

UserAccounts

June 29, 2023

1 DE ASSESSMENT 1 Dated Jun28

```
[8]: import json
import time

import requests
import pandas as pd
from sqlalchemy import create_engine

ENDPOINT = 'https://randomuser.me/api/'

TABLE_NAME = 'user_accounts'

DB_NAME = "gc"
DB_USER = "postgres"
DB_PASS = "welcome123"
DB_HOST = "localhost"
DB_PORT = "5432"

NA = ['Mexico', 'United States', 'Canada']
```

2 QUESTION 1: Extract

A GET request to the following endpoint provides you with randomly generated user information: <https://randomuser.me/api/>

Make 25 requests to the endpoint and add each response into a pandas DataFrame. Your resulting DataFrame should be 25 rows and 34 columns. Take advantage of pandas' `json_normalize()` function. Each request should have at least a one second wait before the next request.

```
[29]: # extract - QUESTION 1

# write your solution(s) here:
# Initialize an empty DataFrame
df = pd.DataFrame()

# Make 25 requests
for _ in range(25):
```

```

# Send a GET request to the endpoint
response = requests.get("https://randomuser.me/api/")

# Wait for one second
time.sleep(1)

# Extract the JSON data from the response
data = response.json()

# Normalize the JSON data and append it to the DataFrame
df = df.append(pd.json_normalize(data['results']))

# Reset the DataFrame index
df = df.reset_index(drop=True)

# Display the resulting DataFrame
print(df.shape) # Output: (25, 34)
print(df)

```

```

C:\Users\paperspace\AppData\Local\Temp\1\ipykernel_1996\257813655.py:19:
FutureWarning: The frame.append method is deprecated and will be removed from
pandas in a future version. Use pandas.concat instead.
    df = df.append(pd.json_normalize(data['results']))
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```

(25, 34)

	gender	email	phone	cell	nat	\
0	male	haroen.jongepier@example.com	(017) 2710759	(06) 58253572	NL	
1	male	edgar.hunt@example.com	021-230-6035	081-482-5606	IE	
2	female	ege.corekci@example.com	(228)-421-4183	(275)-099-3223	TR	
3	female	grace.day@example.com	061-601-8485	081-100-4052	IE	
4	male	murat.tekelioglu@example.com	(146)-019-0048	(218)-504-4769	TR	
5	male	topias.wirta@example.com	05-449-578	040-749-63-91	FI	
6	female	claire.laurent@example.com	04-12-70-94-70	06-38-57-86-77	FR	
7	male	aabs.slry@example.com	033-88861697	0991-712-9675	IR	
8	female	ilham.evertse@example.com	(0829) 317079	(06) 00073712	NL	
9	male	sinisa.jevremovic@example.com	012-7182-777	068-3068-338	RS	
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11	male	volkan.akaydin@example.com	(865)-950-3505	(772)-337-8296	TR	
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20	male	albert.phillips@example.com	09-1343-0306	0479-311-726	AU	
21	female	stacy.carlson@example.com	(475) 998-1801	(431) 676-9002	US	
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23	female	gwendolyn.white@example.com	01-6465-5213	0481-824-249	AU	
24	male	aleksa.cirkovic@example.com	038-8692-598	060-1890-088	RS	

	name.title	name.first	name.last	location.street.number	\
0	Mr	Haroen	Jongepier	7758	
1	Mr	Edgar	Hunt	9026	
2	Miss	Ege	Çörekçi	4362	
3	Miss	Grace	Day	2934	
4	Mr	Murat	Tekelioğlu	1385	
5	Mr	Topias	Wirta	6450	
6	Ms	Claire	Laurent	1682	
7	Mr			4442	
8	Miss	Ilham	Evertse	8064	
9	Mr	Siniša	Jevremović	8685	
10	Ms	Todora	Mihaylik	290	
11	Mr	Volkan	Akaydın	7032	
12	Miss	Yaël	Meinema	9253	
13	Miss	Lylou	Jean	3444	
14	Miss	Saana	Kujala	2218	
15	Miss	Siiri	Peura	4083	
16	Mrs	Kaitlin	Freeman	1269	
17	Ms	Emilia	Sakala	3010	
18	Mrs	Isabella	Thomsen	9827	
19	Miss	Wiesje	Hibma	5889	
20	Mr	Albert	Phillips	5174	
21	Miss	Stacy	Carlson	8378	
22	Mr	Naveen	Bangera	3654	
23	Mrs	Gwendolyn	White	9652	
24	Mr	Aleksa	Ćirković	2189	

	location.street.name	...	\
0	Annevelinkhof	...	
1	Park Avenue	...	
2	Anafartalar Cd	...	
3	South Street	...	
4	Anafartalar Cd	...	
5	Tahmelantie	...	
6	Rue du Stade	...	
7	
8	Bierkade	...	
9	Rade Spasojevića	...	
10	Generala Rodimceva	...	
11	Anafartalar Cd	...	
12	Dokter Janssenplein	...	
13	Place de L'Abbé-Jean-Lebeuf	...	
14	Satakennankatu	...	
15	Mechelininkatu	...	
16	Church Road	...	
17	Siilitie	...	
18	Markedsgade	...	
19	Jacob Gerritstraat	...	

20	Thornridge Cir	...
21	Karen Dr	...
22	Mint St	...
23	Forest Ln	...
24	Bresjačka	...

	login.sha256	\
0	913cab3782e8b09943048847793ae75839321661a20ce2...	
1	185fd2ba04cc6bbefe11e4a38c5850bb0b564774c7739e...	
2	dc799d44e07449d7925e07bb5b4a65757222ab13e1285e...	
3	bdbd4ba76484576b37f032477f5f9c0666caf511807376...	
4	03e92d26481b0c999464b82bed99aeb069de8d53bf8d0e...	
5	cc5680626efe680f97a66f415209ca5a576df35a87d4ed...	
6	70b4d4479107ad8aef2c428c4ea01b27c994b98cda13d7...	
7	4942b75bdfe53e61fbf263fdd317ff9269d96c49f0a6e6...	
8	99894b4727fa07f1b1fd38e00f6241fd368a9a1d57ec6f...	
9	45e24baf56c9f4cd6bc1bd3ad7d993984db2790e9ec8f3...	
10	b0e632a2c06c071f334b9c316acb61cfa6ae1d8eb8808b...	
11	6fb3ad8f36954ed6cb314afcf3798f737938e58ad382d5...	
12	913fc7d3aadd18b96e459dfef8e9e38c55705d5ba5f3a...	
13	89de93a67ddffaaafe687a1661c9cb6fa87818f64054f3...	
14	73eb90db8d1c5d13c787a85fed2959dfba71d2131817d9...	
15	75651273833918bdc36f79a6f694ddfbef57a58bda07124...	
16	cf6b890dca8ef376dd76494e687a1bc501a33df3e2fe31...	
17	0c9bfeae3a6a63104bd74fe9b2f5daaf75474a9f4a061b...	
18	ffebe1da255caacff93fb86b5c015d784a4a2deb8cd568...	
19	68d31258fb8e2cf4148945b045cb3735ad5ac4e4af1896...	
20	b786d6837330a9b3835f8165a37388637701f4ffcb3425...	
21	e541196feb3cfab4cea8f2bc49bdd1159cb590e5d5b09e...	
22	2b389c4f9f33977a538b89931973b3f387feded649cab9...	
23	69e9b8f471afabef8d04933c6d037d3588c58c1e74a975...	
24	fd0e06c4808710d31ece8cca02105b65633ebc9c8299fa...	

	dob.date	dob.age	registered.date	registered.age	\
0	1990-03-21T21:03:57.411Z	33	2017-12-02T05:01:31.519Z	5	
1	1955-04-11T14:09:18.131Z	68	2016-12-10T05:49:35.445Z	6	
2	2000-07-09T22:11:44.070Z	22	2006-08-29T21:01:38.480Z	16	
3	1975-01-31T04:21:43.551Z	48	2002-12-09T07:50:19.036Z	20	
4	1955-09-04T01:07:44.097Z	67	2020-04-30T10:47:36.430Z	3	
5	1957-05-20T04:14:45.660Z	66	2010-03-08T18:41:39.917Z	13	
6	1950-11-03T06:32:23.109Z	72	2006-12-28T05:22:53.007Z	16	
7	1963-04-12T23:39:54.274Z	60	2009-02-12T10:41:26.135Z	14	
8	1991-04-03T10:24:52.915Z	32	2017-10-28T14:49:48.577Z	5	
9	1962-03-24T01:45:35.323Z	61	2020-02-03T11:03:10.727Z	3	
10	1984-10-05T06:36:46.841Z	38	2010-09-28T13:48:52.819Z	12	
11	1986-11-21T17:49:50.349Z	36	2022-05-18T01:34:01.094Z	1	
12	1974-11-04T17:15:27.342Z	48	2011-06-23T10:11:09.070Z	12	
13	1987-04-09T12:24:34.694Z	36	2014-09-11T07:43:10.872Z	8	

14	1947-10-27T00:07:46.085Z	75	2007-02-02T02:50:29.534Z	16
15	1984-09-30T11:18:50.356Z	38	2015-09-04T08:04:17.719Z	7
16	1974-07-06T04:51:37.528Z	48	2019-06-23T08:59:25.672Z	4
17	1984-11-01T19:12:08.843Z	38	2002-08-10T03:16:31.920Z	20
18	1993-06-12T10:37:15.395Z	30	2004-04-23T16:02:12.237Z	19
19	1958-01-27T19:35:11.433Z	65	2005-11-27T08:15:45.375Z	17
20	1988-06-10T22:06:20.206Z	35	2015-04-04T03:19:57.483Z	8
21	1966-07-10T22:30:11.756Z	56	2011-02-07T12:13:37.133Z	12
22	1973-06-21T22:43:42.133Z	50	2016-09-16T19:32:53.973Z	6
23	1982-03-10T08:20:10.193Z	41	2020-03-30T23:49:20.836Z	3
24	1980-11-20T22:44:33.835Z	42	2008-11-18T08:07:14.855Z	14

	id.name	id.value	\
0	BSN	93130237	
1	PPS	3121595T	
2		None	
3	PPS	5399253T	
4		None	
5	HETU	NaNNA497undefined	
6	INSEE	2501006607006	87
7		None	
8	BSN	38220527	
9	SID	486046171	
10		None	
11		None	
12	BSN	52940928	
13	INSEE	2870350578700	60
14	HETU	NaNNA488undefined	
15	HETU	NaNNA478undefined	
16	PPS	2833224T	
17	HETU	NaNNA548undefined	
18	CPR	120693-8534	
19	BSN	11688836	
20	TFN	756413202	
21	SSN	064-27-7591	
22	UIDAI	985754814204	
23	TFN	099434899	
24	SID	945023073	

	picture.large	\
0	https://randomuser.me/api/portraits/men/73.jpg	
1	https://randomuser.me/api/portraits/men/41.jpg	
2	https://randomuser.me/api/portraits/women/73.jpg	
3	https://randomuser.me/api/portraits/women/6.jpg	
4	https://randomuser.me/api/portraits/men/82.jpg	
5	https://randomuser.me/api/portraits/men/71.jpg	
6	https://randomuser.me/api/portraits/women/15.jpg	
7	https://randomuser.me/api/portraits/men/19.jpg	

8 <https://randomuser.me/api/portraits/women/23.jpg>
 9 <https://randomuser.me/api/portraits/men/16.jpg>
 10 <https://randomuser.me/api/portraits/women/77.jpg>
 11 <https://randomuser.me/api/portraits/men/14.jpg>
 12 <https://randomuser.me/api/portraits/women/6.jpg>
 13 <https://randomuser.me/api/portraits/women/33.jpg>
 14 <https://randomuser.me/api/portraits/women/91.jpg>
 15 <https://randomuser.me/api/portraits/women/24.jpg>
 16 <https://randomuser.me/api/portraits/women/19.jpg>
 17 <https://randomuser.me/api/portraits/women/61.jpg>
 18 <https://randomuser.me/api/portraits/women/5.jpg>
 19 <https://randomuser.me/api/portraits/women/39.jpg>
 20 <https://randomuser.me/api/portraits/men/43.jpg>
 21 <https://randomuser.me/api/portraits/women/40.jpg>
 22 <https://randomuser.me/api/portraits/men/26.jpg>
 23 <https://randomuser.me/api/portraits/women/2.jpg>
 24 <https://randomuser.me/api/portraits/men/15.jpg>

picture.medium \

0 <https://randomuser.me/api/portraits/med/men/73...>
 1 <https://randomuser.me/api/portraits/med/men/41...>
 2 <https://randomuser.me/api/portraits/med/women/...>
 3 <https://randomuser.me/api/portraits/med/women/...>
 4 <https://randomuser.me/api/portraits/med/men/82...>
 5 <https://randomuser.me/api/portraits/med/men/71...>
 6 <https://randomuser.me/api/portraits/med/women/...>
 7 <https://randomuser.me/api/portraits/med/men/19...>
 8 <https://randomuser.me/api/portraits/med/women/...>
 9 <https://randomuser.me/api/portraits/med/men/16...>
 10 <https://randomuser.me/api/portraits/med/women/...>
 11 <https://randomuser.me/api/portraits/med/men/14...>
 12 <https://randomuser.me/api/portraits/med/women/...>
 13 <https://randomuser.me/api/portraits/med/women/...>
 14 <https://randomuser.me/api/portraits/med/women/...>
 15 <https://randomuser.me/api/portraits/med/women/...>
 16 <https://randomuser.me/api/portraits/med/women/...>
 17 <https://randomuser.me/api/portraits/med/women/...>
 18 <https://randomuser.me/api/portraits/med/women/...>
 19 <https://randomuser.me/api/portraits/med/women/...>
 20 <https://randomuser.me/api/portraits/med/men/43...>
 21 <https://randomuser.me/api/portraits/med/women/...>
 22 <https://randomuser.me/api/portraits/med/men/26...>
 23 <https://randomuser.me/api/portraits/med/women/...>
 24 <https://randomuser.me/api/portraits/med/men/15...>

picture.thumbnail

0 <https://randomuser.me/api/portraits/thumb/men/...>
 1 <https://randomuser.me/api/portraits/thumb/men/...>


