export pokemon data from public API into table

- requests
- pandas

```
1 ## loop api
2 import requests
3 import time
```

```
1 # test api
2 url = "https://pokeapi.co/api/v2/pokemon/1"
3
4 resp = requests.get(url)
5 if resp.status_code == 200:
6     print("ok")
7 else:
8     print("please check again")
```

→ ok

```
1 resp.json()
```

→ {'abilities': [{'ability': {'name': 'overgrow',
    'url': 'https://pokeapi.co/api/v2/ability/65/'},
   'is_hidden': False,
   'slot': 1},
  {'ability': {'name': 'chlorophyll',
    'url': 'https://pokeapi.co/api/v2/ability/34/'},
   'is_hidden': True,
   'slot': 3}],
 'base_experience': 64,
 'cries': {'latest': 'https://raw.githubusercontent.com/PokeAPI/cries/main/cries/pokemon/latest/1.ogg',
  'legacy': 'https://raw.githubusercontent.com/PokeAPI/cries/main/cries/pokemon/legacy/1.ogg'},
 'forms': [{'name': 'bulbasaur',
   'url': 'https://pokeapi.co/api/v2/pokemon-form/1/'}],
 'game_indices': [{'game_index': 153,
   'version': {'name': 'red', 'url': 'https://pokeapi.co/api/v2/version/1/'}},
  {'game_index': 153,
   'version': {'name': 'blue', 'url': 'https://pokeapi.co/api/v2/version/2/'}},
  {'game_index': 153,
   'version': {'name': 'yellow',
    'url': 'https://pokeapi.co/api/v2/version/3/'}},
  {'game_index': 1,
   'version': {'name': 'gold', 'url': 'https://pokeapi.co/api/v2/version/4/'}},
  {'game_index': 1,
   'version': {'name': 'silver',
    'url': 'https://pokeapi.co/api/v2/version/5/'}},
  {'game_index': 1,
   'version': {'name': 'crystal',
    'url': 'https://pokeapi.co/api/v2/version/6/'}},
  {'game_index': 1,
   'version': {'name': 'ruby', 'url': 'https://pokeapi.co/api/v2/version/7/'}},
  {'game_index': 1,
   'version': {'name': 'sapphire',
    'url': 'https://pokeapi.co/api/v2/version/8/'}},
  {'game_index': 1,
   'version': {'name': 'emerald',
    'url': 'https://pokeapi.co/api/v2/version/9/'}},
  {'game_index': 1,
   'version': {'name': 'firered',
    'url': 'https://pokeapi.co/api/v2/version/10/'}},
  {'game_index': 1,
   'version': {'name': 'leafgreen',
    'url': 'https://pokeapi.co/api/v2/version/11/'}},
  {'game_index': 1,
   'version': {'name': 'diamond',
    'url': 'https://pokeapi.co/api/v2/version/12/'}},
  {'game_index': 1,
   'version': {'name': 'pearl',
    'url': 'https://pokeapi.co/api/v2/version/13/'}},
  {'game_index': 1,
   'version': {'name': 'platinum',
    'url': 'https://pokeapi.co/api/v2/version/14/'}},
  {'game_index': 1,
   'version': {'name': 'heartgold',
    'url': 'https://pokeapi.co/api/v2/version/15/'}},
  {'game_index': 1,
   'version': {'name': 'soulsilver',
```

```
                          'url': 'https://pokeapi.co/api/v2/version/16/'}},
```

```
1 abilities = resp.json()['abilities']
2 abilities
```

```
[{'ability': {'name': 'overgrow',
    'url': 'https://pokeapi.co/api/v2/ability/65/'},
  'is_hidden': False,
  'slot': 1},
 {'ability': {'name': 'chlorophyll',
    'url': 'https://pokeapi.co/api/v2/ability/34/'},
  'is_hidden': True,
  'slot': 3}]
```

```
1 resp.json()['abilities'][0]['ability']['name']
```

```
'overgrow'
```

```
1 for j in abilities:
2   print(j)
```

```
{'ability': {'name': 'overgrow', 'url': 'https://pokeapi.co/api/v2/ability/65/'}, 'is_hidden': False, 'slot': 1}
{'ability': {'name': 'chlorophyll', 'url': 'https://pokeapi.co/api/v2/ability/34/'}, 'is_hidden': True, 'slot': 3}
```

```
1 # prompt: call ability name in resp.json()
2
3 abilities = resp.json()['abilities']
4 ablist = []
5 for j in abilities:
6   print(j['ability']['name'])
7   ablist.append(j['ability']['name'])
8 ablist
```

