R0 S0
	1 K1 K0 R1 S1
	2 K1 K0 R2 S2
	3 K2 K0 R3 S3
	
	Merged Data (keys from data2):
	  key1 key2 P Q
	R S
	0 K0 K0 P0 Q0
	R0 S0
	1 K1 K0 P2 Q2
	R1 S1
	2 K1 K0 P2 Q2
	R2 S2
	3 K2 K0 NaN NaN
	R3 S3
	
	Merged Data (keys from data1):
	  key1 key2 R S
	P Q
	0 K0 K0 R0 S0
	P0 Q0
	1 K0 K1 NaN NaN
	P1 Q1
	2 K1 K0 R1 S1
	P2 Q2
	3 K1 K0 R2 S2
	P2 Q2
	4 K2 K1 NaN NaN
	P3 Q3

Answer: (penalty regime: 0 %)

```
import pandas as pd
a=eval(input())
b=eval(input())
df1=pd.DataFrame(a)
df2=pd.DataFrame(b)
print("Original DataFrames:")
print(df1)
print("--------------------")
print(df2)
print()
print("Merged Data (keys from data2):")
df_merge=pd.merge(df1,df2,on=["key1","key2"],how='right')
print(df_merge)
print()
print("Merged Data (keys from data1):")
df_merge2=pd.merge(df2,df1,on=["key1","key2"],how='right')
print(df_merge2)
```

	Input	Expected	Got	

✔	{'key1': ['K0', 'K0', 'K1', 'K2'],'key2': ['K0', 'K1', 'K0', 'K1'],'P': ['P0', 'P1', 'P2', 'P3'],'Q': ['Q0', 'Q1', 'Q2', 'Q3']}
	{'key1': ['K0', 'K1', 'K1', 'K2'],'key2': ['K0', 'K0', 'K0', 'K0'],'R': ['R0', 'R1', 'R2', 'R3'],'S': ['S0', 'S1', 'S2', 'S3']}
		Original DataFrames:
		  key1 key2 P Q
		0 K0 K0 P0 Q0
		1 K0 K1 P1 Q1
		2 K1 K0 P2 Q2
		3 K2 K1 P3 Q3
		---------- 	
		-
		  key1 key2 R S
		0 K0 K0 R0 S0
		1 K1 K0 R1 S1
		2 K1 K0 R2 S2
		3 K2 K0 R3 S3
		
		Merged Data (keys from data2):
		  key1 key2 P
		Q R S
		0 K0 K0 P0
		Q0 R0 S0
		1 K1 K0 P2
		Q2 R1 S1
		2 K1 K0 P2
		Q2 R2 S2
		3 K2 K0 NaN
		NaN R3 S3
		
		Merged Data (keys from data1):
		  key1 key2 R
		S P Q
		0 K0 K0 R0
		S0 P0 Q0
		1 K0 K1 NaN
		NaN P1 Q1
		2 K1 K0 R1
		S1 P2 Q2
		3 K1 K0 R2
		S2 P2 Q2
		4 K2 K1 NaN
		NaN P3 Q3
			Original DataFrames:
			  key1 key2 P Q
			0 K0 K0 P0 Q0
			1 K0 K1 P1 Q1
			2 K1 K0 P2 Q2
			3 K2 K1 P3 Q3
			---------- 	
			-
			  key1 key2 R S
			0 K0 K0 R0 S0
			1 K1 K0 R1 S1
			2 K1 K0 R2 S2
			3 K2 K0 R3 S3
			
			Merged Data (keys from data2):
			  key1 key2 P
			Q R S
			0 K0 K0 P0
			Q0 R0 S0
			1 K1 K0 P2
			Q2 R1 S1
			2 K1 K0 P2
			Q2 R2 S2
			3 K2 K0 NaN
			NaN R3 S3
			
			Merged Data (keys from data1):
			  key1 key2 R
			S P Q
			0 K0 K0 R0
			S0 P0 Q0
			1 K0 K1 NaN
			NaN P1 Q1
			2 K1 K0 R1
			S1 P2 Q2
			3 K1 K0 R2
			S2 P2 Q2
			4 K2 K1 NaN
			NaN P3 Q3
				✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

Write a Numpy program to Convert a 1-D array into a 2-D array with 3 rows

For example:

Input	Result
[0, 1, 2, 3, 4, 5, 6, 7, 8] The original array: [0 1 2 3 4 5 6 7 8]	The original array: [0 1 2 3 4 5 6 7 8] 3 x 3 Array: [[0 1 2] [3 4 5] [6 7 8]]

Answer: (penalty regime: 0 %)

```
import numpy as np
a=eval(input())
b=np.array(a)
print("The original array:\n",b)

print()
print("3 x 3 Array:\n",np.reshape(b,(3,3)))
```

	Input	Expected	Got	
✔	[0, 1, 2, 3, 4, 5, 6, 7, 8] The original array: [0 1 2 3 4 5 6 7 8]	The original array: [0 1 2 3 4 5 6 7 8] 3 x 3 Array: [[0 1 2] [3 4 5] [6 7 8]]	The original array: [0 1 2 3 4 5 6 7 8] 3 x 3 Array: [[0 1 2] [3 4 5] [6 7 8]]	✔
✔	[11, 12, 13, 14, 15, 16, 17, 18, 19]	The original array: [11 12 13 14 15 16 17 18 19] 3 x 3 Array: [[11 12 13] [14 15 16] [17 18 19]]	The original array: [11 12 13 14 15 16 17 18 19] 3 x 3 Array: [[11 12 13] [14 15 16] [17 18 19]]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a Python Pandas program first to carry out the Multiplication and Division mathematics operations for the following two series a1 and a2.

