WEB SCRAPING USING AN API

IMPORTING THE REQUIRED LIBRARIES

In [1]:
```
import pandas as pd
import requests
```

SCRAPING PAGE 1 OF THE WEB

SENDING REQUEST

In [2]:
```
response = requests.get('https://api.themoviedb.org/3/movie/top_rated?api_key=8265bd1679663a7ea12ac168da84d2e8&language=en-US&page=1')
```

In [3]:
```
response
```

Out[3]:
```
<Response [200]>
```

In [4]:
```
response.json()['results']
```

Out[4]:
```
[{'adult': False,
  'backdrop_path': '/kXfqcdQKsToO0OUXHcrrNCHDBzO.jpg',
  'genre_ids': [18, 80],
  'id': 278,
  'original_language': 'en',
  'original_title': 'The Shawshank Redemption',
  'overview': 'Framed in the 1940s for the double murder of his wife and her lover, upstanding banker Andy Dufresne begins a new life at the Shawshank prison, where he puts his acc
ounting skills to work for an amoral warden. During his long stretch in prison, Dufresne comes to be admired by the other inmates -- including an older prisoner named Red -- for hi
s integrity and unquenchable optimism.',
  'popularity': 92.101,
  'poster_path': '/q6y0Go1tsGEsmtFryDOJo3Dm0ez.jpg',
  'release_date': '1994-09-23',
  'title': 'The Shawshank Redemption',
  'video': False,
  'vote_average': 8.7,
  'vote_count': 21884},
 {'adult': False,
  'backdrop_path': '/8Dcs6kkrpDB5vpIrqBwuXOuJm6.jpg',
  'genre_ids': [18, 10749],
  'id': 19404,
  'original_language': 'hi',
  'original_title': 'दिलवाले दुल्हनिया ले जायेंगे',
  'overview': 'Raj is a rich, carefree, happy-go-lucky second generation NRI. Simran is the daughter of Chaudhary Baldev Singh, who in spite of being an NRI is very strict about ad
herence to Indian values. Simran has left for India to be married to her childhood fiancé. Raj leaves for India with a mission at his hands, to claim his lady love under the noses
of her whole family. Thus begins a saga.',
  'popularity': 27.661,
  'poster_path': '/2CC9N5kB9ggX3ZvlifXbm213GK3Qmx.jpg',
  'release_date': '1995-10-19',
  'title': 'Dilwale Dulhania Le Jayenge',
  'video': False,
  'vote_average': 8.7,
  'vote_count': 3741},
 {'adult': False,
  'backdrop_path': '/AbgDdQ2mwCC5OcBCbnOMa8p8S8I.jpg',
  'genre_ids': [18, 80],
  'id': 238,
  'original_language': 'en',
  'original_title': 'The Godfather',
  'overview': 'Spanning the years 1945 to 1955, a chronicle of the fictional Italian-American Corleone crime family. When organized crime family patriarch, Vito Corleone barely sur
vives an attempt on his life, his youngest son, Michael steps in to take care of the would-be killers, launching a campaign of bloody revenge.',
  'popularity': 77.666,
  'poster_path': '/3bhkrj58Vtu7enYsRolD1fZdja1.jpg',
  'release_date': '1972-03-14',
  'title': 'The Godfather',
  'video': False,
  'vote_average': 8.7,
  'vote_count': 16298},
 {'adult': False,
  'backdrop_path': '/iuAmkqQkZaq5T8TqJuyxSlEQfZb.jpg',
  'genre_ids': [18, 36, 10752],
  'id': 424,
  'original_language': 'en',
  'original_title': 'Schindler's List',
  'overview': 'The true story of how businessman Oskar Schindler saved over a thousand Jewish lives from the Nazis while they worked as slaves in his factory during World War II.',
  'popularity': 54.822,
  'poster_path': '/ke3kqLUyMQbYf3PXksAmT2CX3.jpg',
  'release_date': '1974-12-20',
  'title': 'The Godfather: Part II',
  'video': False,
  'vote_average': 8.6,
  'vote_count': 9622},
 {'adult': False,
  'backdrop_path': '/kv3DAbDAuMMVMNdzjsobnqAkqt.jpg',
  'genre_ids': [10751, 18],
  'id': 68253,
  'original_language': 'es',
  'original_title': 'Sonaes Imposibles',
  'overview': 'Matilde is a woman who, after the death of her husband - a man who constantly abused her - finds her new best friend in Miguel, her young, insecure, disorientated and
even dealer neighbor.',
  'popularity': 12.681,
  'poster_path': '/ZuBm3BC1Z9qbnoC2UMQFD3nQ.jpg',
