

# Assignment 1

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## Q 1.1

```
1 WITH asian_films AS (  
2     SELECT *, MAX(year_released) OVER (PARTITION BY country_name) AS mx  
3     FROM movies m JOIN countries c ON m.country = c.country_code  
4     WHERE continent = 'ASIA'  
5 )  
6 SELECT country_name, title, mx  
7 FROM asian_films  
8 WHERE year_released = mx  
9 ORDER BY country_name;
```

#	country_name	title	year
1	Armenia	Soyit Naya	1989
2	Bangladesh	Nayiva	2017
3	Bangladesh	Onhāi Ayātkha	2017
4	Bangladesh	Vada 2	2017
5	China	Tāngchéngjī tān ān	2018
6	China	Hóng Hāi Xīng Dōng	2018
7	Georgia	Wononisa	1997
8	Hong Kong	Chau' Tsan' Zyun' Gam'	2017
9	Hong Kong	Hap' Hau' Lyun' Heng'	2017
10	India	Song He Titu Ki Deewi	2018

## Q 1.2

```
1 WITH cnt AS (  
2     SELECT country,  
3         COUNT(*) AS x,  
4         AVG(COUNT(*)) OVER () AS avg  
5     FROM movies  
6     GROUP BY country  
7 )  
8 SELECT c.country_name  
9 FROM cnt JOIN countries c ON cnt.country = c.country_code  
10 WHERE cnt.x > cnt.avg;
```

	country_name
1	United States
2	China
3	India
4	Japan
5	South Korea
6	France
7	Germany
8	Italy
9	Russia
10	United Kingdom

### Q 1.3

```

1 WITH cnt AS (
2     SELECT c.country_name          AS name,
3           COUNT(*) / SUM(COUNT(*) OVER ()) AS per
4     FROM movies
5           JOIN countries c ON movies.country = c.country_code
6     GROUP BY c.country_code
7 )
8 SELECT name, ROUND(100. * cnt.per, 2) AS percentage
9 FROM cnt
10 ORDER BY percentage;
```

	name	percentage
1	Slovenia	0.01
2	Nicaragua	0.01
3	Kenya	0.01
4	Trinidad	0.01
5	Ukraine	0.01
6	Sweden	0.01
7	Guatemala	0.01
8	Bosnia and Herzegovina	0.01
9	Albania	0.01
10	Japan	0.01

### Q 2.1

```

1 WITH rk AS (
2     SELECT title, year_released, RANK() OVER (ORDER BY year_released DESC) AS r
3     FROM movies
4     WHERE country = (SELECT country_code FROM countries WHERE country_name = 'China')
5 )
6 SELECT title, year_released
7 FROM rk
8 WHERE rk.r <= 10
9 ORDER BY year_released DESC;
```

	title	year_released
1	Hóng Hái Xing Dong	2018
2	Tangrenjie zhan an	2018
3	Fang Hua	2017
4	Tei's Lung	2017
5	Xiao Xiao De Tian Quan	2017
6	Zhan Lang 2	2017
7	Cheng Feng Pi Lang	2017
8	Xi Yao Fu Yao Pian	2017
9	Ti Nian Hua	2017
10	San Sheng San Shi Shi Li Tao Hua	2017

## Q 2.2

```

1 WITH crk AS (
2     SELECT c.continent,
3           c.country_name,
4           RANK() OVER (PARTITION BY c.continent
5                        ORDER BY COUNT(*) DESC) AS rk
6     FROM movies m
7           JOIN countries c ON m.country = c.country_code
8     GROUP BY c.country_name, c.continent
9 )
10 SELECT continent, country_name
11 FROM crk
12 WHERE rk = 1;

```

	continent	country_name
1	AFRICA	Nigeria
2	AMERICA	United States
3	ASIA	India
4	EUROPE	United Kingdom
5	OCEANIA	Australia