For example:

Input	Result
[6, 6, 6, 6, 6] [1, 2, 5, 7, 9]	Multiplication of two Series: 0 6 1 12 2 30 3 42 4 54 dtype: int64 Division of Series1 by Series2: 0 6.000000 1 3.000000 2 1.200000 3 0.857143 4 0.666667 dtype: float64

Answer: (penalty regime: 0 %)

```
import pandas as pd
a=eval(input())
b=eval(input())
c=pd.Series(a)
d=pd.Series(b)
print("Multiplication of two Series:")
print(c*d)
print("Division of Series1 by Series2:")
print(c/d)
```

	Input	Expected	Got	
✔	[6, 6, 6, 6, 6] [1, 2, 5, 7, 9]	Multiplication of two Series: 0 6 1 12 2 30 3 42 4 54 dtype: int64 Division of Series1 by Series2: 0 6.000000 1 3.000000 2 1.200000 3 0.857143 4 0.666667 dtype: float64	Multiplication of two Series: 0 6 1 12 2 30 3 42 4 54 dtype: int64 Division of Series1 by Series2: 0 6.000000 1 3.000000 2 1.200000 3 0.857143 4 0.666667 dtype: float64	✔

	Input	Expected	Got	
✔	[1,3,5,7,9] [2,4,6,8,10]	Multiplication of two Series: 0 2 1 12 2 30 3 56 4 90 dtype: int64 Division of Series1 by Series2: 0 0.500000 1 0.750000 2 0.833333 3 0.875000 4 0.900000 dtype: float64	Multiplication of two Series: 0 2 1 12 2 30 3 56 4 90 dtype: int64 Division of Series1 by Series2: 0 0.500000 1 0.750000 2 0.833333 3 0.875000 4 0.900000 dtype: float64	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Create a numpy program to find the sum of first column in a given numpy array.

For example:

Input	Result
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]	[[1 2 3] [4 5 6] [7 8 9] [10 11 12]] 22

Answer: (penalty regime: 0 %)

```
import numpy as np
a=eval(input())
b=np.array(a)
c=np.reshape(b,(4,3))
print(c)
d=np.sum(c[:,0])
print(d)
```

	Input	Expected	Got	
✔	[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]	[[1 2 3] [4 5 6] [7 8 9] [10 11 12]] 22	[[1 2 3] [4 5 6] [7 8 9] [10 11 12]] 22	✔
✔	[2,4,6,8,10,12,14,16,18,20,22,24]	[[2 4 6] [8 10 12] [14 16 18] [20 22 24]] 44	[[2 4 6] [8 10 12] [14 16 18] [20 22 24]] 44	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Incorrect

Mark 0.00 out of 20.00

Create a Python program to write the user given employee details into a csv file and read the content from the newly created file.

note:fieldnames = ['emp_name', 'dept', 'birth_month']

For example:

Test	Input	Result

with open('employee_file2.csv', 'r') as file:
  csvreader = csv.reader(file)
  header = next(csvreader)
  for row in csvreader:
  rows.append(row)
print(header)
print(rows)
	{'emp_name': 'John Smith', 'dept': 'Accounting', 'birth_month': 'November'}
	{'emp_name': 'Erica Meyers', 'dept': 'IT', 'birth_month': 'March'}
		['emp_name', 'dept', 'birth_month']
		[['John Smith', 'Accounting', 'November'], ['Erica Meyers', 'IT', 'March']]

Answer: (penalty regime: 0 %)

```
with open('employee_file2.csv', 'w') as file:
    csvreader = csv.reader(file)
    header = next(csvreader)
    for row in csvreader:
        rows.append(row)
print(header)
print(rows)
```

	Test	Input	Expected	Got	

✖	with open('employee_file2.csv', 'r') as file:
	  csvreader = csv.reader(file)
	  header = next(csvreader)
	  for row in csvreader:
	  rows.append(row)
	print(header)
	print(rows)
		{'emp_name': 'John Smith', 'dept': 'Accounting', 'birth_month': 'November'}
		{'emp_name': 'Erica Meyers', 'dept': 'IT', 'birth_month': 'March'}
			['emp_name', 'dept', 'birth_month']
			[['John Smith', 'Accounting', 'November'], ['Erica Meyers', 'IT', 'March']]
				Run error
				Traceback (most recent call last):
				  File "__tester__.python3", line 2, in <module>
				  csvreader = csv.reader(file)
				NameError: name 'csv' is not defined
					✖

Testing was aborted due to error.

Your code must pass all tests to earn any marks. Try again.

Show differences

Incorrect

Marks for this submission: 0.00/20.00.