```

2 https://randomuser.me/api/portraits/thumb/wome...
3 https://randomuser.me/api/portraits/thumb/wome...
4 https://randomuser.me/api/portraits/thumb/men/...
5 https://randomuser.me/api/portraits/thumb/men/...
6 https://randomuser.me/api/portraits/thumb/wome...
7 https://randomuser.me/api/portraits/thumb/men/...
8 https://randomuser.me/api/portraits/thumb/wome...
9 https://randomuser.me/api/portraits/thumb/men/...
10 https://randomuser.me/api/portraits/thumb/wome...
11 https://randomuser.me/api/portraits/thumb/men/...
12 https://randomuser.me/api/portraits/thumb/wome...
13 https://randomuser.me/api/portraits/thumb/wome...
14 https://randomuser.me/api/portraits/thumb/wome...
15 https://randomuser.me/api/portraits/thumb/wome...
16 https://randomuser.me/api/portraits/thumb/wome...
17 https://randomuser.me/api/portraits/thumb/wome...
18 https://randomuser.me/api/portraits/thumb/wome...
19 https://randomuser.me/api/portraits/thumb/wome...
20 https://randomuser.me/api/portraits/thumb/men/...
21 https://randomuser.me/api/portraits/thumb/wome...
22 https://randomuser.me/api/portraits/thumb/men/...
23 https://randomuser.me/api/portraits/thumb/wome...
24 https://randomuser.me/api/portraits/thumb/men/...

```

[25 rows x 34 columns]

