Week 5 Exercise: Pandas Joining, merging DataFrame and Plotting

1. Write a Pandas program to append a list of dictioneries or series to an existing DataFrame and display the combined data.

Student detail:

student	id		name	marks
bedaene_	_			
0	S1	Danniella	Fenton	200
1	S2	Ryder	Storey	210
2	s3	Bryce	Jensen	190
3	S4	Ed	Bernal	222
4	S5	Kwame	e Morin	199
Dictionary:				
student_i	Ld		S6	
name		Scarlette	Fisher	
marks			205	

2. Write a Pandas program to join the two given dataframes a long rows and merge with another dataframe along the common column id.

student data1:

	student_id	name	marks
0	_s1	Danniella Fenton	200
1	S2	Ryder Storey	210
2	S3	Bryce Jensen	190
3	S4	Ed Bernal	222
4	S5	Kwame Morin	199
st	tudent data2	:	
	student id	name	marks
0	_ S4	Scarlette Fisher	201
1	S5	Carla Williamson	200
2	S6	Dante Morse	198
3	S7	Kaiser William	219
4	S8	Madeeha Preston	201
ez	kam_data:		
	student_id	exam_id	
0	S1	23	
1	S2	45	
2	S3	12	
3	S4	67	
4	S5	21	
5	S7	55	
6	S8	33	
7	S9	14	
8	S10	56	
9	S11	83	
1() S12	88	
11	S13	12	

3. Write a Pandas program to join the two dataframes using the common column of both dataframes.

student_data11:

	student_id	name	marks
0	S1	Danniella Fenton	200
1	S2	Ryder Storey	210
2	S3	Bryce Jensen	190
3	S4	Ed Bernal	222
4	S5	Kwame Morin	199
s	tudent data2	2:	
	student_id	name	marks
0	_		marks 201
_	student_id	name	
_	student_id S4	name Scarlette Fisher	201
0	student_id S4 S5	name Scarlette Fisher Carla Williamson	201 200
0 1 2	student_id S4 S5 S6	name Scarlette Fisher Carla Williamson Dante Morse	201 200 198

4. Write a Pandas program to join the two dataframes with matching records from both sides where available.

student_data1:

scadenc_datar.			
name	marks		
Danniella Fenton	200		
Ryder Storey	210		
Bryce Jensen	190		
Ed Bernal	222		
Kwame Morin	199		
student_data2:			
name	marks		
Scarlette Fisher	201		
Carla Williamson	200		
Dante Morse	198		
Kaiser William	219		
Madeeha Preston	201		
	name Danniella Fenton Ryder Storey Bryce Jensen Ed Bernal Kwame Morin 2: name Scarlette Fisher Carla Williamson Dante Morse Kaiser William		

5. Write a Pandas program to join (left join) the two dataframes using keys from left dataframe only.

da	ata1:			
	key1	key2	P	Q
0	ΚO	K0	ΡO	Q0
1	ΚO	K1	P1	Q1
2	K1	K0	P2	Q2
3	K2	K1	Р3	Q3
da	ata2:			
	key1	key2	R	S
0	ΚO	K0	R0	SO
1	K1	K0	R1	S1
2	K1	K0	R2	S2
3	K2	K0	R3	S3

Using the Alphabet Dataset Provided on Moodle

- 6. Write a Pandas program to create a line plot of the historical stock prices of Alphabet Inc. between two specific dates.
- 7. Write a Pandas program to create a line plot of the opening, closing stock prices of Alphabet Inc. between two specific dates.
- 8. Write a Pandas program to create a bar plot of the trading volume of Alphabet Inc. stock between two specific dates.
- 9. Write a Pandas program to create a bar plot of opening, closing stock prices of Alphabet Inc. between two specific dates.
- 10. Write a Pandas program to create a stacked bar plot of opening, closing stock prices of Alphabet Inc. between two specific dates.