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In [ ]: Part 1 - Data Exploration (RedisInsight or Python)
```

```
In [1]: !pip install redis
import redis

# Connect
r = redis.Redis(host='redis', port=6379, decode_responses=True)
r.ping()
```

Requirement already satisfied: redis in /opt/conda/lib/python3.11/site-packages (6.0.0)

```
Out[1]: True
```

```
In [2]: r.hgetall('movie:1')
```

```
Out[2]: {'plot': 'A group of intergalactic criminals must pull together to stop a fanatica
l warrior with plans to purge the universe.',
'ibmdb_id': 'tt2015381',
'genre': 'Action',
'poster': 'https://m.media-amazon.com/images/M/MV5BMTAwMjU5OTgxNjZeQTJeQWpwZ15BbW
U4MDUxNDYxODEx._V1_SX300.jpg',
'release_year': '2014',
'vetes': '704613',
'title': 'Guardians of the Galaxy',
'rating': '8.1'}
```

```
In [3]: #How many actors and movies are stored in Redis?
act= r.keys('actor:*')
mov=r.keys('movie:*')

nb_act=len(r.keys("actor:*"))
nb_mov=len(r.keys("movie:*"))

print('Nb_movie:',nb_mov,'Nb_act:',nb_act)
```

Nb_movie: 922 Nb_act: 1319

```
In [ ]: mov= r.keys('movie:*')
len(mov)
```

```
In [30]: #act= r.keys('actor:*')

#act_final []
#for key in r.keys('actor:*')
# db=int(r.hget(key, 'date_of_birth'))

#len(act)
#print(r.hgetall('actor:557'))
```

```
In [31]: act_two=r.keys("date_of_birth:1980")
print(act_two)
```

[]

```
In [46]: #List 5 actors born before 1980.
```

```
act_final = []

for key in r.scan_iter('actor:*'):
    db = int(r.hget(key, 'date_of_birth'))
    if db < 1980:
        act_final.append(r.hgetall(key))
    if (len(act_final)==5):
        break

print ('', act_final)
```

```
[{'first_name': 'Andy', 'last_name': 'Garcia', 'date_of_birth': '1956'}, {'first_name': 'Sylvester', 'last_name': 'Stallone', 'date_of_birth': '1946'}, {'first_name': 'Diane', 'last_name': 'Kruger', 'date_of_birth': '1976'}, {'first_name': 'Tony', 'last_name': 'Way', 'date_of_birth': '1978'}, {'first_name': 'Tim', 'last_name': 'Rot h', 'date_of_birth': '1961'}]
```

```
In [8]: #List 5 actors born before 1980.
```

```
#date_of_birth=1980
act=r.keys("actor:*")
mov=r.keys("movie:*")

act_two=r.keys("date_of_birth:<1980")
print(act_two)
#print(r.hgetall("actor:*"))
#print (r.hget('date_of_birth':>1980))

#Lenn = enumarate(act)
#nb_x=nb[0]
#nb_a=hLen(nb)
#value = r.key("movie")
#print(h)
```

```
[]
```

```
In [48]: #Retrieve the genre and rating of the movie "The Imitation Game".
```

```
for key in r.scan_iter("movie*"):
    title = r.hget(key, "title")
    if title == "The Imitation Game":
        genre = r.hget(key, "genre")
        rating = r.hget(key, "rating")
        print("Genre:", genre, "Rating:", rating, "of the movie The Imitation Game")
        break
```

```
Genre: Biography Rating: 8.5 of the movie The Imitation Game
```

```
In [64]: #List the top 5 highest-rated movies.
```

```
movies = []
keys = r.keys("movie:*")
for key in keys:
    movie_data = r.hgetall(key)
    if movie_data.get('rating') :
        movies.append({
            'rating': float(movie_data['rating'])})
```

```

        })

top_movies = sorted(movies, key=lambda x: x['rating'], reverse=True)[:5]

print("Les 5 films les mieux notés:", top_movies)

```

Les 5 films les mieux notés: [{'rating': 9.4}, {'rating': 9.4}, {'rating': 9.3}, {'rating': 9.2}, {'rating': 9.1}]