```

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[30]: df

```

[30]:   gender      email      phone      cell nat \
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11    male  volkan.akaydin@example.com  (865)-950-3505  (772)-337-8296  TR
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```

14	female	saana.kujala@example.com	09-851-743	049-658-18-84	FI
15	female	siiri.peura@example.com	03-833-419	043-638-31-50	FI
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4	Mr	Murat	Tekelioğlu	1385	
5	Mr	Topias	Wirta	6450	
6	Ms	Claire	Laurent	1682	
7	Mr			4442	
8	Miss	Ilham	Evertse	8064	
9	Mr	Siniša	Jevremović	8685	
10	Ms	Todora	Mihaylik	290	
11	Mr	Volkan	Akaydın	7032	
12	Miss	Yaël	Meinema	9253	
13	Miss	Lylou	Jean	3444	
14	Miss	Saana	Kujala	2218	
15	Miss	Siiri	Peura	4083	
16	Mrs	Kaitlin	Freeman	1269	
17	Ms	Emilia	Sakala	3010	
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	location.street.name	...	\
0	Annevelinkhof	...	
1	Park Avenue	...	
2	Anafartalar Cd	...	
3	South Street	...	
4	Anafartalar Cd	...	
5	Tahmelantie	...	
6	Rue du Stade	...	

7	...
8	Bierkade ...
9	Rade Spasojevića ...
10	Generala Rodimceva ...
11	Anafartalar Cd ...
12	Dokter Janssenplein ...
13	Place de L'Abbé-Jean-Lebeuf ...
14	Satakennankatu ...
15	Mechelininkatu ...
16	Church Road ...
17	Siilitie ...
18	Markedsgade ...
19	Jacob Gerritstraat ...
20	Thornridge Cir ...
21	Karen Dr ...
22	Mint St ...
23	Forest Ln ...
24	Bresjačka ...

	login.sha256 \
0	913cab3782e8b09943048847793ae75839321661a20ce2...
1	185fd2ba04cc6bbefe11e4a38c5850bb0b564774c7739e...
2	dc799d44e07449d7925e07bb5b4a65757222ab13e1285e...
3	bdbd4ba76484576b37f032477f5f9c0666caf511807376...
4	03e92d26481b0c999464b82bed99aeb069de8d53bf8d0e...
5	cc5680626efe680f97a66f415209ca5a576df35a87d4ed...
6	70b4d4479107ad8aef2c428c4ea01b27c994b98cda13d7...
7	4942b75bdf53e61fbf263fdd317ff9269d96c49f0a6e6...
8	99894b4727fa07f1b1fd38e00f6241fd368a9a1d57ec6f...
9	45e24baf56c9f4cd6bc1bd3ad7d993984db2790e9ec8f3...
10	b0e632a2c06c071f334b9c316acb61cfa6ae1d8eb8808b...
11	6fb3ad8f36954ed6cb314afcf3798f737938e58ad382d5...
12	913fc7d3aadd18b96e459df8e8e9e38c55705d5ba5f3a...
13	89de93a67ddffaaafe687a1661c9cb6fa87818f64054f3...
14	73eb90db8d1c5d13c787a85fed2959dfba71d2131817d9...
15	75651273833918bdc36f79a6f694ddfbe57a58bda07124...
16	cf6b890dca8ef376dd76494e687a1bc501a33df3e2fe31...
17	0c9bfeae3a6a63104bd74fe9b2f5daaf75474a9f4a061b...
18	ffebe1da255caacff93fb86b5c015d784a4a2deb8cd568...
19	68d31258fb8e2cf4148945b045cb3735ad5ac4e4af1896...
20	b786d6837330a9b3835f8165a37388637701f4ffcb3425...
21	e541196feb3cfab4cea8f2bc49bdd1159cb590e5d5b09e...
22	2b389c4f9f33977a538b89931973b3f387feded649cab9...
23	69e9b8f471afabef8d04933c6d037d3588c58c1e74a975...
24	fd0e06c4808710d31ece8cca02105b65633ebc9c8299fa...

dob.date	dob.age	registered.date	registered.age \
----------	---------	-----------------	------------------

0	1990-03-21T21:03:57.411Z	33	2017-12-02T05:01:31.519Z	5
1	1955-04-11T14:09:18.131Z	68	2016-12-10T05:49:35.445Z	6
2	2000-07-09T22:11:44.070Z	22	2006-08-29T21:01:38.480Z	16
3	1975-01-31T04:21:43.551Z	48	2002-12-09T07:50:19.036Z	20
4	1955-09-04T01:07:44.097Z	67	2020-04-30T10:47:36.430Z	3
5	1957-05-20T04:14:45.660Z	66	2010-03-08T18:41:39.917Z	13
6	1950-11-03T06:32:23.109Z	72	2006-12-28T05:22:53.007Z	16
7	1963-04-12T23:39:54.274Z	60	2009-02-12T10:41:26.135Z	14
8	1991-04-03T10:24:52.915Z	32	2017-10-28T14:49:48.577Z	5
9	1962-03-24T01:45:35.323Z	61	2020-02-03T11:03:10.727Z	3
10	1984-10-05T06:36:46.841Z	38	2010-09-28T13:48:52.819Z	12
11	1986-11-21T17:49:50.349Z	36	2022-05-18T01:34:01.094Z	1
12	1974-11-04T17:15:27.342Z	48	2011-06-23T10:11:09.070Z	12
13	1987-04-09T12:24:34.694Z	36	2014-09-11T07:43:10.872Z	8
14	1947-10-27T00:07:46.085Z	75	2007-02-02T02:50:29.534Z	16
15	1984-09-30T11:18:50.356Z	38	2015-09-04T08:04:17.719Z	7
16	1974-07-06T04:51:37.528Z	48	2019-06-23T08:59:25.672Z	4
17	1984-11-01T19:12:08.843Z	38	2002-08-10T03:16:31.920Z	20
18	1993-06-12T10:37:15.395Z	30	2004-04-23T16:02:12.237Z	19
19	1958-01-27T19:35:11.433Z	65	2005-11-27T08:15:45.375Z	17
20	1988-06-10T22:06:20.206Z	35	2015-04-04T03:19:57.483Z	8
21	1966-07-10T22:30:11.756Z	56	2011-02-07T12:13:37.133Z	12
22	1973-06-21T22:43:42.133Z	50	2016-09-16T19:32:53.973Z	6
23	1982-03-10T08:20:10.193Z	41	2020-03-30T23:49:20.836Z	3
24	1980-11-20T22:44:33.835Z	42	2008-11-18T08:07:14.855Z	14

	id.name	id.value	\
0	BSN	93130237	
1	PPS	3121595T	
2		None	
3	PPS	5399253T	
4		None	
5	HETU	NaNNA497undefined	
6	INSEE	2501006607006	87
7		None	
8	BSN	38220527	
9	SID	486046171	
10		None	
11		None	
12	BSN	52940928	
13	INSEE	2870350578700	60
14	HETU	NaNNA488undefined	
15	HETU	NaNNA478undefined	
16	PPS	2833224T	
17	HETU	NaNNA548undefined	
18	CPR	120693-8534	
19	BSN	11688836	

20	TFN	756413202
21	SSN	064-27-7591
22	UIDAI	985754814204
23	TFN	099434899
24	SID	945023073

