ACTIVIDAD 05 - LIBRERÍA PANDAS

```
[1]  import pandas as pd
     import numpy as np
```

Entregar: Archivo PDF de la actividad, así como el archivo .ipynb en tu repositorio. **Nota:** Recuerda habrá una penalización de 50 puntos si la actividad fue entregada fuera de la fecha límite.

1. Subir el archivo `netflix_titles.csv` que se encuentra en el repositorio de la clase y cargalos en un `Dataframe`.

```
[3]  from google.colab import files

     uploaded = files.upload()

     for fn in uploaded.keys():
       print('User uploaded file "{name}" with length {length} bytes'.format(name=fn, length=len(uploaded[fn])))
```

```
Elegir archivos   netflix_titles.csv
• netflix_titles.csv(text/csv) - 3000491 bytes, last modified: 21/3/2023 - 100% done
Saving netflix_titles.csv to netflix_titles (2).csv
User uploaded file "netflix_titles.csv" with length 3000491 bytes
```

```
[4]  df = pd.read_csv('netflix_titles.csv')
```

2. Desplegar las primeras 5 líneas del `DataFrame`.

```
[5]  df.head(5)
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	In a future where the elite inhabit an island ...
1	s2	Movie	7:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	2016	TV-MA	93 min	Dramas, International Movies	After a devastating earthquake hits Mexico Cit...
2	s3	Movie	23:59	Gilbert Chan	Tedd Chan, Stella Chung, Henley Hii, Lawrence ...	Singapore	December 20, 2018	2011	R	78 min	Horror Movies, International Movies	When an army recruit is found dead, his fellow...
3	s4	Movie	9	Shane Acker	Elijah Wood, John C. Reilly, Jennifer Connelly...	United States	November 16, 2017	2009	PG-13	80 min	Action & Adventure, Independent Movies, Sci-Fi...	In a postapocalyptic world, rag-doll robots hi...
4	s5	Movie	21	Robert Luketic	Jim Sturgess, Kevin Spacey, Kate Bosworth, Aar...	United States	January 1, 2020	2008	PG-13	123 min	Dramas	A brilliant group of students become card-coun...

3. Implementa una función que despliegue el primer renglón de un `DataFrame`.

```
[6]  def the_first(DataFrame):
       a = DataFrame[:1]
       return a

     the_first(df)
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	In a future where the elite inhabit an island ...

4. Implementa una función que regrese el número de registros en el `DataFrame`.

```
[7]  def row_number(DataFrame):
       n = len(DataFrame)
       return n

     row_number(df)
```

```
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```

5. Implementa una función que despliega las películas con un `release_year` determminado.

```
[8] def released_year(year):
        date = df[df.release_year ==year]
        return date

    year_query = 2020
    released_year(year_query)
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
0	s1	TV Show	3%	NaN	João Miguel, Bianca Comparato, Michel Gomes, R...	Brazil	August 14, 2020	2020	TV-MA	4 Seasons	International TV Shows, TV Dramas, TV Sci-Fi &...	In a future where the elite inhabit an island ...
24	s25	TV Show	SAINT SEIYA: Knights of the Zodiac	NaN	Bryson Baugus, Emily Neves, Blake Shepard, Pat...	Japan	January 23, 2020	2020	TV-14	2 Seasons	Anime Series, International TV Shows	Seiya and the Knights of the Zodiac rise again...
26	s27	TV Show	(Un)Well	NaN	NaN	United States	August 12, 2020	2020	TV-MA	1 Season	Reality TV	This docuseries takes a deep dive into the luc...
27	s28	Movie	#Alive	Cho Il	Yoo Ah-in, Park Shin-hye	South Korea	September 8, 2020	2020	TV-MA	99 min	Horror Movies, International Movies, Thrillers	As a grisly virus rampages a city, a lone man ...
29	s30	TV Show	#blackAF	NaN	Kenya Barris, Rashida Jones, Iman Benson, Genn...	United States	April 17, 2020	2020	TV-MA	1 Season	TV Comedies	Kenya Barris and his family navigate relations...

6. Implementa una función que despliegue las películas que son de un país determinado.

```
[9] def origin_country(country):
        origin = df[df.country == country]
        return origin

    country_query = 'Mexico'
    origin_country(country_query)
```

	show_id	type	title	director	cast	country	date_added	release_year	rating	duration	listed_in	description
1	s2	Movie	7:19	Jorge Michel Grau	Demián Bichir, Héctor Bonilla, Oscar Serrano, ...	Mexico	December 23, 2016	2016	TV-MA	93 min	Dramas, International Movies	After a devastating earthquake hits Mexico Cit...
12	s13	TV Show	1994	Diego Enrique Osorno	NaN	Mexico	May 17, 2019	2019	TV-MA	1 Season	Crime TV Shows, Docuseries, International TV S...	Archival video and new interviews examine Mexi...
292	s293	Movie	Acapulco La vida va	Alfonso Serrano Maturino	Patricio Castillo, Sergio Bustamante, Alejandr...	Mexico	June 3, 2017	2016	TV-MA	89 min	Comedies, Dramas, International Movies	Three lifelong friends travel to Acapulco oste...
370	s371	Movie	Alan Saldaña: Mi vida de pobre	Raúl Campos, Jan Suter	Alan Saldaña	Mexico	August 4, 2017	2017	TV-MA	54 min	Stand-Up Comedy	Mexican comic Alan Saldaña has fun with everyt...
378	s379	Movie	Alex Fernández: The Best Comedian in the	Alex Díaz	Alex Fernández	Mexico	January 23, 2020	2020	TV-MA	51 min	Stand-Up Comedy	Comic Alex Fernández performs his familiar...

7. Crea un nuevo `DataFrame` que sólo contenga las columnas `type`, `title`, `country` y `release_year`.

```
[11] df2 = pd.DataFrame(columns=('Type','Title','Country','Release_year'))
     df2
```

Type	Title	Country	Release_year

8. Despliega, cuántos tipos de producciones (`type`) se hicieron por país determinado (`country`).

```
[12] tipo = df.groupby(['type','country']).count()
     tipo
```

type	country	show_id	title	director	cast	date_added	release_year	rating	duration	listed_in	description
Movie	Argentina	34	34	34	31	34	34	34	34	34	34
	Argentina, Brazil, France, Poland, Germany, Denmark	1	1	1	1	1	1	1	1	1	1
	Argentina, Chile	1	1	1	1	1	1	1	1	1	1
	Argentina, Chile, Peru	1	1	1	1	1	1	1	1	1	1
	Argentina, France	1	1	1	1	1	1	1	1	1	1

9. Implementa la función que genera el cuadrado de un número.

```
[13] def square(x):
         cuadrado = x**2
         return cuadrado
```

10. Usando el método `apply`, genera el cuadrado de todos los valores del siguiente `DataFrame`.

```
df2 = pd.DataFrame({'A': [1, 2, 3, 5, 6], 'B': [10, 20, 30, 40, 50]})
df2
```

	A	B
0	1	10
1	2	20
2	3	30
3	5	40
4	6	50