تمرین دوم آزمایشگاه پایگاه داده

سروش رستم نژاد - پر هام شیروانیون

تمرين تحقيقي:

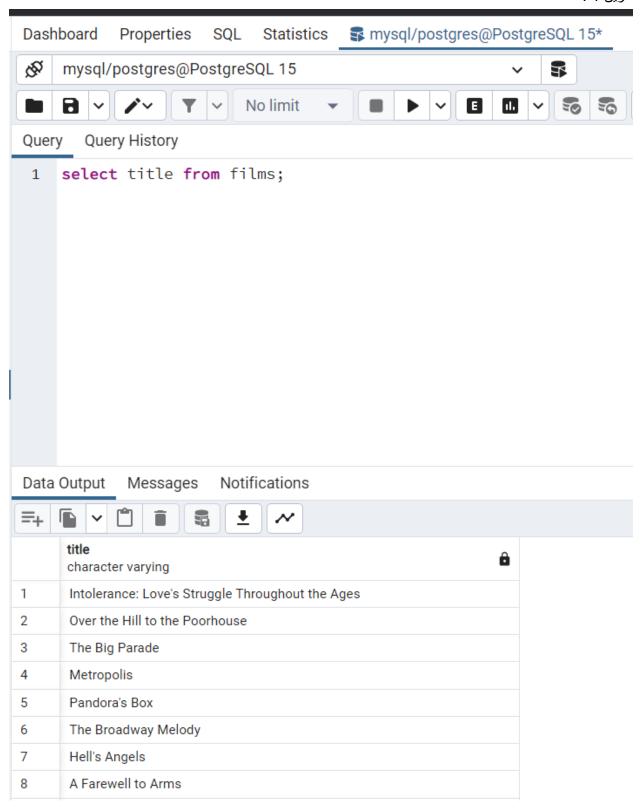
با استفاده از رابط خط فرمان psql می توانید فایل ها را به PostgreSQL وارد کنید. سینتکس برای وارد کردن یک فایل به شرح زیر است:

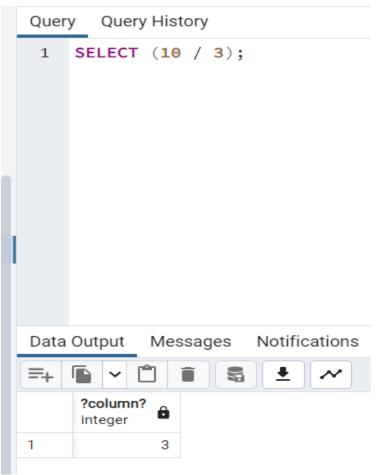
\i /path/to/file.sql

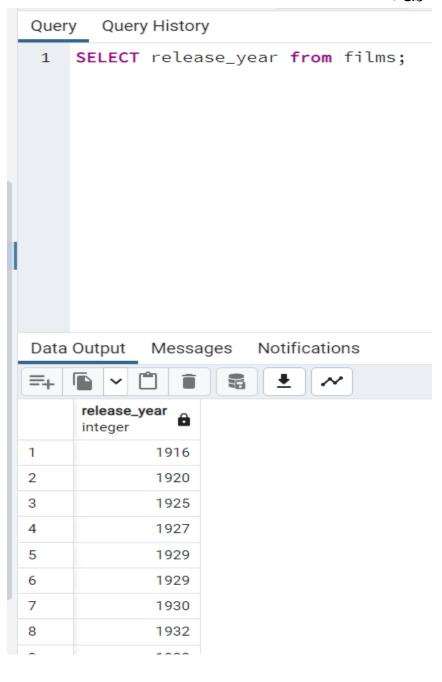
این دستور دستورات SQL را در فایل مشخص شده اجرا می کند. همچنین می توانید از دستور COPY برای وارد کردن داده ها از یک فایل CSV استفاده کنید. در اینجا یک مثال است:

COPY table name FROM '/path/to/file.csv' DELIMITER ',' CSV HEADER;

این دستور محتویات فایل CSV را در جدول مشخص شده کپی می کند. می توانید table_name را با نام جدول خود و /path/to/file.csv را با مسیر فایل CSV خود جایگزین کنید.