```

                                picture.large \
0   https://randomuser.me/api/portraits/men/73.jpg
1   https://randomuser.me/api/portraits/men/41.jpg
2   https://randomuser.me/api/portraits/women/73.jpg
3   https://randomuser.me/api/portraits/women/6.jpg
4   https://randomuser.me/api/portraits/men/82.jpg
5   https://randomuser.me/api/portraits/men/71.jpg
6   https://randomuser.me/api/portraits/women/15.jpg
7   https://randomuser.me/api/portraits/men/19.jpg
8   https://randomuser.me/api/portraits/women/23.jpg
9   https://randomuser.me/api/portraits/men/16.jpg
10  https://randomuser.me/api/portraits/women/77.jpg
11  https://randomuser.me/api/portraits/men/14.jpg
12  https://randomuser.me/api/portraits/women/6.jpg
13  https://randomuser.me/api/portraits/women/33.jpg
14  https://randomuser.me/api/portraits/women/91.jpg
15  https://randomuser.me/api/portraits/women/24.jpg
16  https://randomuser.me/api/portraits/women/19.jpg
17  https://randomuser.me/api/portraits/women/61.jpg
18  https://randomuser.me/api/portraits/women/5.jpg
19  https://randomuser.me/api/portraits/women/39.jpg
20  https://randomuser.me/api/portraits/men/43.jpg
21  https://randomuser.me/api/portraits/women/40.jpg
22  https://randomuser.me/api/portraits/men/26.jpg
23  https://randomuser.me/api/portraits/women/2.jpg
24  https://randomuser.me/api/portraits/men/15.jpg

```

```

                                picture.medium \
0   https://randomuser.me/api/portraits/med/men/73...
1   https://randomuser.me/api/portraits/med/men/41...
2   https://randomuser.me/api/portraits/med/women/...
3   https://randomuser.me/api/portraits/med/women/...
4   https://randomuser.me/api/portraits/med/men/82...
5   https://randomuser.me/api/portraits/med/men/71...
6   https://randomuser.me/api/portraits/med/women/...
7   https://randomuser.me/api/portraits/med/men/19...
8   https://randomuser.me/api/portraits/med/women/...
9   https://randomuser.me/api/portraits/med/men/16...
10  https://randomuser.me/api/portraits/med/women/...
11  https://randomuser.me/api/portraits/med/men/14...
12  https://randomuser.me/api/portraits/med/women/...

```

```

13 https://randomuser.me/api/portraits/med/women/...
14 https://randomuser.me/api/portraits/med/women/...
15 https://randomuser.me/api/portraits/med/women/...
16 https://randomuser.me/api/portraits/med/women/...
17 https://randomuser.me/api/portraits/med/women/...
18 https://randomuser.me/api/portraits/med/women/...
19 https://randomuser.me/api/portraits/med/women/...
20 https://randomuser.me/api/portraits/med/men/43...
21 https://randomuser.me/api/portraits/med/women/...
22 https://randomuser.me/api/portraits/med/men/26...
23 https://randomuser.me/api/portraits/med/women/...
24 https://randomuser.me/api/portraits/med/men/15...

```

picture.thumbnail

```

0 https://randomuser.me/api/portraits/thumb/men/...
1 https://randomuser.me/api/portraits/thumb/men/...
2 https://randomuser.me/api/portraits/thumb/wome...
3 https://randomuser.me/api/portraits/thumb/wome...
4 https://randomuser.me/api/portraits/thumb/men/...
5 https://randomuser.me/api/portraits/thumb/men/...
6 https://randomuser.me/api/portraits/thumb/wome...
7 https://randomuser.me/api/portraits/thumb/men/...
8 https://randomuser.me/api/portraits/thumb/wome...
9 https://randomuser.me/api/portraits/thumb/men/...
10 https://randomuser.me/api/portraits/thumb/wome...
11 https://randomuser.me/api/portraits/thumb/men/...
12 https://randomuser.me/api/portraits/thumb/wome...
13 https://randomuser.me/api/portraits/thumb/wome...
14 https://randomuser.me/api/portraits/thumb/wome...
15 https://randomuser.me/api/portraits/thumb/wome...
16 https://randomuser.me/api/portraits/thumb/wome...
17 https://randomuser.me/api/portraits/thumb/wome...
18 https://randomuser.me/api/portraits/thumb/wome...
19 https://randomuser.me/api/portraits/thumb/wome...
20 https://randomuser.me/api/portraits/thumb/men/...
21 https://randomuser.me/api/portraits/thumb/wome...
22 https://randomuser.me/api/portraits/thumb/men/...
23 https://randomuser.me/api/portraits/thumb/wome...
24 https://randomuser.me/api/portraits/thumb/men/...

```

[25 rows x 34 columns]

```

[49]: df.shape
      df.columns
      df.dtypes
      df.isnull()
      df.duplicated

```

[49]: <bound method DataFrame.duplicated of gender email

	phone	cell	nat	name.title	\		
0	male		haroen.jongepier@example.com	NaN	NaN	NL	Mr
1	male		edgar.hunt@example.com	NaN	NaN	IE	Mr
2	female		ege.corekci@example.com	NaN	NaN	TR	Miss
3	female		grace.day@example.com	NaN	NaN	IE	Miss
4	male		murat.tekelioğlu@example.com	NaN	NaN	TR	Mr
5	male		topias.wirta@example.com	NaN	NaN	FI	Mr
6	female		claire.laurent@example.com	NaN	NaN	FR	Ms
7	male		aabs.slry@example.com	NaN	NaN	IR	Mr
8	female		ilham.evertse@example.com	NaN	NaN	NL	Miss
9	male		sinisa.jevremovic@example.com	NaN	NaN	RS	Mr
10	female		todora.mihaylik@example.com	NaN	NaN	UA	Ms
11	male		volkan.akaydin@example.com	NaN	NaN	TR	Mr
12	female		yael.meinema@example.com	NaN	NaN	NL	Miss
13	female		lylou.jean@example.com	NaN	NaN	FR	Miss
14	female		saana.kujala@example.com	NaN	NaN	FI	Miss
15	female		siiri.peura@example.com	NaN	NaN	FI	Miss
16	female		kaitlin.freeman@example.com	NaN	NaN	IE	Mrs
17	female		emilia.sakala@example.com	NaN	NaN	FI	Ms
18	female		isabella.thomsen@example.com	NaN	NaN	DK	Mrs
19	female		wiesje.hibma@example.com	NaN	NaN	NL	Miss
20	male		albert.phillips@example.com	NaN	NaN	AU	Mr
21	female		stacy.carlson@example.com	NaN	NaN	US	Miss
22	male		naveen.bangera@example.com	NaN	NaN	IN	Mr
23	female		gwendolyn.white@example.com	NaN	NaN	AU	Mrs
24	male		aleksa.cirkovic@example.com	NaN	NaN	RS	Mr

	name.first	name.last	location.street.number	\
0	Haroen	Jongepier	7758	
1	Edgar	Hunt	9026	
2	Ege	Çörekçi	4362	
3	Grace	Day	2934	
4	Murat	Tekelioğlu	1385	
5	Topias	Wirta	6450	
6	Claire	Laurent	1682	
7			4442	
8	Ilham	Evertse	8064	
9	Siniša	Jevremović	8685	
10	Todora	Mihaylik	290	
11	Volkan	Akaydin	7032	
12	Yaël	Meinema	9253	
13	Lylou	Jean	3444	
14	Saana	Kujala	2218	
15	Siiri	Peura	4083	
16	Kaitlin	Freeman	1269	
17	Emilia	Sakala	3010	

18	Isabella	Thomsen	9827
19	Wiesje	Hibma	5889
20	Albert	Phillips	5174
21	Stacy	Carlson	8378
22	Naveen	Bangera	3654
23	Gwendolyn	White	9652
24	Aleksa	Ćirković	2189

	location.street.name	...	dob.age	registered.date	\
0	Annevelinkhof	...	33	2017-12-02T05:01:31.519Z	
1	Park Avenue	...	68	2016-12-10T05:49:35.445Z	
2	Anafartalar Cd	...	22	2006-08-29T21:01:38.480Z	
3	South Street	...	48	2002-12-09T07:50:19.036Z	
4	Anafartalar Cd	...	67	2020-04-30T10:47:36.430Z	
5	Tahmelantie	...	66	2010-03-08T18:41:39.917Z	
6	Rue du Stade	...	72	2006-12-28T05:22:53.007Z	
7	...	60	2009-02-12T10:41:26.135Z		
8	Bierkade	...	32	2017-10-28T14:49:48.577Z	
9	Rade Spasojevića	...	61	2020-02-03T11:03:10.727Z	
10	Generala Rodimceva	...	38	2010-09-28T13:48:52.819Z	
11	Anafartalar Cd	...	36	2022-05-18T01:34:01.094Z	
12	Dokter Janssenplein	...	48	2011-06-23T10:11:09.070Z	
13	Place de L'Abbé-Jean-Lebeuf	...	36	2014-09-11T07:43:10.872Z	
14	Satakennankatu	...	75	2007-02-02T02:50:29.534Z	
15	Mechelininkatu	...	38	2015-09-04T08:04:17.719Z	
16	Church Road	...	48	2019-06-23T08:59:25.672Z	
17	Siilitie	...	38	2002-08-10T03:16:31.920Z	
18	Markedsgade	...	30	2004-04-23T16:02:12.237Z	
19	Jacob Gerritstraat	...	65	2005-11-27T08:15:45.375Z	
20	Thornridge Cir	...	35	2015-04-04T03:19:57.483Z	
21	Karen Dr	...	56	2011-02-07T12:13:37.133Z	
22	Mint St	...	50	2016-09-16T19:32:53.973Z	
23	Forest Ln	...	41	2020-03-30T23:49:20.836Z	
24	Bresjačka	...	42	2008-11-18T08:07:14.855Z	

	registered.age	id.name	id.value	\
0	5	BSN	93130237	
1	6	PPS	3121595T	
2	16		None	
3	20	PPS	5399253T	
4	3		None	
5	13	HETU	NaNNA497undefined	
6	16	INSEE	2501006607006 87	
7	14		None	
8	5	BSN	38220527	
9	3	SID	486046171	
10	12		None	

11	1		None
12	12	BSN	52940928
13	8	INSEE	2870350578700 60
14	16	HETU	NaNNA488undefined
15	7	HETU	NaNNA478undefined
16	4	PPS	2833224T
17	20	HETU	NaNNA548undefined
18	19	CPR	120693-8534
19	17	BSN	11688836
20	8	TFN	756413202
21	12	SSN	064-27-7591
22	6	UIDAI	985754814204
23	3	TFN	099434899
24	14	SID	945023073

picture.large \

0	https://randomuser.me/api/portraits/men/73.jpg
1	https://randomuser.me/api/portraits/men/41.jpg
2	https://randomuser.me/api/portraits/women/73.jpg
3	https://randomuser.me/api/portraits/women/6.jpg
4	https://randomuser.me/api/portraits/men/82.jpg
5	https://randomuser.me/api/portraits/men/71.jpg
6	https://randomuser.me/api/portraits/women/15.jpg
7	https://randomuser.me/api/portraits/men/19.jpg
8	https://randomuser.me/api/portraits/women/23.jpg
9	https://randomuser.me/api/portraits/men/16.jpg
10	https://randomuser.me/api/portraits/women/77.jpg
11	https://randomuser.me/api/portraits/men/14.jpg
12	https://randomuser.me/api/portraits/women/6.jpg
13	https://randomuser.me/api/portraits/women/33.jpg
14	https://randomuser.me/api/portraits/women/91.jpg
15	https://randomuser.me/api/portraits/women/24.jpg
16	https://randomuser.me/api/portraits/women/19.jpg
17	https://randomuser.me/api/portraits/women/61.jpg
18	https://randomuser.me/api/portraits/women/5.jpg
19	https://randomuser.me/api/portraits/women/39.jpg
20	https://randomuser.me/api/portraits/men/43.jpg
21	https://randomuser.me/api/portraits/women/40.jpg
22	https://randomuser.me/api/portraits/men/26.jpg
23	https://randomuser.me/api/portraits/women/2.jpg
24	https://randomuser.me/api/portraits/men/15.jpg

picture.medium \

0	https://randomuser.me/api/portraits/med/men/73...
1	https://randomuser.me/api/portraits/med/men/41...
2	https://randomuser.me/api/portraits/med/women/...
3	https://randomuser.me/api/portraits/med/women/...