  'release_date': '2021-08-17',
  'title': 'Impossible Things',
  'video': False,
  'vote_average': 8.6,
  'vote_count': 296},
 {'adult': False,
  'backdrop_path': '/hZ1TdMQxKvv07KJ90Dbq34e1ber.jpg',
  'genre_ids': [16, 10751, 14],
  'id': 129,
  'original_language': 'ja',
  'original_title': '千と千尋の神隠し',
  'overview': 'A young girl, Chihiro, becomes trapped in a strange new world of spirits. When her parents undergo a mysterious transformation, she must call upon the courage she no
w knew she had to free her family.',
  'popularity': 83.675,
  'poster_path': '/39wmItIWsg5sZMyRUHLkWBcvUFK.jpg',
  'release_date': '2001-07-20',
  'title': 'Spirited Away',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 13100},
 {'adult': False,
  'backdrop_path': '/vSCE1BlDsuMaQ5Ms9oSD2E1.jpg',
  'genre_ids': [18],
  'id': 238314,
  'original_language': 'ja',
  'original_title': '夕凪の街 桜の国',
  'overview': 'A tragic accident lead to Kaori's blindness, but she clings to life and the smaller pleasures it can still afford her. She meets Rui and begins to talk to him. Rui w
as once a promising bicycleur, but something happened in his past. Kaori's smile brings out a change in Rui. However, the two are connected in more than one way. Rui attempts to do
what is right.',
  'popularity': 42.509,
  'poster_path': '/rcHUE3FxkIbhRYYtaSfsh1YC4gi.jpg',
  'release_date': '2020-10-23',
  'title': 'Yokohama Eyes Tokii',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 940},
 {'adult': False,
  'backdrop_path': '/3RMLSEXOn3zCcsWT7eFcfdnhq.jpg',
  'genre_ids': [10749, 18],
  'id': 372754,
  'original_language': 'ja',
  'original_title': '君の名は。',
  'overview': 'Mitsuha, an honor student with a perfect score on the entrance exam and Mikaru Kusakabe, in a band and popular among girls, would have never crossed paths. Until
one day they switched bodies! Waking at the practice for their school's upcoming Kenzou festival. After school, the two meet regularly, as Mikaru helps Rihito to improve his singing skill
s. While they listen to each other's voice and harmonize, their hearts start to beat together.',
  'popularity': 12.931,
  'poster_path': '/ZTRCA3wEvjEMcpcAk8DbqQEJR.jpg',
  'release_date': '2016-08-26',
  'title': 'Your Name.',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 2391},
 {'adult': False,
  'backdrop_path': '/mMtUQQOLi2AFXo8F3Z4j2KEfkZ.jpg',
  'genre_ids': [10749, 16, 18],
  'id': 372058,
  'original_language': 'ja',
  'original_title': '君の名は。',
  'overview': 'Your Name. Two schoolers Mitsuha and Taki are complete strangers living separate lives. But one night, they suddenly switch places. Mitsuha wakes up in Taki's body, and he in
hers. This bizarre occurrence continues to happen randomly, and the two must adjust their lives around each other.',
  'popularity': 161.144,
  'poster_path': '/q7QjXKEzUbnYapuo6baKnONNDKX.jpg',
  'release_date': '2021-06-24',
  'title': 'Your Name.',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 99955},
 {'adult': False,
  'backdrop_path': '/1j6iPnz1SNDFrRLKqbmG6Cp3n1O.jpg',
  'genre_ids': [18],
  'id': 389,
  'original_language': 'en',
  'original_title': '12 Angry Men',
  'overview': 'The defense and the prosecution have rested and the jury is filing into the jury room to decide if a young Spanish-American is guilty or innocent of murdering his fa
ther. What begins as an open and shut case soon becomes a mini-drama of each of the jurors' prejudices and preconceptions about the trial, the accused, and each other.',
  'popularity': 19.329,
  'poster_path': '/ppd84D2i9W8jXmsyInGyihiSyqz.jpg',
  'release_date': '1957-04-10',
  'title': '12 Angry Men',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 6540},
 {'adult': False,
  'backdrop_path': '/w2vub5GiMtvB8ZgBwwS3YvSy2Ia.jpg',
  'genre_ids': [10749],