```

In [67]: #How many movies have a rating above 7.5?
count = 0
keys = r.keys("movie:*")
for key in keys:
    movie_data = r.hgetall(key)
    if float(movie_data.get('rating')) > 7.5:
        count += 1

print("Nombre de films avec une note supérieure à 7.5 : ",count)

```

Nombre de films avec une note supérieure à 7.5 : 183

```

In [68]: keys = r.keys("movie:*")
for key in keys:
    movie_data = r.hgetall(key)
    if movie_data.get('title') == "The Imitation Game":
        r.hset(key, "rating", "8.5")
        print("Rating du film 'The Imitation Game' mis à jour à 8.5")

```

Rating du film 'The Imitation Game' mis à jour à 8.5

```

In [72]: #Add a new actor: "Zendaya", born in 1996.
zendaya_data = {
    'first_name': 'Zendaya',
    'last_name': '',
    'date_of_birth': '1996'
}
actor_key ="actor:zendaya"
r.hset(actor_key, mapping=zendaya_data)
print(r.hgetall(actor_key))

{'first_name': 'Zendaya', 'last_name': '', 'date_of_birth': '1996'}

```

```

In [77]: #Delete the movie with title "The Room".
keys = r.keys("movie:*")
for key in keys:
    movie_data = r.hgetall(key)
    if movie_data.get('title') == "The Room":
        r.delete(key)
print("Film 'The Room' supprimé avec la clé:",key)

```

Film 'The Room' supprimé avec la clé: movie:341

In [75]: Part 2 - Python Interaction

```

Cell In[75], line 1
 Part 2 - Python Interaction
^
SyntaxError: invalid character '✖' (U+1F4CC)

```

```
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r.ping()
```

```
In [79]: # Comptage des acteurs dont le nom de famille commence par "P"
actor_keys = r.keys("actor:*")
last_name_count = 0

for key in actor_keys:
    actor_data = r.hgetall(key)
    if actor_data.get('last_name') and actor_data['last_name'].startswith('P'):
        last_name_count += 1

print("Nombre d'acteurs dont le nom de famille commence par 'P':", last_name_count)
```

Nombre d'acteurs dont le nom de famille commence par 'P': 64

```
In [111...]: # Récupération des films sortis après 2010 avec plus de 100 000 votes
movie_keys = r.keys("movie:*")
recent_movies = []

for key in movie_keys:
    movie_data = r.hgetall(key)
    year = int(movie_data['release_year'])
    votes = int(movie_data['votes'])

    if year > 2010 and votes > 100000:
        recent_movies.append({
            'title': movie_data['title'],
            'year': year,
            'votes': votes
        })

print("Films sortis après 2010 avec plus de 100 000 votes:")
print(recent_movies)
```

Films sortis après 2010 avec plus de 100 000 votes:

```
'votes': 117742}, {'title': 'Terminator Genisys', 'year': 2015, 'votes': 194182}, {'title': '22 Jump Street', 'year': 2014, 'votes': 265037}, {'title': 'It Follows', 'year': 2014, 'votes': 120440}, {'title': 'Teenage Mutant Ninja Turtles', 'year': 2014, 'votes': 172213}, {'title': 'The Imitation Game', 'year': 2014, 'votes': 489175}, {'title': 'Now You See Me 2', 'year': 2016, 'votes': 112664}, {'title': 'Exodus: Gods and Kings', 'year': 2014, 'votes': 131331}, {'title': 'Fantastic Four', 'year': 2015, 'votes': 114717}, {'title': 'Star Wars: Episode VIII - The Last Jedi', 'year': 2017, 'votes': 531361}, {'title': 'The Hunger Games: Mockingjay - Part 1', 'year': 2014, 'votes': 313261}, {'title': 'Zootopia', 'year': 2016, 'votes': 216939}, {'title': 'American Sniper', 'year': 2014, 'votes': 333228}, {'title': 'Transformers: Age of Extinction', 'year': 2014, 'votes': 246318}, {'title': 'The Conjuring 2', 'year': 2016, 'votes': 108550}, {'title': 'Deadpool', 'year': 2016, 'votes': 533503}, {'title': 'Inside Out', 'year': 2015, 'votes': 367848}, {'title': '10 Cloverfield Lane', 'year': 2016, 'votes': 149415}, {'title': 'Dracula Untold', 'year': 2014, 'votes': 141759}, {'title': 'Jurassic World', 'year': 2015, 'votes': 429565}, {'title': 'Spotlight', 'year': 2015, 'votes': 220052}, {'title': 'The Martian', 'year': 2015, 'votes': 506641}, {'title': 'Focus', 'year': 2015, 'votes': 155186}, {'title': 'Southpaw', 'year': 2015, 'votes': 154514}, {'title': 'Unbroken', 'year': 2014, 'votes': 106707}, {'title': 'Battle Los Angeles', 'year': 2011, 'votes': 169988}, {'title': 'Pitch Perfect 2', 'year': 2015, 'votes': 101190}, {'title': 'Divergent', 'year': 2014, 'votes': 412364}, {'title': 'Warcraft', 'year': 2016, 'votes': 154327}, {'title': 'The Hateful Eight', 'year': 2015, 'votes': 294908}, {'title': 'Furious Seven', 'year': 2015, 'votes': 284316}, {'title': 'Fury', 'year': 2014, 'votes': 312068}, {'title': 'Spider-Man: Far from Home', 'year': 2019, 'votes': 269287}, {'title': 'Predestination', 'year': 2014, 'votes': 172521}, {'title': 'Big Hero 6', 'year': 2014, 'votes': 288143}, {'title': 'Kingsman: The Secret Service', 'year': 2014, 'votes': 410076}, {'title': 'Neighbors', 'year': 2014, 'votes': 224378}, {'title': 'The Judge', 'year': 2014, 'votes': 140247}, {'title': 'The Grand Budapest Hotel', 'year': 2014, 'votes': 492158}, {'title': 'Whiplash', 'year': 2014, 'votes': 667323}, {'title': 'Captain America: Civil War', 'year': 2016, 'votes': 627228}, {'title': 'Non-Stop', 'year': 2014, 'votes': 242556}, {'title': 'The Nice Guys', 'year': 2016, 'votes': 116011}, {'title': 'The Jungle Book', 'year': 2016, 'votes': 151342}, {'title': 'Star Trek Beyond', 'year': 2016, 'votes': 111125}, {'title': 'Transcendence', 'year': 2014, 'votes': 176429}, {'title': 'Avengers: Age of Ultron', 'year': 2015, 'votes': 479512}, {'title': 'Sicario', 'year': 2015, 'votes': 212880}]
```

In [107...]

```
# Récupération des films sortis après 2010 avec plus de 100 000 votes
movie_keys = r.keys("movie:*")
recent_movies = []

for key in movie_keys:
    movie_data = r.hgetall(key)
    year = int(movie_data['release_year'])
    votes = int(movie_data['votes'])

    if year > 2010 and votes > 100000:
        recent_movies.append({
            'title': movie_data['title'],
            'year': year,
            'votes': votes
        })

print("Films sortis après 2010 avec plus de 100 000 votes:")
print(recent_movies)
```

Films sortis après 2010 avec plus de 100 000 votes:

```
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6}, {'title': 'Neighbors', 'year': 2014, 'votes': 224378}, {'title': 'The Judge', 'y  
ear': 2014, 'votes': 140247}, {'title': 'The Grand Budapest Hotel', 'year': 2014, 'v  
otes': 492158}, {'title': 'Whiplash', 'year': 2014, 'votes': 667323}, {'title': 'Cap  
tain America: Civil War', 'year': 2016, 'votes': 627228}, {'title': 'Non-Stop', 'yea  
r': 2014, 'votes': 242556}, {'title': 'The Nice Guys', 'year': 2016, 'votes': 11601  
1}, {'title': 'The Jungle Book', 'year': 2016, 'votes': 151342}, {'title': 'Star Tre  
k Beyond', 'year': 2016, 'votes': 111125}, {'title': 'Transcendence', 'year': 2014,  
'votes': 176429}, {'title': 'Avengers: Age of Ultron', 'year': 2015, 'votes': 47951  
2}, {'title': 'Sicario', 'year': 2015, 'votes': 212880}]
```

In []:

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