: 4 تمرین

		ىمرىن 4 :
1	SELECT name from	people;
Data	Output Messages	Notification
=+		• ~
	name character varying	â
1	50 Cent	
2	A. Michael Baldwin	
3	A. Raven Cruz	
4	A.J. Buckley	
5	A.J. DeLucia	
6	A.J. Langer	
7	Aaliyah	
8	Aaron Ashmore	
9	Aaron Hann	
10	Aaron Hill	
11	Aaron Hughes	
12	Aaron Kwok	
13	Aaron Schneider	
14	Aaron Seltzer	
15	Aaron Stanford	
16	Aaron Staton	
17	Aaron Yoo	
4.0		

1 SELECT title from films;

Data Output Messages Notifications

title character varying Intolerance: Love's Struggle Throughout the Ages Over the Hill to the Poorhouse The Big Parade Metropolis Pandora's Box The Broadway Melody Hell's Angels A Farewell to Arms 4 Ararewell to Arms She Done Him Wrong It Happened One Night Top Hat Modern Times The Charge of the Light Brigade Snow White and the Seven Dwarfs	Data Catpat Messages Notifications			
character varying Intolerance: Love's Struggle Throughout the Ages Over the Hill to the Poorhouse The Big Parade Metropolis Pandora's Box The Broadway Melody Hell's Angels A Farewell to Arms 42nd Street She Done Him Wrong It Happened One Night Top Hat Modern Times The Charge of the Light Brigade	=+			
2 Over the Hill to the Poorhouse 3 The Big Parade 4 Metropolis 5 Pandora's Box 6 The Broadway Melody 7 Hell's Angels 8 A Farewell to Arms 9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade				
The Big Parade Metropolis Pandora's Box The Broadway Melody Hell's Angels A Farewell to Arms She Done Him Wrong It Happened One Night Top Hat Modern Times The Charge of the Light Brigade	1	Intolerance: Love's Struggle Throughout the Ages		
4 Metropolis 5 Pandora's Box 6 The Broadway Melody 7 Hell's Angels 8 A Farewell to Arms 9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	2	Over the Hill to the Poorhouse		
5 Pandora's Box 6 The Broadway Melody 7 Hell's Angels 8 A Farewell to Arms 9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	3	The Big Parade		
6 The Broadway Melody 7 Hell's Angels 8 A Farewell to Arms 9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	4	Metropolis		
7 Hell's Angels 8 A Farewell to Arms 9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	5	Pandora's Box		
8 A Farewell to Arms 9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	6	The Broadway Melody		
9 42nd Street 10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	7	Hell's Angels		
10 She Done Him Wrong 11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	8	A Farewell to Arms		
11 It Happened One Night 12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	9	42nd Street		
12 Top Hat 13 Modern Times 14 The Charge of the Light Brigade	10	She Done Him Wrong		
13 Modern Times 14 The Charge of the Light Brigade	11	It Happened One Night		
14 The Charge of the Light Brigade	12	Top Hat		
The strange of the Light engage	13	Modern Times		
15 Snow White and the Seven Dwarfs	14	The Charge of the Light Brigade		
	15	Snow White and the Seven Dwarfs		
16 The Prisoner of Zenda	16	The Prisoner of Zenda		
17 Alexander's Ragtime Band	17	Alexander's Ragtime Band		
18 You Can't Take It with You	18	You Can't Take It with You		

SELECT title , release_year from films; 1 Notifications Data Output Messages =+ title release_year character varying integer 1 Intolerance: Love's Struggle Throughout the Ages 1916 2 Over the Hill to the Poorhouse 1920 3 The Big Parade 1925 1927 4 Metropolis 5 Pandora's Box 1929 6 The Broadway Melody 1929 7 Hell's Angels 1930 8 A Farewell to Arms 1932 9 42nd Street 1933 10 She Done Him Wrong 1933 11 It Happened One Night 1934 12 Top Hat 1935 13 Modern Times 1936 14 The Charge of the Light Brigade 1936 15 Snow White and the Seven Dwarfs 1937 The Prisoner of Zenda 16 1937 17 Alexander's Ragtime Band 1938