  'id': 597,
  'original_language': 'en',
  'original_title': 'Gabriel's Inferno',
  'overview': 'Professor Gabriel Emerson finally learns the truth about Julia Mitchell's identity, but his realization comes a moment too late. Julia is done waiting for the well-
educated, handsome professor to remember her and wants nothing more to do with him. Can Gabriel win back her heart before she finds love in another's arms?',
  'popularity': 18.025,
  'poster_path': '/xSo8cL2fEKMbcZcrTMLrVk1PTXJ.jpg',
  'release_date': '2020-07-31',
  'title': 'Gabriel's Inferno: Part II',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 1423},
 {'adult': False,
  'backdrop_path': '/nMKdUUepR0i5zn0y1T4CsSB5chy.jpg',
  'genre_ids': [18, 28, 80, 53],
  'id': 155,
  'original_language': 'en',
  'original_title': 'The Dark Knight',
  'overview': 'Batman raises the stakes in his war on crime. With the help of Lt. Jim Gordon and District Attorney Harvey Dent, Batman sets out to dismantle the remaining criminal
organizations that plague the streets. The partnership proves to be effective, but they soon find themselves prey to a reign of chaos unleashed by a rising criminal mastermind know
n to the terrified citizens of Gotham as the Joker.',
  'popularity': 85.792,
  'poster_path': '/qJ2tW6WMUpW8qstGKhzxW7EB3ET.jpg',
  'release_date': '2008-07-14',
  'title': 'The Dark Knight',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 29948},
 {'adult': False,
  'backdrop_path': '/4AiAraRPFCvgB8iaV8zRmNbdgHIz.jpg',
  'genre_ids': [37],
  'id': 429,
  'original_language': 'it',
  'original_title': 'Il buono, il brutto, il cattivo',
  'overview': 'While the Civil War rages between the Union and the Confederacy, three men – a quiet loner, a ruthless hit man and a Mexican bandit – comb the American Southwest in
search of a stronghold containing $200,000 in stolen gold.',
  'popularity': 30.460,
  'poster_path': '/wZ7ZqPnnMQQGcxgGNEUEf9ziG26.jpg',
  'release_date': '1966-12-15',
  'title': 'The Good, the Bad and the Ugly',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 4194},
 {'adult': False,
  'backdrop_path': '/iuaBOC1kNIsqgDMTh2dZCfYqo3.jpg',
  'genre_ids': [53, 80],
  'id': 680,
  'original_language': 'en',
  'original_title': 'Pulp Fiction',
  'overview': 'Pulp Fiction',
  'popularity': 67.37,
  'poster_path': '/dS1iIFdsG8mzzYrBP0BJFIfbb.jpg',
  'release_date': '1994-09-10',
  'title': 'Pulp Fiction',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 23503},
 {'adult': False,
  'backdrop_path': '/a7p3MuCcoCbwurgcZbJ5AEhJgqf.jpg',
  'genre_ids': [12, 14, 28],
  'id': 122,
  'original_language': 'en',
  'original_title': 'The Lord of the Rings: The Return of the King',
  'overview': 'Aragorn is revealed as the heir to the ancient kings as he, Gandalf and the other members of the broken fellowship struggle to save Gondor from Sauron's forces. Mean
while, Frodo and Sam take the ring closer to the heart of Mordor, the dark lord's realm.',
  'popularity': 139.783,
  'poster_path': '/rCzpDGLbOoPwLjy3OAm5NUPOTrC.jpg',
  'release_date': '2003-12-01',
  'title': 'The Lord of the Rings: The Return of the King',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 19867},
 {'adult': False,
  'backdrop_path': '/7QpUYmjcYC8Sn5Y9MyeFJdFUdM0.jpg',
  'genre_ids': [10749, 35],
  'id': 761053,
  'original_language': 'en',
  'original_title': 'Gabriel's Inferno: Part III',
  'overview': 'The final part of the film adaption of the erotic romance novel Gabriel's Inferno written by an anonymous Canadian author under the pen name Sylvain Reynard.',
  'popularity': 54.991,
  'poster_path': '/uqKfxDPJgN15MWtlJwlrnUTpMK.jpg',
  'release_date': '2020-11-19',
  'title': 'Gabriel's Inferno: Part III',
  'video': False,
  'vote_average': 8.5,
  'vote_count': 977}]
```

