

```
import pandas as pd
```

```
df = pd.read_csv('country_vaccinations.csv')
```

```
df
```

	country	iso_code	date	total_vaccinations	\
0	Afghanistan	AFG	2021-02-22	0.0	
1	Afghanistan	AFG	2021-02-23	NaN	
2	Afghanistan	AFG	2021-02-24	NaN	
3	Afghanistan	AFG	2021-02-25	NaN	
4	Afghanistan	AFG	2021-02-26	NaN	
...	
86507	Zimbabwe	ZWE	2022-03-25	8691642.0	
86508	Zimbabwe	ZWE	2022-03-26	8791728.0	
86509	Zimbabwe	ZWE	2022-03-27	8845039.0	
86510	Zimbabwe	ZWE	2022-03-28	8934360.0	
86511	Zimbabwe	ZWE	2022-03-29	9039729.0	

	people_vaccinated	people_fully_vaccinated
daily_vaccinations_raw	\	
0	0.0	NaN
NaN		
1	NaN	NaN
NaN		
2	NaN	NaN
NaN		
3	NaN	NaN
NaN		
4	NaN	NaN
NaN		
...
...		
86507	4814582.0	3473523.0
139213.0		
86508	4886242.0	3487962.0
100086.0		
86509	4918147.0	3493763.0
53311.0		
86510	4975433.0	3501493.0
89321.0		
86511	5053114.0	3510256.0
105369.0		

	daily_vaccinations	total_vaccinations_per_hundred	\
0	NaN	0.00	
1	1367.0	NaN	
2	1367.0	NaN	
3	1367.0	NaN	
4	1367.0	NaN	

...
86507	69579.0	57.59
86508	83429.0	58.25
86509	90629.0	58.61
86510	100614.0	59.20
86511	103751.0	59.90

people_vaccinated_per_hundred	
people_fully_vaccinated_per_hundred \	
0	0.00
NaN	
1	NaN
NaN	
2	NaN
NaN	
3	NaN
NaN	
4	NaN
NaN	
...	...

...	
86507	31.90
23.02	
86508	32.38
23.11	
86509	32.59
23.15	
86510	32.97
23.20	
86511	33.48
23.26	

daily_vaccinations_per_million \	
0	NaN
1	34.0
2	34.0
3	34.0
4	34.0
...	...
86507	4610.0
86508	5528.0
86509	6005.0
86510	6667.0
86511	6874.0

vaccines \	
0	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
1	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
2	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
3	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...

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4      Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
...
86507 Oxford/AstraZeneca, Sinopharm/Beijing, Sinovac...
86508 Oxford/AstraZeneca, Sinopharm/Beijing, Sinovac...
86509 Oxford/AstraZeneca, Sinopharm/Beijing, Sinovac...
86510 Oxford/AstraZeneca, Sinopharm/Beijing, Sinovac...
86511 Oxford/AstraZeneca, Sinopharm/Beijing, Sinovac...

```

```

              source_name \
0      World Health Organization
1      World Health Organization
2      World Health Organization
3      World Health Organization
4      World Health Organization
...
86507      Ministry of Health
86508      Ministry of Health
86509      Ministry of Health
86510      Ministry of Health
86511      Ministry of Health

```

```

              source_website
0      https://covid19.who.int/
1      https://covid19.who.int/
2      https://covid19.who.int/
3      https://covid19.who.int/
4      https://covid19.who.int/
...
86507 https://www.arcgis.com/home/webmap/viewer.html...
86508 https://www.arcgis.com/home/webmap/viewer.html...
86509 https://www.arcgis.com/home/webmap/viewer.html...
86510 https://www.arcgis.com/home/webmap/viewer.html...
86511 https://www.arcgis.com/home/webmap/viewer.html...

```

[86512 rows x 15 columns]

df.head()

	country	iso_code	date	total_vaccinations
0	Afghanistan	AFG	2021-02-22	0.0
1	Afghanistan	AFG	2021-02-23	NaN
2	Afghanistan	AFG	2021-02-24	NaN
3	Afghanistan	AFG	2021-02-25	NaN
4	Afghanistan	AFG	2021-02-26	NaN

	people_fully_vaccinated	daily_vaccinations_raw	daily_vaccinations
0	NaN	NaN	NaN
1	NaN	NaN	1367.0
2	NaN	NaN	1367.0
3	NaN	NaN	1367.0
4	NaN	NaN	1367.0

	total_vaccinations_per_hundred	people_vaccinated_per_hundred	
0	0.0	0.0	
1	NaN	NaN	
2	NaN	NaN	
3	NaN	NaN	
4	NaN	NaN	

	people_fully_vaccinated_per_hundred	daily_vaccinations_per_million
0	NaN	NaN
1	NaN	34.0
2	NaN	34.0
3	NaN	34.0
4	NaN	34.0

	vaccines
0	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
1	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
2	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
3	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...
4	Johnson&Johnson, Oxford/AstraZeneca, Pfizer/Bi...

	source_name	source_website
0	World Health Organization	https://covid19.who.int/
1	World Health Organization	https://covid19.who.int/
2	World Health Organization	https://covid19.who.int/
3	World Health Organization	https://covid19.who.int/
4	World Health Organization	https://covid19.who.int/

```
df['date'] = pd.to_datetime(df['date'])
```

```
df2021 = df[df['date'].dt.year == 2021]
```

```
monthly_totals = df2021.groupby(df2021['date'].dt.month)
['total_vaccinations'].sum()
```

monthly_totals

date

1	1.368363e+09
2	4.511692e+09
3	1.237050e+10
4	2.663815e+10
5	4.693966e+10
6	7.500972e+10
7	1.084767e+11
8	1.410912e+11
9	1.652023e+11
10	1.900397e+11
11	2.084644e+11
12	2.374725e+11

Name: total_vaccinations, dtype: float64