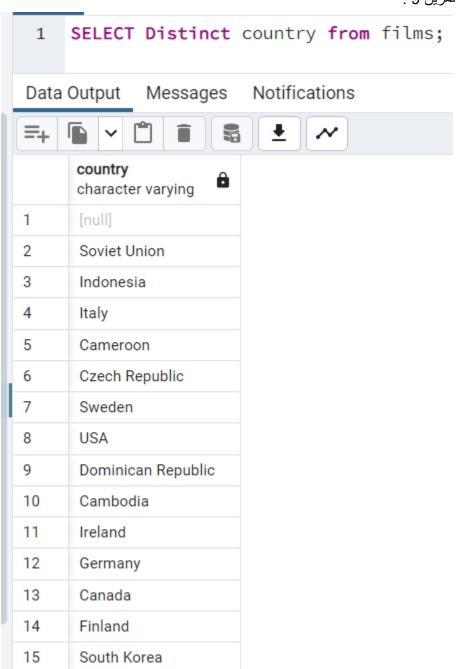
: 7 تمرين

1 SELECT title , release_year, country from films;

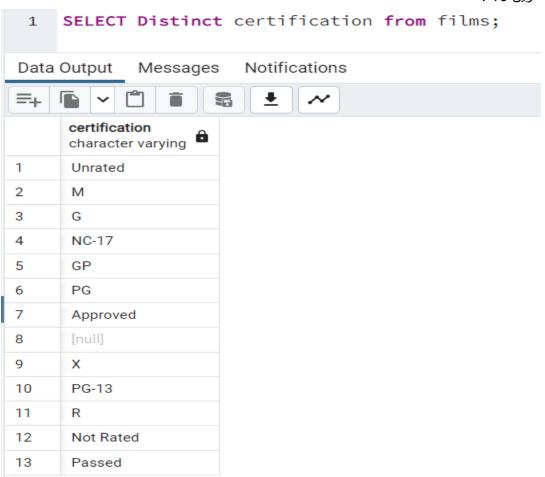
=+			
	title character varying	release_year integer	country character varying
1	Intolerance: Love's Struggle Throughout the Ages	1916	USA
2	Over the Hill to the Poorhouse	1920	USA
3	The Big Parade	1925	USA
4	Metropolis	1927	Germany
5	Pandora's Box	1929	Germany
6	The Broadway Melody	1929	USA
7	Hell's Angels	1930	USA
8	A Farewell to Arms	1932	USA
9	42nd Street	1933	USA
10	She Done Him Wrong	1933	USA
11	It Happened One Night	1934	USA
12	Top Hat	1935	USA
13	Modern Times	1936	USA
14	The Charge of the Light Brigade	1936	USA
15	Snow White and the Seven Dwarfs	1937	USA
16	The Prisoner of Zenda	1937	USA
17	Alexander's Ragtime Band	1938	USA
18	You Can't Take It with You	1938	USA

تمرین 8:

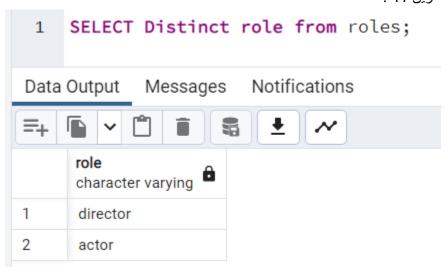
1	SELECT * fr	om films;							
Data	Output Mess	ages Notifications	2						
=+									
	id [PK] integer	title character varying	release_year integer	country character varying	duration integer	language character varying	certification character va		
1	1	Intolerance: Love's Struggle Throughout the Ages	1916	USA	123	[null]	Not Rated		
2	2	Over the Hill to the Poorhouse	1920	USA	110	[null]	[null]		
3	3	The Big Parade	1925	USA	151	[null]	Not Rated		
4	4	Metropolis	1927	Germany	145	German	Not Rated		
5	5	Pandora's Box	1929	Germany	110	German	Not Rated		
6	6	The Broadway Melody	1929	USA	100	English	Passed		
7	7	Hell's Angels	1930	USA	96	English	Passed		
8	8	A Farewell to Arms	1932	USA	79	English	Unrated		
9	9	42nd Street	1933	USA	89	English	Unrated		
10	10	She Done Him Wrong	1933	USA	66	English	Approved		
11	11	It Happened One Night	1934	USA	65	English	Unrated		
12	12	Top Hat	1935	USA	81	English	Approved		
13	13	Modern Times	1936	USA	87	English	G		