CREATING A DATAFRAME

In [5]:
```
df = pd.DataFrame(response.json()['results'])[['id','release_date','adult','title','vote_average','overview','popularity']]
```

In [6]:
```
df
```

Out[6]:

	id	release_date	adult	title	vote_average	overview	popularity
0	278	1994-09-23	False	The Shawshank Redemption	8.7	Framed in the 1940s for the double murder of h...	92.101
1	19404	1995-10-19	False	Dilwale Dulhania Le Jayenge	8.7	Raj is a rich, carefree, happy-go-lucky second...	27.661
2	238	1972-03-14	False	The Godfather	8.7	Spanning the years 1945 to 1955, a chronicle o...	77.666
3	424	1993-12-15	False	Schindler's List	8.6	The true story of how businessman Oskar Schind...	45.895
4	240	1974-12-20	False	The Godfather: Part II	8.6	In the continuing saga of the Corleone crime f...	54.822
5	667257	2021-06-17	False	Impossible Things	8.6	Matilde is a woman who, after the death of her...	12.681
6	129	2001-07-20	False	Spirited Away	8.5	A young girl, Chihiro, becomes trapped in a st...	83.675
7	730154	2020-10-23	False	Your Eyes Tell	8.5	A tragic accident lead to Kaori's blindness, b...	62.569
8	372754	2016-02-20	False	Dou kyu sei - Classmates	8.5	Rihito Sajo, an honor student with a perfect s...	12.911
9	372058	2016-08-26	False	Your Name.	8.5	High schoolers Mitsuha and Taki are complete s...	161.144
10	389	1957-04-10	False	12 Angry Men	8.5	The defense and the prosecution have rested an...	23.178
11	696374	2020-05-29	False	Gabriel's Inferno	8.5	An intriguing and sinful exploration of seduct...	12.222
12	496243	2019-06-30	False	Parasite	8.5	All unemployed, Ki-taek's family takes peculia...	67.367
13	497	1999-12-10	False	The Green Mile	8.5	A supernatural tale set on death row in a Sout...	61.997
14	724089	2020-07-31	False	Gabriel's Inferno: Part II	8.5	Professor Gabriel Emerson finally learns the t...	10.823
15	155	2008-07-14	False	The Dark Knight	8.5	Batman raises the stakes in his war on crime. ...	85.792
16	429	1966-12-15	False	The Good, the Bad and the Ugly	8.5	While the Civil War rages between the Union an...	30.404
17	680	1994-09-10	False	Pulp Fiction	8.5	A burger-loving hit man, his philosophical par...	67.171
18	122	2003-12-01	False	The Lord of the Rings: The Return of the King	8.5	Aragorn is revealed as the heir to the ancient...	129.783
19	761053	2020-11-19	False	Gabriel's Inferno: Part III	8.5	The final part of the film adaption of the ero...	54.991