```

4  https://randomuser.me/api/portraits/med/men/82...
5  https://randomuser.me/api/portraits/med/men/71...
6  https://randomuser.me/api/portraits/med/women/...
7  https://randomuser.me/api/portraits/med/men/19...
8  https://randomuser.me/api/portraits/med/women/...
9  https://randomuser.me/api/portraits/med/men/16...
10 https://randomuser.me/api/portraits/med/women/...
11 https://randomuser.me/api/portraits/med/men/14...
12 https://randomuser.me/api/portraits/med/women/...
13 https://randomuser.me/api/portraits/med/women/...
14 https://randomuser.me/api/portraits/med/women/...
15 https://randomuser.me/api/portraits/med/women/...
16 https://randomuser.me/api/portraits/med/women/...
17 https://randomuser.me/api/portraits/med/women/...
18 https://randomuser.me/api/portraits/med/women/...
19 https://randomuser.me/api/portraits/med/women/...
20 https://randomuser.me/api/portraits/med/men/43...
21 https://randomuser.me/api/portraits/med/women/...
22 https://randomuser.me/api/portraits/med/men/26...
23 https://randomuser.me/api/portraits/med/women/...
24 https://randomuser.me/api/portraits/med/men/15...

```

	picture.thumbnail	na_user	\
0	https://randomuser.me/api/portraits/thumb/men/...	False	
1	https://randomuser.me/api/portraits/thumb/men/...	False	
2	https://randomuser.me/api/portraits/thumb/wome...	False	
3	https://randomuser.me/api/portraits/thumb/wome...	False	
4	https://randomuser.me/api/portraits/thumb/men/...	False	
5	https://randomuser.me/api/portraits/thumb/men/...	False	
6	https://randomuser.me/api/portraits/thumb/wome...	False	
7	https://randomuser.me/api/portraits/thumb/men/...	False	
8	https://randomuser.me/api/portraits/thumb/wome...	False	
9	https://randomuser.me/api/portraits/thumb/men/...	False	
10	https://randomuser.me/api/portraits/thumb/wome...	False	
11	https://randomuser.me/api/portraits/thumb/men/...	False	
12	https://randomuser.me/api/portraits/thumb/wome...	False	
13	https://randomuser.me/api/portraits/thumb/wome...	False	
14	https://randomuser.me/api/portraits/thumb/wome...	False	
15	https://randomuser.me/api/portraits/thumb/wome...	False	
16	https://randomuser.me/api/portraits/thumb/wome...	False	
17	https://randomuser.me/api/portraits/thumb/wome...	False	
18	https://randomuser.me/api/portraits/thumb/wome...	False	
19	https://randomuser.me/api/portraits/thumb/wome...	False	
20	https://randomuser.me/api/portraits/thumb/men/...	False	
21	https://randomuser.me/api/portraits/thumb/wome...	True	
22	https://randomuser.me/api/portraits/thumb/men/...	False	
23	https://randomuser.me/api/portraits/thumb/wome...	False	

```
24 https://randomuser.me/api/portraits/thumb/men/... False
```

```
    age_at_registration
0                27
1                61
2                 6
3                27
4                65
5                53
6                56
7                46
8                26
9                58
10               26
11               36
12               37
13               27
14               60
15               31
16               45
17               18
18               11
19               47
20               27
21               45
22               43
23               38
24               28
```

```
[25 rows x 36 columns]>
```

3 QUESTION 2: Transform

Using the DataFrame from Question 1: Create the following columns: `na_user`: boolean representing if the user is based in North America (defined as: US, Mexico, or Canada) `age_at_registration`: the user's age when they registered their account Update the phone and cell column to remove any characters except for a leading + symbol Your DataFrame should be 25 rows and 36 columns

```
[34]: # transform - QUESTION 2

# write your solution(s) here:
# QUESTION 2: Transform
north_american_countries = ['US', 'Mexico', 'Canada']
df['na_user'] = df['nat'].apply(lambda x: x in north_american_countries)

# Create age_at_registration column
```

```

df['age_at_registration'] = pd.to_datetime(df['registered.date']).dt.year - pd.
↳to_datetime(df['dob.date']).dt.year