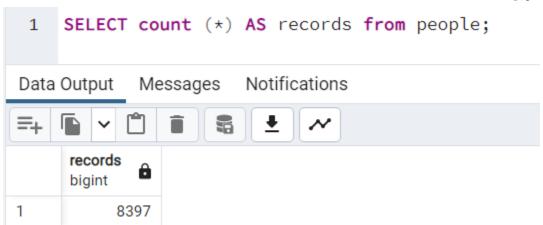
تمرين 10 :



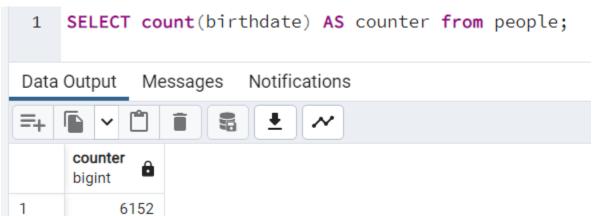
تمرين 11 :







تمرين 13 :



تمرين 14:



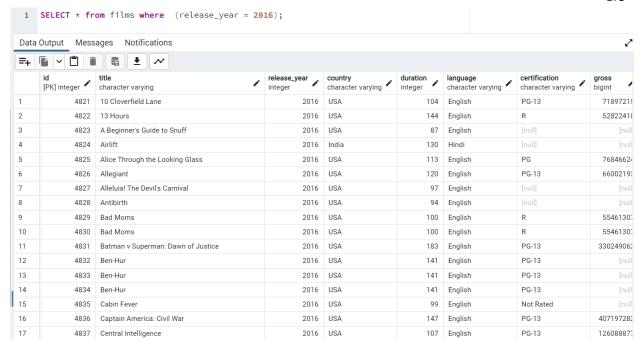
تمرين 15:

1 SELECT count(distinct country) AS counter from films;

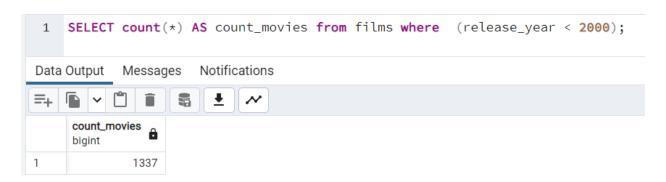
Data Output Messages Notifications

counter bigint 64

تمرين 16:



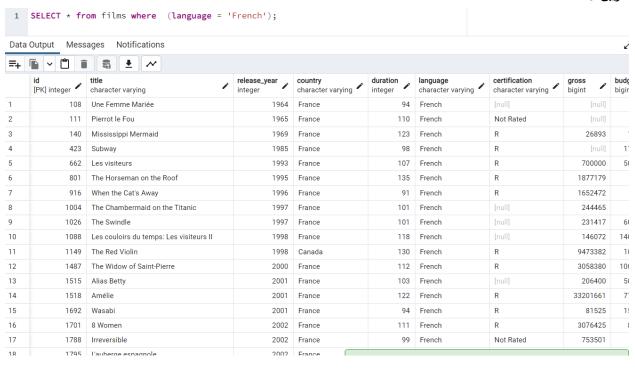
تمرین 17 :



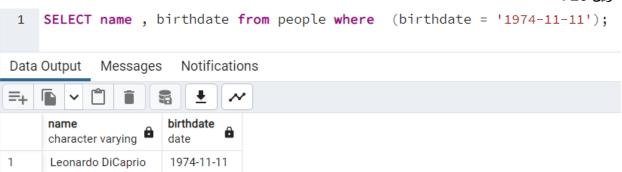
تمرين 18 :

	title character varying	release_year integer
1	15 Minutes	2001
2	3000 Miles to Graceland	2001
3	A Beautiful Mind	2001
4	A Knight's Tale	2001
5	A.I. Artificial Intelligence	2001
6	Ali	2001
7	Alias Betty	2001
8	All the Queen's Men	2001
9	Along Came a Spider	2001
10	Amélie	2001
11	America's Sweethearts	2001
12	American Desi	2001
13	American Outlaws	2001
14	American Pie 2	2001
15	Angel Eyes	2001
16	Antitrust	2001
17	Atlantis: The Lost Empire	2001
18	Ayurveda: Art of Being	2001

تمرين 19:

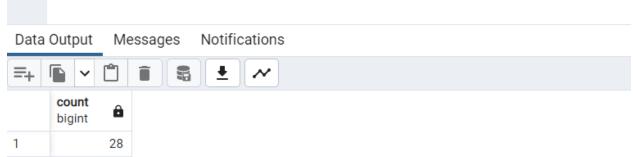


تمرين 20 :

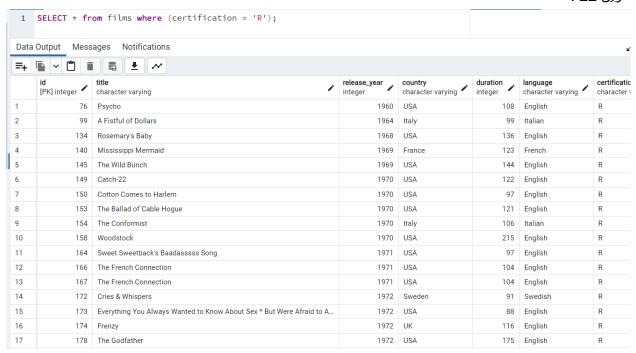


تمرين 21:

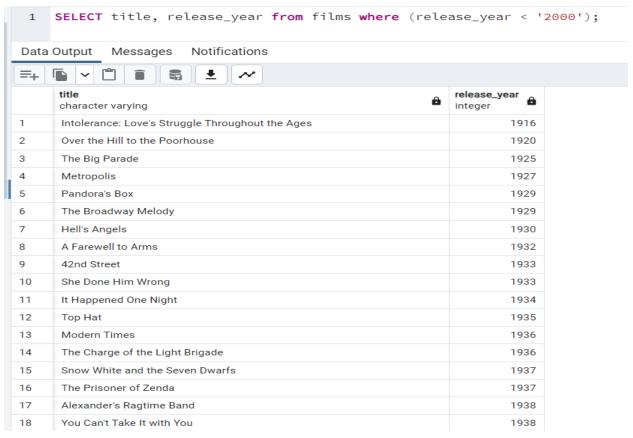
1 SELECT count (*) AS count from films where (language = 'Hindi');



تمرين 22 :



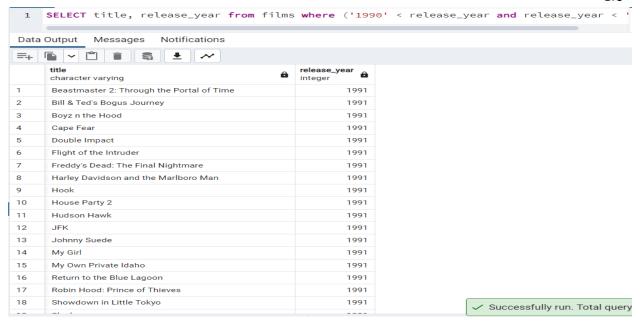
تمرين 23:



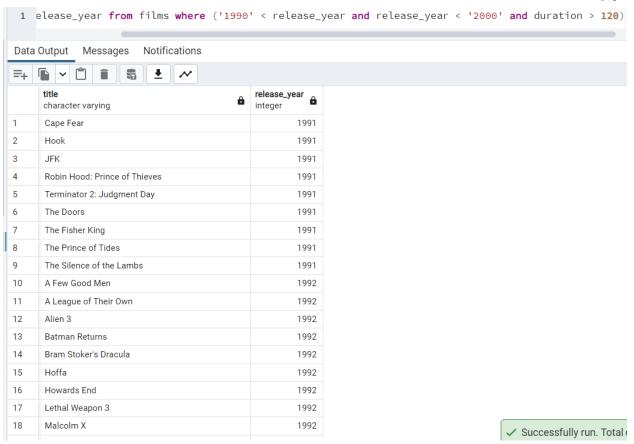
تمرين 24:

1 SELECT title, release_year from films where ('1990' < release_year and release_year < Data Output Messages Notifications # release_year title character varying integer Beastmaster 2: Through the Portal of Time 1991 1 2 Bill & Ted's Bogus Journey 1991 3 Boyz n the Hood 1991 4 Cape Fear 1991 5 Double Impact 1991 6 Flight of the Intruder 1991 Freddy's Dead: The Final Nightmare 1991 Harley Davidson and the Marlboro Man 8 1991 Hook 1991 10 House Party 2 1991 11 Hudson Hawk 1991 12 JFK 1991 13 Johnny Suede 1991 14 My Girl 1991 15 My Own Private Idaho 1991 Return to the Blue Lagoon 1991 16 17 Robin Hood: Prince of Thieves 1991 18 Showdown in Little Tokyo 1991

