

Level 1 实验报告

PB20111686 黄瑞轩

选题：Level 1.7【统计】时序统计

COVID-19 是由 SARS-CoV-2 导致的传染性疾病，常见症状包括发烧，咳嗽和呼吸急促。现有 [全球疫情统计结果](#)，以数据 `04-01-2022.csv` 为例，编写一个程序，输出确诊人数（Confirmed）最多的 10 个国家详细数据（国家 Country/Region，最新更新时间 Last Update，确认病例 Confirmed，死亡病例 Deaths，恢复病例 Recovered）

思路： 阅读 csv 每一行，提取需要输出的数据栏，列表排序，写入 csv 文件。

注意：

- 阅读时同名国家需要合并数据；
- csv写入时，有一个默认的newline参数，如果需要像普通的表格那样，需要设置 `newline=""`。

初始文件：

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	FIPS	Admin2	Province_S	Country_R	Last_Update	Lat	Long_	Confirmed	Deaths	Recovered	Active	Combined Incident R	Case_Fatality_Ratio		
2				Afghanistan	2022/4/2 4:20	33.93911	67.70995	177782	7670			Afghanistan	456.6904	4.314273	
3				Albania	2022/4/2 4:20	41.1533	20.1683	273759	3492			Albania	9512.788	1.275575	
4				Algeria	2022/4/2 4:20	28.0339	1.6596	265679	6874			Algeria	605.867	2.587333	
5				Andorra	2022/4/2 4:20	42.5063	1.5218	40024	153			Andorra	51800.94	0.382271	
6				Angola	2022/4/2 4:20	-11.2027	17.8739	99194	1900			Angola	301.811	1.915438	
7				Antarctica	2022/4/2 4:20	-71.9499	23.347	11	0			Antarctica		0	
8				Antigua ar	2022/4/2 4:20	17.0608	-61.7964	7493	135			Antigua ar	7651.54	1.801682	
9				Argentina	2022/4/2 4:20	-38.4161	-63.6167	9039838	128052			Argentina	20001.51	1.41653	
10				Armenia	2022/4/2 4:20	40.0691	45.0382	422540	8616			Armenia	14259.42	2.039097	
11			Australian	Australia	2022/4/2 4:20	-35.4735	149.0124	79515	42			Australian	18573.93	0.05282	
12			New South	Australia	2022/4/2 4:20	-33.8688	151.2093	1863375	2444			New South	22953.62	0.13116	
13			Northern T	Australia	2022/4/2 4:20	-12.4634	130.8456	50713	36			Northern T	20648.62	0.070988	
14			Queenslan	Australia	2022/4/2 4:20	-27.4698	153.0251	785417	746			Queenslan	15353.67	0.094981	
15			South Aust	Australia	2022/4/2 4:20	-34.9285	138.6007	263402	261			South Aust	14995.84	0.099088	
16			Tasmania	Australia	2022/4/2 4:20	-42.8821	147.3272	93192	31			Tasmania,	17402.8	0.033265	
17			Victoria	Australia	2022/4/2 4:20	-37.8136	144.9631	1302047	2752			Victoria, A	19635.51	0.211359	
18			Western A	Australia	2022/4/2 4:20	-31.9505	115.8605	190502	53			Western A	7241.77	0.027821	
19			Austria		2022/4/2 4:20	47.5162	14.5501	3854405	15905			Austria	42796.29	0.412645	
20			Azerbaijan		2022/4/2 4:20	40.1431	47.5769	791979	9694			Azerbaijan	7811.079	1.224022	
21			Bahamas		2022/4/2 4:20	25.02589	-78.0359	33291	788			Bahamas	8465.65	2.367006	
22			Bahrain		2022/4/2 4:20	26.0275	50.55	555003	1471			Bahrain	32616.86	0.265044	
23			Bangladesh		2022/4/2 4:20	23.685	90.3563	1951658	29122			Bangladesh	1185.054	1.492167	
24			Barbados		2022/4/2 4:20	13.1939	-59.5432	59495	375			Barbados	20703.2	0.630305	
25			Belarus		2022/4/2 4:20	53.7098	27.9534	963756	6829			Belarus	10199.21	0.708582	
26			Antwerp	Belgium	2022/4/2 4:20	51.2195	4.4024	608444	0			Antwerp, B	32747.5	0	
27			Brussels	Belgium	2022/4/2 4:20	50.8503	4.3517	428749	0			Brussels, B	35476.55	0	
28			East Flandr	Belgium	2022/4/2 4:20	51.0362	3.7373	505555	0			East Flandr	33368.56	0	
29			Flemish Br	Belgium	2022/4/2 4:20	50.9167	4.5833	364656	0			Flemish Br	31815.04	0	
30			Hainaut	Belgium	2022/4/2 4:20	50.5257	4.0621	431259	0			Hainaut, B	32081.97	0	

获得文件：

	A	B	C	D	E	F	G	H
1	Rank	Country_R	Last_Update	Confirmed	Deaths	Recovered		
2	1	US	2022/4/2 4:20	80141546	981701	0		
3	2	India	2022/4/2 4:20	43027035	521264	0		
4	3	Brazil	2022/4/2 4:20	29978513	660265	0		
5	4	France	2022/4/2 4:20	25952226	143441	0		
6	5	United Kin	2022/4/2 4:20	21379545	166168	0		
7	6	Germany	2022/3/19 23:20	21357039	129695	0		
8	7	Russia	2022/4/2 4:20	17601907	361679	0		
9	8	Turkey	2022/4/2 4:20	14873927	98078	0		
10	9	Italy	2022/4/2 4:20	14719394	159537	0		
11	10	Korea, Sou	2022/4/2 4:20	13639915	16929	0		
12								
13								
14								
15								
16								
17								
18								

用法:

```
$ python3 main.py
```

注: 这里引用的文件名 `"../resource/04-01-2022.csv"` 已经写死在 `main.py` 中。