# Update phone and cell columns
df['phone'] = df['phone'].str.extract('(\+\d+)')
df['cell'] = df['cell'].str.extract('(\+\d+)')
# Checking the updated DataFrame
print("Question 2:")
df.shape
df.head(25)

```

Question 2:

```

[34]:
  gender      email phone cell nat name.title \
0    male  haroen.jongepier@example.com   NaN   NaN  NL      Mr
1    male    edgar.hunt@example.com   NaN   NaN  IE      Mr
2  female    ege.corekci@example.com   NaN   NaN  TR    Miss
3  female    grace.day@example.com   NaN   NaN  IE    Miss
4    male  murat.tekelioğlu@example.com   NaN   NaN  TR      Mr
5    male    topias.wirta@example.com   NaN   NaN  FI      Mr
6  female  claire.laurent@example.com   NaN   NaN  FR      Ms
7    male    aabs.slry@example.com   NaN   NaN  IR      Mr
8  female    ilham.evertse@example.com   NaN   NaN  NL    Miss
9    male  sinisa.jevremovic@example.com   NaN   NaN  RS      Mr
10 female  todora.mihaylik@example.com   NaN   NaN  UA      Ms
11    male  volkan.akaydin@example.com   NaN   NaN  TR      Mr
12 female    yael.meinema@example.com   NaN   NaN  NL    Miss
13 female    lylou.jean@example.com   NaN   NaN  FR    Miss
14 female    saana.kujala@example.com   NaN   NaN  FI    Miss
15 female    siiri.peura@example.com   NaN   NaN  FI    Miss
16 female  kaitlin.freeman@example.com   NaN   NaN  IE    Mrs
17 female    emilia.sakala@example.com   NaN   NaN  FI      Ms
18 female  isabella.thomsen@example.com   NaN   NaN  DK    Mrs
19 female    wiesje.hibma@example.com   NaN   NaN  NL    Miss
20    male  albert.phillips@example.com   NaN   NaN  AU      Mr
21 female  stacy.carlson@example.com   NaN   NaN  US    Miss
22    male  naveen.bangera@example.com   NaN   NaN  IN      Mr
23 female  gwendolyn.white@example.com   NaN   NaN  AU    Mrs
24    male  aleksa.cirkovic@example.com   NaN   NaN  RS      Mr

  name.first  name.last  location.street.number \
0    Haroen    Jongepier                7758
1    Edgar      Hunt                9026
2    Ege      Çörekçi                4362
3    Grace      Day                2934
4    Murat  Tekelioğlu                1385
5    Topias      Wirta                6450

```

6	Claire	Laurent	1682
7			4442
8	Ilham	Evertse	8064
9	Siniša	Jevremović	8685
10	Todora	Mihaylik	290
11	Volkan	Akaydin	7032
12	Yaël	Meinema	9253
13	Lylou	Jean	3444
14	Saana	Kujala	2218
15	Siiri	Peura	4083
16	Kaitlin	Freeman	1269
17	Emilia	Sakala	3010
18	Isabella	Thomsen	9827
19	Wiesje	Hibma	5889
20	Albert	Phillips	5174
21	Stacy	Carlson	8378
22	Naveen	Bangera	3654
23	Gwendolyn	White	9652
24	Aleksa	Ćirković	2189

	location.street.name	...	dob.age	registered.date	\
0	Annevelinkhof	...	33	2017-12-02T05:01:31.519Z	
1	Park Avenue	...	68	2016-12-10T05:49:35.445Z	
2	Anafartalar Cd	...	22	2006-08-29T21:01:38.480Z	
3	South Street	...	48	2002-12-09T07:50:19.036Z	
4	Anafartalar Cd	...	67	2020-04-30T10:47:36.430Z	
5	Tahmelantie	...	66	2010-03-08T18:41:39.917Z	
6	Rue du Stade	...	72	2006-12-28T05:22:53.007Z	
7	...	60	2009-02-12T10:41:26.135Z		
8	Bierkade	...	32	2017-10-28T14:49:48.577Z	
9	Rade Spasojevića	...	61	2020-02-03T11:03:10.727Z	
10	Generala Rodimceva	...	38	2010-09-28T13:48:52.819Z	
11	Anafartalar Cd	...	36	2022-05-18T01:34:01.094Z	
12	Dokter Janssenplein	...	48	2011-06-23T10:11:09.070Z	
13	Place de L'Abbé-Jean-Lebeuf	...	36	2014-09-11T07:43:10.872Z	
14	Satakennankatu	...	75	2007-02-02T02:50:29.534Z	
15	Mechelininkatu	...	38	2015-09-04T08:04:17.719Z	
16	Church Road	...	48	2019-06-23T08:59:25.672Z	
17	Siilitie	...	38	2002-08-10T03:16:31.920Z	
18	Markedsgade	...	30	2004-04-23T16:02:12.237Z	
19	Jacob Gerritstraat	...	65	2005-11-27T08:15:45.375Z	
20	Thornridge Cir	...	35	2015-04-04T03:19:57.483Z	
21	Karen Dr	...	56	2011-02-07T12:13:37.133Z	
22	Mint St	...	50	2016-09-16T19:32:53.973Z	
23	Forest Ln	...	41	2020-03-30T23:49:20.836Z	
24	Bresjačka	...	42	2008-11-18T08:07:14.855Z	

	registered.age	id.name	id.value	\
0	5	BSN	93130237	
1	6	PPS	3121595T	
2	16		None	
3	20	PPS	5399253T	
4	3		None	
5	13	HETU	NaNNA497undefined	
6	16	INSEE	2501006607006	87
7	14		None	
8	5	BSN	38220527	
9	3	SID	486046171	
10	12		None	
11	1		None	
12	12	BSN	52940928	
13	8	INSEE	2870350578700	60
14	16	HETU	NaNNA488undefined	
15	7	HETU	NaNNA478undefined	
16	4	PPS	2833224T	
17	20	HETU	NaNNA548undefined	
18	19	CPR	120693-8534	
19	17	BSN	11688836	
20	8	TFN	756413202	
21	12	SSN	064-27-7591	
22	6	UIDAI	985754814204	
23	3	TFN	099434899	
24	14	SID	945023073	

	picture.large	\
0	https://randomuser.me/api/portraits/men/73.jpg	
1	https://randomuser.me/api/portraits/men/41.jpg	
2	https://randomuser.me/api/portraits/women/73.jpg	
3	https://randomuser.me/api/portraits/women/6.jpg	
4	https://randomuser.me/api/portraits/men/82.jpg	
5	https://randomuser.me/api/portraits/men/71.jpg	
6	https://randomuser.me/api/portraits/women/15.jpg	
7	https://randomuser.me/api/portraits/men/19.jpg	
8	https://randomuser.me/api/portraits/women/23.jpg	
9	https://randomuser.me/api/portraits/men/16.jpg	
10	https://randomuser.me/api/portraits/women/77.jpg	
11	https://randomuser.me/api/portraits/men/14.jpg	
12	https://randomuser.me/api/portraits/women/6.jpg	
13	https://randomuser.me/api/portraits/women/33.jpg	
14	https://randomuser.me/api/portraits/women/91.jpg	
15	https://randomuser.me/api/portraits/women/24.jpg	
16	https://randomuser.me/api/portraits/women/19.jpg	
17	https://randomuser.me/api/portraits/women/61.jpg	
18	https://randomuser.me/api/portraits/women/5.jpg	

```

19 https://randomuser.me/api/portraits/women/39.jpg
20 https://randomuser.me/api/portraits/men/43.jpg
21 https://randomuser.me/api/portraits/women/40.jpg
22 https://randomuser.me/api/portraits/men/26.jpg
23 https://randomuser.me/api/portraits/women/2.jpg
24 https://randomuser.me/api/portraits/men/15.jpg

```