تمرين 25 :



تمرين 26:

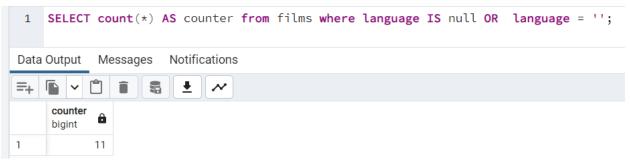


1 SELECT name from people where deathdate IS NULL;

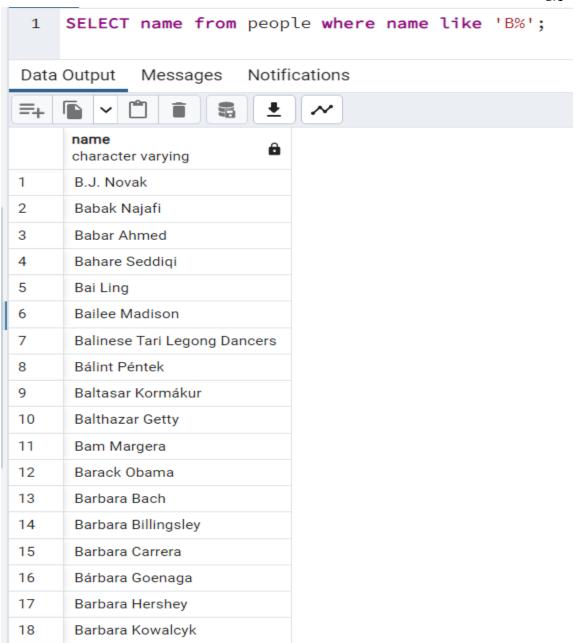
Data Output Messages Notifications



تمرين 28:

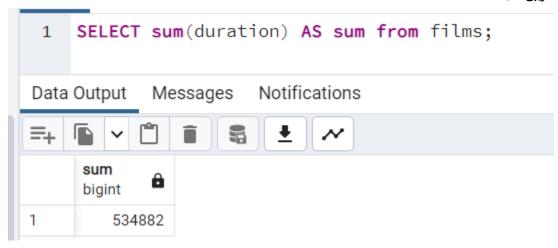


تمرين 29:

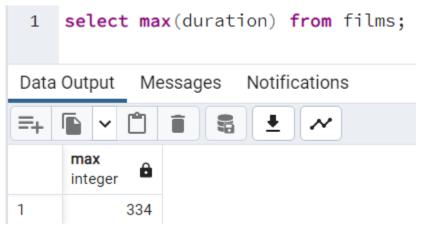


SELECT name from people where name like '_r%'; 1 Data Output Messages Notifications =+ name â character varying 1 Ara Celi 2 Aramis Knight 3 Arben Bajraktaraj 4 Arcelia Ramírez 5 Archie Kao Archie Panjabi 7 Aretha Franklin Ari Folman 8 Ari Gold 10 Ari Graynor Ari Kirschenbaum 11 Ari Sandel 12 13 Aria Noelle Curzon Ariana Neal 14 Ariana Richards 15 16 Ariane Labed 17 Ariane Schluter 18 Arie Posin

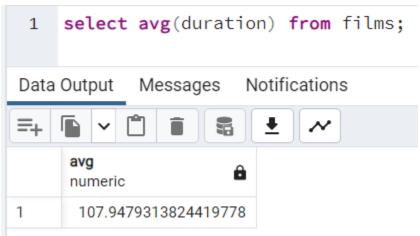
تمرين 31 :



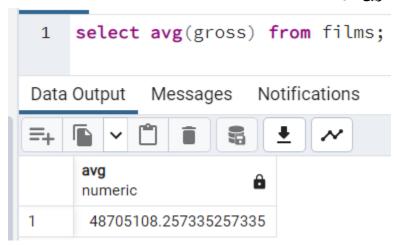
تمرين 32 :