SCRAPING ALL PAGES OF THE PAGE

In [7]:
```
df = pd.DataFrame()
```

CREAT LOOP TO SCRAPE PAGES ONE BY ONE OF THE WEB

In [8]:
```
for i in range(1,429):
    response = requests.get('https://api.themoviedb.org/3/movie/top_rated?api_key=8265bd1679663a7ea12ac168da84d2e8&language=en-US&page={}'.format(i))
    temp_df = pd.DataFrame(response.json()['results'])[['id','release_date','title','vote_average','overview','popularity']]
    df = df.append(temp_df, ignore_index = True)
```

In [9]:
```
df
```

Out[9]:

	id	release_date	title	vote_average	overview	popularity
0	278	1994-09-23	The Shawshank Redemption	8.7	Framed in the 1940s for the double murder of h...	92.101
1	19404	1995-10-19	Dilwale Dulhania Le Jayenge	8.7	Raj is a rich, carefree, happy-go-lucky second...	27.661
2	238	1972-03-14	The Godfather	8.7	Spanning the years 1945 to 1955, a chronicle o...	77.666
3	424	1993-12-15	Schindler's List	8.6	The true story of how businessman Oskar Schind...	45.895
4	240	1974-12-20	The Godfather: Part II	8.6	In the continuing saga of the Corleone crime f...	54.822
...	...	...	...	...	...	...
8555	629557	2022-04-27	365 Days: This Day	5.8	Laura and Massimo are back and hotter than eve...	489.525
8556	244793	2014-01-20	Song One	5.8	Estranged from her family, Franny returns home...	7.486
8557	73499	2011-10-27	The Double	5.8	The mysterious murder of a US senator bearing ...	25.540
8558	12517	2006-03-09	The Ordeal	5.8	A few days before Christmas, traveling enterta...	6.492
8559	9384	2004-03-05	Starsky & Hutch	5.8	Join uptight David Starsky and laid-back Ken "...	15.260

8560 rows × 6 columns

In [10]:
```
df.head()
```

Out[10]:

	id	release_date	title	vote_average	overview	popularity
0	278	1994-09-23	The Shawshank Redemption	8.7	Framed in the 1940s for the double murder of h...	92.101
1	19404	1995-10-19	Dilwale Dulhania Le Jayenge	8.7	Raj is a rich, carefree, happy-go-lucky second...	27.661
2	238	1972-03-14	The Godfather	8.7	Spanning the years 1945 to 1955, a chronicle o...	77.666
3	424	1993-12-15	Schindler's List	8.6	The true story of how businessman Oskar Schind...	45.895
4	240	1974-12-20	The Godfather: Part II	8.6	In the continuing saga of the Corleone crime f...	54.822

In [11]:
```
df.tail()
```

Out[11]:

	id	release_date	title	vote_average	overview	popularity
8555	629557	2022-04-27	365 Days: This Day	5.8	Laura and Massimo are back and hotter than eve...	489.525
8556	244793	2014-01-20	Song One	5.8	Estranged from her family, Franny returns home...	7.486
8557	73499	2011-10-27	The Double	5.8	The mysterious murder of a US senator bearing ...	25.540
8558	12517	2006-03-09	The Ordeal	5.8	A few days before Christmas, traveling enterta...	6.492
8559	9384	2004-03-05	Starsky & Hutch	5.8	Join uptight David Starsky and laid-back Ken "...	15.260

In [12]:
```
df.shape
```

Out[12]:
```
(8560, 6)
```

CONVERTING THIS DATA INTO A CSV FILE

In [13]:
```
df.to_csv('imdb top rated movies.csv')
```