## Q 2.3

```

1 WITH cufii AS (
2     SELECT *
3     FROM movies
4           JOIN countries c ON movies.country = c.country_code
5     WHERE country_name IN ('China', 'United States', 'France', 'Italy', 'India')
6 ),
7     cufii_actors AS (
8         SELECT p.first_name          first_name,
9               p.surname              surname,
10              m.country_name         country,
11              RANK() OVER (PARTITION BY country_name
12                           ORDER BY COUNT(*) DESC) rk
13         FROM cufii m

```

```

14         JOIN credits cd ON cd.movieid = m.movieid
15         JOIN people p ON cd.peopleid = p.peopleid
16     WHERE cd.credited_as = 'A'
17     GROUP BY p.first_name, p.surname, m.country_name
18 )
19 SELECT country, first_name, surname
20 FROM cufii_actors
21 WHERE cufii_actors.rk <= 3
22 ORDER BY country, cufii_actors.rk;

```

	country	first_name	surname
1	China	Chao	Deng
2	China	Li	Gong
3	China	Wen	Jiang
4	France	Gerard	Depardieu
5	France	Catherine	Deneuve
6	France	Isabelle	Huppert
7	India	Aksheni	Nageswara Rao
8	India	Amitabh	Bachchan
9	India	Shah Rukh	Khan
10	Italy	Alberto	Sordi

## Q 2.4

```

1 WITH cufii2010 AS (
2     SELECT *
3     FROM movies
4         JOIN countries c ON movies.country = c.country_code
5     WHERE country_name IN ('China', 'United States', 'France', 'Italy', 'India')
6         AND year_released >= 2010
7 ),
8 cufii_actors_24 AS (
9     SELECT p.first_name      first_name,
10           p.surname         surname,
11           m.country_name    country,
12           RANK() OVER (PARTITION BY country_name
13                       ORDER BY COUNT(*) DESC) rk
14     FROM cufii2010 m
15         JOIN credits cd ON cd.movieid = m.movieid
16         JOIN people p ON cd.peopleid = p.peopleid
17     WHERE cd.credited_as = 'A'
18     GROUP BY p.first_name, p.surname, m.country_name
19     HAVING COUNT(*) > 3
20 )
21 SELECT country, first_name, surname
22 FROM cufii_actors_24 ca
23 WHERE rk <= 3
24 ORDER BY country, ca.rk;

```

	country	first_name	surname
1	China	Chao	Deng
2	China	Wingbing	Fan
3	China	Baihe	Bai
4	China	Qi	Shu
5	China	Carina	Lau
6	China	Baoqiang	Wang
7	China	Eddie	Peng
8	China	Jackie	Chan
9	China	Shaofeng	Feng
10	China	null	Angelababy

### Q 3.1

```

1  WITH availble_cc AS (
2      SELECT DISTINCT country,
3                      year_released,
4                      COUNT(*) OVER (PARTITION BY country, year_released) per_year,
5                      COUNT(*) OVER (PARTITION BY country) flag
6  FROM movies
7  WHERE year_released >= 2010
8  ),
9      computable AS (
10     SELECT country_name,
11            year_released,
12            per_year,
13            LAG(per_year, 1) OVER (PARTITION BY country_name ORDER BY year_released)
14            last_year
15     FROM availble_cc m
16     JOIN countries c ON m.country = c.country_code
17     WHERE flag >= 20
18 )
19 SELECT country_name,
20        year_released,
21        per_year,
22        ROUND(100 * (per_year::numeric - last_year) / last_year, 2) || '%' AS variation
23 FROM computable c
24 ORDER BY country_name, year_released;

```

	country_name	year_released	per_year	variation
1	China	2010	9	null
2	China	2011	1	-22.22%
3	China	2012	7	600.00%
4	China	2013	14	100.00%
5	China	2014	19	35.71%
6	China	2015	24	26.32%
7	China	2016	14	-41.67%
8	China	2017	11	-21.43%
9	China	2018	2	-81.82%
10	France	2019	9	null