5/19/24, 5:11 PM Bubble Sort - Colab from google.colab import files uploaded = files.upload() Choose Files No file chosen Upload widget is only available when the cell has been executed in the current browser session. Please rerun this cell to enable. Saving Gender Wage Gan csv to Gender Wage Gan csv import pandas as pd df = pd.read_csv('Gender Wage Gap.csv') ₹ LOCATION INDICATOR SUBJECT MEASURE FREQUENCY TIME Value Flag Codes 0 AUS WAGEGAP EMPLOYEE PC A 1975 21.582734 NaN 1 AUS WAGEGAP EMPLOYEE РС A 1976 20.754717 NaN 2 PC AUS WAGEGAP EMPLOYEE A 1977 18.390805 NaN 3 AUS WAGEGAP EMPLOYEE PC A 1978 19.791667 NaN 4 AUS WAGEGAP EMPLOYEE PC A 1979 20.000000 NaN 1304 BRA WAGEGAP EMPLOYEE PC A 2017 13.333333 NaN BRA WAGEGAP EMPLOYEE PC NaN 1305 A 2018 10 666667 1306 BRA WAGEGAP EMPLOYEE РС A 2019 6.666667 NaN BRA WAGEGAP EMPLOYEE PC 1307 A 2020 6 250000 NaN 1308 BRA WAGEGAP EMPLOYEE PC A 2021 9.090909 NaN 1309 rows × 8 columns # Bubble Sort algorithm for double array arr according to column with index col def bubble_sort(arr, col): n = len(arr)for i in range(1,n): #Last i elements are already in place for j in range(1, n - i):

```
#Compare adjacent elements
     if float(arr[j][col]) > float(arr[j + 1][col]):
       arr[j], arr[j + 1] = arr[j + 1], arr[j]
 return arr
import csv
file = csv.reader(open('Gender Wage Gap.csv', 'r'))
rows = [row for row in file]
sorted_rows = [', '.join(row) + '\n' for row in bubble_sort(rows, 6)]
with open('output.csv', 'w+') as f:
    f.writelines(sorted_rows)
pd.read_csv("output.csv")
```

	LOCATION	INDICATOR	SUBJECT	MEASURE	FREQUENCY	TIME	Value	Flag Codes
0	EST	WAGEGAP	SELFEMPLOYED	PC	Α	2020	-53.283390	
1	EST	WAGEGAP	SELFEMPLOYED	PC	Α	2019	-40.535191	
2	EST	WAGEGAP	SELFEMPLOYED	PC	Α	2010	-30.379969	
3	EST	WAGEGAP	SELFEMPLOYED	PC	Α	2009	-28.117098	
4	EST	WAGEGAP	SELFEMPLOYED	PC	Α	2011	-25.505442	
1304	POL	WAGEGAP	SELFEMPLOYED	PC	Α	2010	61.631920	
1305	POL	WAGEGAP	SELFEMPLOYED	PC	Α	2009	61.635010	
1306	POL	WAGEGAP	SELFEMPLOYED	PC	Α	2011	61.928143	
1307	PRT	WAGEGAP	SELFEMPLOYED	PC	Α	2006	62.250122	
1308	USA	WAGEGAP	SELFEMPLOYED	PC	Α	2005	63.200001	
	1 2 3 4 1304 1305 1306	0 EST 1 EST 2 EST 3 EST 4 EST 1304 POL 1305 POL 1306 POL	0 EST WAGEGAP 1 EST WAGEGAP 2 EST WAGEGAP 3 EST WAGEGAP 4 EST WAGEGAP 1304 POL WAGEGAP 1305 POL WAGEGAP 1306 POL WAGEGAP 1307 PRT WAGEGAP	0 EST WAGEGAP SELFEMPLOYED 1 EST WAGEGAP SELFEMPLOYED 2 EST WAGEGAP SELFEMPLOYED 3 EST WAGEGAP SELFEMPLOYED 4 EST WAGEGAP SELFEMPLOYED 1304 POL WAGEGAP SELFEMPLOYED 1305 POL WAGEGAP SELFEMPLOYED 1306 POL WAGEGAP SELFEMPLOYED 1307 PRT WAGEGAP SELFEMPLOYED	0 EST WAGEGAP SELFEMPLOYED PC 1 EST WAGEGAP SELFEMPLOYED PC 2 EST WAGEGAP SELFEMPLOYED PC 3 EST WAGEGAP SELFEMPLOYED PC 4 EST WAGEGAP SELFEMPLOYED PC	0 EST WAGEGAP SELFEMPLOYED PC A 1 EST WAGEGAP SELFEMPLOYED PC A 2 EST WAGEGAP SELFEMPLOYED PC A 3 EST WAGEGAP SELFEMPLOYED PC A 4 EST WAGEGAP SELFEMPLOYED PC A 1304 POL WAGEGAP SELFEMPLOYED PC A 1305 POL WAGEGAP SELFEMPLOYED PC A 1306 POL WAGEGAP SELFEMPLOYED PC A 1307 PRT WAGEGAP SELFEMPLOYED PC A	0 EST WAGEGAP SELFEMPLOYED PC A 2020 1 EST WAGEGAP SELFEMPLOYED PC A 2019 2 EST WAGEGAP SELFEMPLOYED PC A 2010 3 EST WAGEGAP SELFEMPLOYED PC A 2011 4 EST WAGEGAP SELFEMPLOYED PC A 2011 1304 POL WAGEGAP SELFEMPLOYED PC A 2010 1305 POL WAGEGAP SELFEMPLOYED PC A 2011 1306 POL WAGEGAP SELFEMPLOYED PC A 2011 1307 PRT WAGEGAP SELFEMPLOYED PC A 2006	0 EST WAGEGAP SELFEMPLOYED PC A 2020 -53.283390 1 EST WAGEGAP SELFEMPLOYED PC A 2019 -40.535191 2 EST WAGEGAP SELFEMPLOYED PC A 2010 -30.379969 3 EST WAGEGAP SELFEMPLOYED PC A 2009 -28.117098 4 EST WAGEGAP SELFEMPLOYED PC A 2011 -25.505442 1304 POL WAGEGAP SELFEMPLOYED PC A 2010 61.635010 1305 POL WAGEGAP SELFEMPLOYED PC A 2011 61.928143 1307 PRT WAGEGAP SELFEMPLOYED PC A 2006 62.250122

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