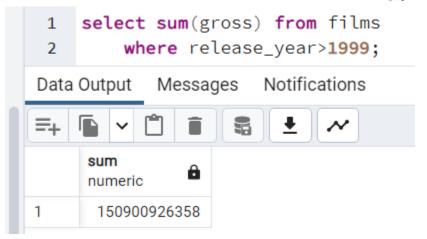
تمرين 33 :



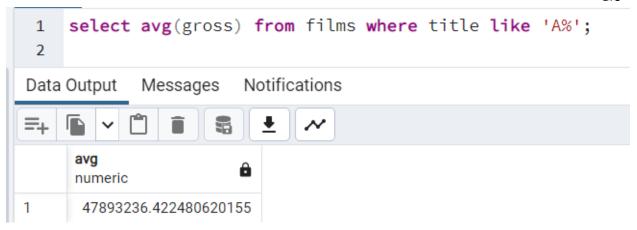
تمرين 34 :



تمرين 35 :



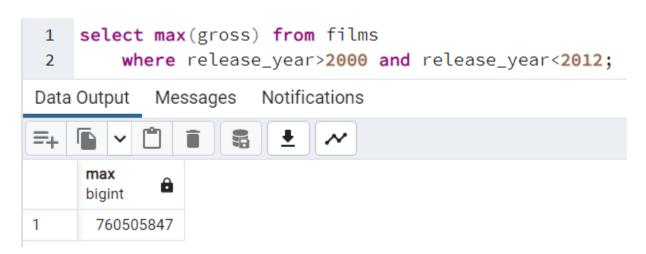
تمرين 36:



تمرين 37 :



سوال 38:



سوال 39 :



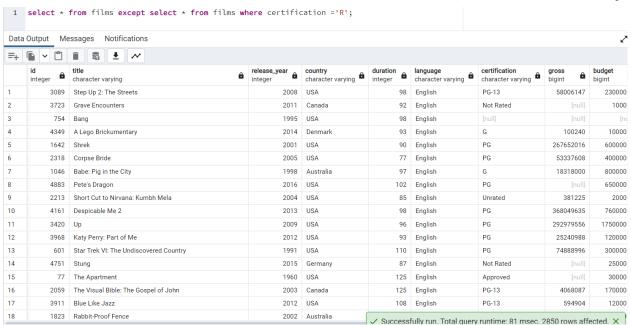
سوال 40:

1 Select count(distinct floor(10.0 / release_year)) AS number_decades from films;

Data Output Messages Notifications

The proof of the

سوال 41:



سوال 42 :

1 select title, gross as net_profit from films;

Data	Output Messages Notifications	
=+		
	title character varying	net_profit bigint
1	Intolerance: Love's Struggle Throughout the Ages	[null]
2	Over the Hill to the Poorhouse	3000000
3	The Big Parade	[null]
4	Metropolis	26435
5	Pandora's Box	9950
6	The Broadway Melody	2808000
7	Hell's Angels	[null
8	A Farewell to Arms	[null
9	42nd Street	2300000
10	She Done Him Wrong	[null
11	It Happened One Night	[null
12	Top Hat	3000000
13	Modern Times	163245
14	The Charge of the Light Brigade	[null
15	Snow White and the Seven Dwarfs	184925485
16	The Prisoner of Zenda	[null
17	Alexander's Ragtime Band	[null
18	You Can't Take It with You	[null]

سوال 43 :

Select title, duration/60 as duration_hours from films; Data Output Notifications Messages =+ title duration_hours integer character varying 1 Intolerance: Love's Struggle Throughout the Ages 2 2 Over the Hill to the Poorhouse 1 3 The Big Parade 2 4 Metropolis 2 5 Pandora's Box 1 6 The Broadway Melody 1 7 Hell's Angels 1 8 A Farewell to Arms 1 42nd Street 9 1 10 She Done Him Wrong 1 11 It Happened One Night 1 12 Top Hat 1 13 Modern Times 1 14 The Charge of the Light Brigade 1 15 Snow White and the Seven Dwarfs 1 The Prisoner of Zenda 16 1 Alexander's Ragtime Band 17 1 You Can't Take It with You 2 18

سوال 44:



Select name from people 1 Order by name; 2 Notifications Data Output Messages =+ name ۵ character varying 1 50 Cent 2 A. Michael Baldwin 3 A. Raven Cruz 4 A.J. Buckley A.J. DeLucia 5 A.J. Langer 6 7 Aaliyah 8 Aaron Ashmore 9 Aaron Hann 10 Aaron Hill 11 Aaron Hughes Aaron Kwok 12 Aaron Schneider 13 14 Aaron Seltzer Aaron Stanford 15 Aaron Staton 16 Aaron Yoo 17 Aasheekaa Bathija 18

سو ال 46: Select name from people Order by birthdate; 1 2 Notifications Messages Data Output =+ name ۵ character varying Robert Shaw 1 2 Lucille La Verne 3 Mary Carr 4 D.W. Griffith 5 Finlay Currie Lionel Barrymore 6 Billy Gilbert 7 8 Cecil B. DeMille Leopold Stokowski 9 Éric Tessier 10 Rex Baker 11 Billie Burke 12 John Reinhardt 13 14 Allan Dwan Georg Wilhelm Pabst 15 16 Harry F. Millarde

Rudolf Klein-Rogge

Deems Taylor

17

18

سوال 47 :

Select birthdate, name from people 2 Order by birthdate; Notifications Data Output Messages **≡**₊ birthdate name â date character varying 1 Robert Shaw 1837-10-10 Lucille La Verne 2 1872-11-07 3 1874-03-14 Mary Carr D.W. Griffith 4 1875-01-22 5 1878-01-20 Finlay Currie 1878-04-28 Lionel Barrymore 6 7 1880-03-21 Billy Gilbert 8 1881-08-12 Cecil B. DeMille 9 Leopold Stokowski 1882-04-18 Éric Tessier 10 1883-05-28 11 1884-02-08 Rex Baker 1884-08-07 Billie Burke 12 13 1885-03-11 John Reinhardt 14 Allan Dwan 1885-04-03 Georg Wilhelm Pabst 15 1885-08-25 16 1885-11-12 Harry F. Millarde 17 1885-11-24 Rudolf Klein-Rogge Deems Taylor 18 1885-12-22

1 Select title from films

11

Autumn in New York

Where release_year=2000 or release_year=2012

Order by release_year; 3 Notifications Data Output Messages =+ title â character varying 102 Dalmatians 1 2 28 Days 3 3 Strikes 4 Aberdeen All the Pretty Horses 5 6 Almost Famous 7 American Psycho Amores Perros 8 An Everlasting Piece 9 10 Anatomy

سوال 49 :

- 1 Select * from films
 2 Except Select * from films where release_year=2015
 3 Order by duration;

=+							
	id integer	title character varying	release_year integer	country character varying	duration integer	language character varying	certification character varying
	2926	The Touch	2007	USA	7	English	
	4098	Vessel	2012	USA	14	English	
3	2501	Wal-Mart: The High Cost of Low Price	2005	USA	20	English	Not Rated
	4929	Anger Management		USA	22	English	[null]
	4927	10,000 B.C.			22		
	4968	Yu-Gi-Oh! Duel Monsters	[null]	Japan	24	Japanese	[null]
	4944	Lovesick		UK	24	English	[null]
	4942	Jesse		USA	30	English	
	4937	Fired Up		USA	30	English	
0	4965	Wings		USA	30	English	[null]
1	4955	The Honeymooners		USA	30	English	[null]
2	4953	The Doombolt Chase		UK	30	English	
3	4945	Meet the Browns		USA	30	English	
4	566	Marilyn Hotchkiss' Ballroom Dancing and Charm School	1990	USA	34	English	
5	2829	Jesus People	2007	USA	35	English	
5	462	Evil Dead II	1987	USA	37	English	Х

- 1 Select title, gross from films
- where title like 'M%' order by title ASC;

Data Output Messages Notifications

=+		
	title character varying	gross bigint
1	MacGruber	8460995
2	Machete	26589953
3	Machete Kills	7268659
4	Machine Gun McCain	[null]
5	Machine Gun Preacher	537580
6	Mad City	10556196
7	Mad Hot Ballroom	8044906
8	Mad Max	[null]
9	Mad Max 2: The Road Warrior	9003011
10	Mad Max Beyond Thunderdome	36200000
11	Mad Max: Fury Road	153629485
12	Mad Money	20668843
13	Madadayo	48856
14	Madagascar	193136719
15	Madagascar 3: Europe's Most Wanted	216366733
16	Madagascar: Escape 2 Africa	179982968
17	Made	5308707