```
overgrow
chlorophyll
['overgrow', 'chlorophyll']
```

```
1 # prompt: make ablist in to str
2
3 abstr = ", ".join(ablist)
4 abstr
5
```

```
'overgrow, chlorophyll'
```

```
1 resp.json()['forms'][0]['name']
```

```
'bulbasaur'
```

```
1 stats = resp.json()['stats']
2 stats
```

```
[{'base_stat': 45,
  'effort': 0,
  'stat': {'name': 'hp', 'url': 'https://pokeapi.co/api/v2/stat/1/'}},
 {'base_stat': 49,
  'effort': 0,
  'stat': {'name': 'attack', 'url': 'https://pokeapi.co/api/v2/stat/2/'}},
 {'base_stat': 49,
  'effort': 0,
  'stat': {'name': 'defense', 'url': 'https://pokeapi.co/api/v2/stat/3/'}},
 {'base_stat': 65,
  'effort': 1,
  'stat': {'name': 'special-attack',
    'url': 'https://pokeapi.co/api/v2/stat/4/'}},
 {'base_stat': 65,
  'effort': 0,
  'stat': {'name': 'special-defense',
    'url': 'https://pokeapi.co/api/v2/stat/5/'}},
 {'base_stat': 45,
  'effort': 0,
  'stat': {'name': 'speed', 'url': 'https://pokeapi.co/api/v2/stat/6/'}}]
```

```
1 stats[0]['stat']['name']
```

⤵ 'hp'

```
1 stats[0]['base_stat']
```

⤵ 45

```
1 ## loop api
2 import requests
3 import time
4
5 numbers = []
6 names = []
7 abilities_ = []
8 masses = []
9 hp_ = []
10 atk_ = []
11 def_ = []
12 spatk_ = []
13 spdef_ = []
14 spd_ = []
15 for i in range(6):
16     url = f"https://pokeapi.co/api/v2/pokemon/{i+1}"
17
18     response = requests.get(url)
19     number = str(i)
20     name = response.json()['forms'][0]['name']
21     abilities = response.json()['abilities']
22     ability = []
23     for j in abilities:
24         ability.append(j['ability']['name'])
25     ability = ", ".join(ability)
26     mass = response.json()['weight']
27     masses.append(mass)
28
29     stats = response.json()['stats']
30     hp = stats[0]['base_stat']
31     atk = stats[1]['base_stat']
32     deff = stats[2]['base_stat']
33     spatk = stats[3]['base_stat']
34     spdef = stats[4]['base_stat']
35
36
37
38
39     numbers.append(number)
40     names.append(name)
41     abilities_.append(ability)
42
43     hp_.append(hp)
44     atk_.append(atk)
45     def_.append(deff)
46     spatk_.append(spatk)
47     spdef_.append(spdef)
48
49     print(name)
50     time.sleep(1)
51
52
```

⤵ bulbasaur
  ivysaur
  venusaur
  charmander
  charmeleon
  charizard

```
1 print(numbers)
2 print(names)
3 print(abilities_)
```

⤵ ['0', '1', '2', '3', '4', '5']
  ['bulbasaur', 'ivysaur', 'venusaur', 'charmander', 'charmeleon', 'charizard']
  ['overgrow, chlorophyll', 'overgrow, chlorophyll', 'overgrow, chlorophyll', 'blaze, solar-power', 'blaze, solar-power', 'blaze, solar-po

```
1 import pandas as pd
```

```
1 import pandas as pd
2 df = pd.DataFrame({'id'          : numbers,
3                    'name'        : names,
4                    'weight'      : masses,
5                    'abilites'    : abilities_,
6                    'hp'          : hp_,
7                    'atk'         : atk_,
8                    'def'         : def_,
9                    'spatk'       : spatk_,
10                   'spdef'       : spdef_})
11 df
```

	id	name	weight	abilites	hp	atk	def	spatk	spdef
0	0	bulbasaur	69	overgrow, chlorophyll	45	49	49	65	65
1	1	ivysaur	130	overgrow, chlorophyll	60	62	63	80	80
2	2	venusaur	1000	overgrow, chlorophyll	80	82	83	100	100
3	3	charmander	85	blaze, solar-power	39	52	43	60	50
4	4	charmeleon	190	blaze, solar-power	58	64	58	80	65
5	5	charizard	905	blaze, solar-power	78	84	78	109	85

Next steps: [Generate code with df] [View recommended plots] [New interactive sheet]