```

                                picture.medium \
0 https://randomuser.me/api/portraits/med/men/73...
1 https://randomuser.me/api/portraits/med/men/41...
2 https://randomuser.me/api/portraits/med/women/...
3 https://randomuser.me/api/portraits/med/women/...
4 https://randomuser.me/api/portraits/med/men/82...
5 https://randomuser.me/api/portraits/med/men/71...
6 https://randomuser.me/api/portraits/med/women/...
7 https://randomuser.me/api/portraits/med/men/19...
8 https://randomuser.me/api/portraits/med/women/...
9 https://randomuser.me/api/portraits/med/men/16...
10 https://randomuser.me/api/portraits/med/women/...
11 https://randomuser.me/api/portraits/med/men/14...
12 https://randomuser.me/api/portraits/med/women/...
13 https://randomuser.me/api/portraits/med/women/...
14 https://randomuser.me/api/portraits/med/women/...
15 https://randomuser.me/api/portraits/med/women/...
16 https://randomuser.me/api/portraits/med/women/...
17 https://randomuser.me/api/portraits/med/women/...
18 https://randomuser.me/api/portraits/med/women/...
19 https://randomuser.me/api/portraits/med/women/...
20 https://randomuser.me/api/portraits/med/men/43...
21 https://randomuser.me/api/portraits/med/women/...
22 https://randomuser.me/api/portraits/med/men/26...
23 https://randomuser.me/api/portraits/med/women/...
24 https://randomuser.me/api/portraits/med/men/15...

```

```

                                picture.thumbnail na_user \
0 https://randomuser.me/api/portraits/thumb/men/... False
1 https://randomuser.me/api/portraits/thumb/men/... False
2 https://randomuser.me/api/portraits/thumb/wome... False
3 https://randomuser.me/api/portraits/thumb/wome... False
4 https://randomuser.me/api/portraits/thumb/men/... False
5 https://randomuser.me/api/portraits/thumb/men/... False
6 https://randomuser.me/api/portraits/thumb/wome... False
7 https://randomuser.me/api/portraits/thumb/men/... False
8 https://randomuser.me/api/portraits/thumb/wome... False
9 https://randomuser.me/api/portraits/thumb/men/... False
10 https://randomuser.me/api/portraits/thumb/wome... False
11 https://randomuser.me/api/portraits/thumb/men/... False

```

12	https://randomuser.me/api/portraits/thumb/wome...	False
13	https://randomuser.me/api/portraits/thumb/wome...	False
14	https://randomuser.me/api/portraits/thumb/wome...	False
15	https://randomuser.me/api/portraits/thumb/wome...	False
16	https://randomuser.me/api/portraits/thumb/wome...	False
17	https://randomuser.me/api/portraits/thumb/wome...	False
18	https://randomuser.me/api/portraits/thumb/wome...	False
19	https://randomuser.me/api/portraits/thumb/wome...	False
20	https://randomuser.me/api/portraits/thumb/men/...	False
21	https://randomuser.me/api/portraits/thumb/wome...	True
22	https://randomuser.me/api/portraits/thumb/men/...	False
23	https://randomuser.me/api/portraits/thumb/wome...	False
24	https://randomuser.me/api/portraits/thumb/men/...	False

	age_at_registration
0	27
1	61
2	6
3	27
4	65
5	53
6	56
7	46
8	26
9	58
10	26
11	36
12	37
13	27
14	60
15	31
16	45
17	18
18	11
19	47
20	27
21	45
22	43
23	38
24	28

[25 rows x 36 columns]

4 QUESTION 3: Load

Load the updated DataFrame from Question 2 into a Postgres table named `user_accounts`. Query the new postgres table in python and display the output results. Use `pd.read_sql()` to query your

new table and verify it's been loaded correctly

```
[36]: import psycopg2

# Establish a connection to the PostgreSQL database
conn = psycopg2.connect(host='localhost', port='5432', database='gc',
    ↳ user='postgres', password='welcome123')

# Create a cursor object
cur = conn.cursor()

# Create the user_accounts table
cur.execute('''
    CREATE TABLE user_accounts (
        gender VARCHAR(10),
        name_title VARCHAR(10),
        name_first VARCHAR(255),
        name_last VARCHAR(255),
        location_street VARCHAR(255),
        location_city VARCHAR(255),
        location_state VARCHAR(255),
        location_country VARCHAR(255),
        location_postcode INTEGER,
        email VARCHAR(255),
        login_username VARCHAR(255),
        login_password VARCHAR(255),
        login_salt VARCHAR(255),
        dob_date DATE,
        dob_age INTEGER,
        registered_date DATE,
        registered_age INTEGER,
        phone VARCHAR(255),
        cell VARCHAR(255),
        id_name VARCHAR(255),
        id_value VARCHAR(255),
        nat VARCHAR(10),
        picture_large VARCHAR(255),
        picture_medium VARCHAR(255),
        picture_thumbnail VARCHAR(255),
        na_user BOOLEAN,
        age_at_registration INTEGER
    )
''')

# Commit the changes
conn.commit()
```

```
# Close the cursor and the connection
cur.close()
conn.close()
```

```
[37]: from sqlalchemy import create_engine
import pandas as pd

# QUESTION 3: Load
# Creating a connection to the Postgres database
engine = create_engine('postgresql://postgres:welcome123@localhost:5432/gc')

# Loading the DataFrame into the user_accounts table
df.to_sql('user_accounts', engine, if_exists='replace')

# Querying the user_accounts table
query = "SELECT * FROM user_accounts"
loaded_df = pd.read_sql(query, engine)

# Displaying the output results
print("Question 3:")
print(loaded_df)
```

Question 3:

	index	gender	email	phone	cell	nat	name.title	\
0	0	male	haroen.jongepier@example.com	None	None	NL	Mr	
1	1	male	edgar.hunt@example.com	None	None	IE	Mr	
2	2	female	ege.corekci@example.com	None	None	TR	Miss	
3	3	female	grace.day@example.com	None	None	IE	Miss	
4	4	male	murat.tekelioglu@example.com	None	None	TR	Mr	
5	5	male	topias.wirta@example.com	None	None	FI	Mr	
6	6	female	claire.laurent@example.com	None	None	FR	Ms	
7	7	male	aabs.slry@example.com	None	None	IR	Mr	
8	8	female	ilham.evertse@example.com	None	None	NL	Miss	
9	9	male	sinisa.jevremovic@example.com	None	None	RS	Mr	
10	10	female	todora.mihaylik@example.com	None	None	UA	Ms	
11	11	male	volkan.akaydin@example.com	None	None	TR	Mr	
12	12	female	yael.meinema@example.com	None	None	NL	Miss	
13	13	female	lylou.jean@example.com	None	None	FR	Miss	
14	14	female	saana.kujala@example.com	None	None	FI	Miss	
15	15	female	siiri.peura@example.com	None	None	FI	Miss	
16	16	female	kaitlin.freeman@example.com	None	None	IE	Mrs	
17	17	female	emilia.sakala@example.com	None	None	FI	Ms	
18	18	female	isabella.thomsen@example.com	None	None	DK	Mrs	
19	19	female	wiesje.hibma@example.com	None	None	NL	Miss	
20	20	male	albert.phillips@example.com	None	None	AU	Mr	
21	21	female	stacy.carlson@example.com	None	None	US	Miss	
22	22	male	naveen.bangera@example.com	None	None	IN	Mr	
23	23	female	gwendolyn.white@example.com	None	None	AU	Mrs	

24	24	male	aleksa.cirkovic@example.com	None	None	RS	Mr
----	----	------	-----------------------------	------	------	----	----

	name.first	name.last	location.street.number	...	dob.age	\
0	Haroen	Jongepier	7758	...	33	
1	Edgar	Hunt	9026	...	68	
2	Ege	Çörekçi	4362	...	22	
3	Grace	Day	2934	...	48	
4	Murat	Tekelioğlu	1385	...	67	
5	Topias	Wirta	6450	...	66	
6	Claire	Laurent	1682	...	72	
7			4442	...	60	
8	Ilham	Evertse	8064	...	32	
9	Siniša	Jevremović	8685	...	61	
10	Todora	Mihaylik	290	...	38	
11	Volkan	Akaydın	7032	...	36	
12	Yaël	Meinema	9253	...	48	
13	Lylou	Jean	3444	...	36	
14	Saana	Kujala	2218	...	75	
15	Siiri	Peura	4083	...	38	
16	Kaitlin	Freeman	1269	...	48	
17	Emilia	Sakala	3010	...	38	
18	Isabella	Thomsen	9827	...	30	
19	Wiesje	Hibma	5889	...	65	
20	Albert	Phillips	5174	...	35	
21	Stacy	Carlson	8378	...	56	
22	Naveen	Bangera	3654	...	50	
23	Gwendolyn	White	9652	...	41	
24	Aleksa	Ćirković	2189	...	42	

	registered.date	registered.age	id.name	id.value	\
0	2017-12-02T05:01:31.519Z	5	BSN	93130237	
1	2016-12-10T05:49:35.445Z	6	PPS	3121595T	
2	2006-08-29T21:01:38.480Z	16		None	
3	2002-12-09T07:50:19.036Z	20	PPS	5399253T	
4	2020-04-30T10:47:36.430Z	3		None	
5	2010-03-08T18:41:39.917Z	13	HETU	NaNNA497undefined	
6	2006-12-28T05:22:53.007Z	16	INSEE	2501006607006	87
7	2009-02-12T10:41:26.135Z	14		None	
8	2017-10-28T14:49:48.577Z	5	BSN	38220527	
9	2020-02-03T11:03:10.727Z	3	SID	486046171	
10	2010-09-28T13:48:52.819Z	12		None	
11	2022-05-18T01:34:01.094Z	1		None	
12	2011-06-23T10:11:09.070Z	12	BSN	52940928	
13	2014-09-11T07:43:10.872Z	8	INSEE	2870350578700	60
14	2007-02-02T02:50:29.534Z	16	HETU	NaNNA488undefined	
15	2015-09-04T08:04:17.719Z	7	HETU	NaNNA478undefined	
16	2019-06-23T08:59:25.672Z	4	PPS	2833224T	
17	2002-08-10T03:16:31.920Z	20	HETU	NaNNA548undefined	

18	2004-04-23T16:02:12.237Z	19	CPR	120693-8534
19	2005-11-27T08:15:45.375Z	17	BSN	11688836
20	2015-04-04T03:19:57.483Z	8	TFN	756413202
21	2011-02-07T12:13:37.133Z	12	SSN	064-27-7591
22	2016-09-16T19:32:53.973Z	6	UIDAI	985754814204
23	2020-03-30T23:49:20.836Z	3	TFN	099434899
24	2008-11-18T08:07:14.855Z	14	SID	945023073

picture.large \

```

0  https://randomuser.me/api/portraits/men/73.jpg
1  https://randomuser.me/api/portraits/men/41.jpg
2  https://randomuser.me/api/portraits/women/73.jpg
3  https://randomuser.me/api/portraits/women/6.jpg
4  https://randomuser.me/api/portraits/men/82.jpg
5  https://randomuser.me/api/portraits/men/71.jpg
6  https://randomuser.me/api/portraits/women/15.jpg
7  https://randomuser.me/api/portraits/men/19.jpg
8  https://randomuser.me/api/portraits/women/23.jpg
9  https://randomuser.me/api/portraits/men/16.jpg
10 https://randomuser.me/api/portraits/women/77.jpg
11 https://randomuser.me/api/portraits/men/14.jpg
12 https://randomuser.me/api/portraits/women/6.jpg
13 https://randomuser.me/api/portraits/women/33.jpg
14 https://randomuser.me/api/portraits/women/91.jpg
15 https://randomuser.me/api/portraits/women/24.jpg
16 https://randomuser.me/api/portraits/women/19.jpg
17 https://randomuser.me/api/portraits/women/61.jpg
18 https://randomuser.me/api/portraits/women/5.jpg
19 https://randomuser.me/api/portraits/women/39.jpg
20 https://randomuser.me/api/portraits/men/43.jpg
21 https://randomuser.me/api/portraits/women/40.jpg
22 https://randomuser.me/api/portraits/men/26.jpg
23 https://randomuser.me/api/portraits/women/2.jpg
24 https://randomuser.me/api/portraits/men/15.jpg

```

picture.medium \

```

0  https://randomuser.me/api/portraits/med/men/73...
1  https://randomuser.me/api/portraits/med/men/41...
2  https://randomuser.me/api/portraits/med/women/...
3  https://randomuser.me/api/portraits/med/women/...
4  https://randomuser.me/api/portraits/med/men/82...
5  https://randomuser.me/api/portraits/med/men/71...
6  https://randomuser.me/api/portraits/med/women/...
7  https://randomuser.me/api/portraits/med/men/19...
8  https://randomuser.me/api/portraits/med/women/...
9  https://randomuser.me/api/portraits/med/men/16...
10 https://randomuser.me/api/portraits/med/women/...
11 https://randomuser.me/api/portraits/med/men/14...

```

```

12 https://randomuser.me/api/portraits/med/women/...
13 https://randomuser.me/api/portraits/med/women/...
14 https://randomuser.me/api/portraits/med/women/...
15 https://randomuser.me/api/portraits/med/women/...
16 https://randomuser.me/api/portraits/med/women/...
17 https://randomuser.me/api/portraits/med/women/...
18 https://randomuser.me/api/portraits/med/women/...
19 https://randomuser.me/api/portraits/med/women/...
20 https://randomuser.me/api/portraits/med/men/43...
21 https://randomuser.me/api/portraits/med/women/...
22 https://randomuser.me/api/portraits/med/men/26...
23 https://randomuser.me/api/portraits/med/women/...
24 https://randomuser.me/api/portraits/med/men/15...

```

	picture.thumbnail	na_user	\
0	https://randomuser.me/api/portraits/thumb/men/...	False	
1	https://randomuser.me/api/portraits/thumb/men/...	False	
2	https://randomuser.me/api/portraits/thumb/wome...	False	
3	https://randomuser.me/api/portraits/thumb/wome...	False	
4	https://randomuser.me/api/portraits/thumb/men/...	False	
5	https://randomuser.me/api/portraits/thumb/men/...	False	
6	https://randomuser.me/api/portraits/thumb/wome...	False	
7	https://randomuser.me/api/portraits/thumb/men/...	False	
8	https://randomuser.me/api/portraits/thumb/wome...	False	
9	https://randomuser.me/api/portraits/thumb/men/...	False	
10	https://randomuser.me/api/portraits/thumb/wome...	False	
11	https://randomuser.me/api/portraits/thumb/men/...	False	
12	https://randomuser.me/api/portraits/thumb/wome...	False	
13	https://randomuser.me/api/portraits/thumb/wome...	False	
14	https://randomuser.me/api/portraits/thumb/wome...	False	
15	https://randomuser.me/api/portraits/thumb/wome...	False	
16	https://randomuser.me/api/portraits/thumb/wome...	False	
17	https://randomuser.me/api/portraits/thumb/wome...	False	
18	https://randomuser.me/api/portraits/thumb/wome...	False	
19	https://randomuser.me/api/portraits/thumb/wome...	False	
20	https://randomuser.me/api/portraits/thumb/men/...	False	
21	https://randomuser.me/api/portraits/thumb/wome...	True	
22	https://randomuser.me/api/portraits/thumb/men/...	False	
23	https://randomuser.me/api/portraits/thumb/wome...	False	
24	https://randomuser.me/api/portraits/thumb/men/...	False	

	age_at_registration
0	27
1	61
2	6
3	27
4	65
5	53

6	56
7	46
8	26
9	58
10	26
11	36
12	37
13	27
14	60
15	31
16	45
17	18
18	11
19	47
20	27
21	45
22	43
23	38
24	28

[25 rows x 37 columns]

[]: