

DB Assignment 4

Administration Schemas Query 1

Limit to 1000 rows

132 foreign key (rental_id) references rental(rental_id);

133);

134

135 -- 1. average film length

136 SELECT

137 c.name AS category, -- Category name

138 ROUND(AVG(f.length), 2) AS avg_length_minutes

139 FROM category c

140 JOIN film_category fc ON fc.category_id = c.category_id -- Join to connect categories with films

141 JOIN film f ON f.film_id = fc.film_id -- Join to get each film's length

142 GROUP BY c.name

143 ORDER BY c.name;

100% 22:143

Result Grid

category	avg_length_minut...
Action	111.61
Animation	111.02
Children	109.80
Classics	111.67
Comedy	115.83
Documentary	108.75
Drama	120.54
Family	114.73
Foreign	121.70
Games	127.84
Horror	112.48
Music	113.66
New	111.13
Sci-Fi	108.20
Sports	128.20

Result 47

Action Output

Time	Action	Response	Duration / Fetch Time
218 22:34:50	WITH actor_counts AS (SELECT a.actor_id, -- Actor I...	1 row(s) returned	0.040 sec / 0.000055...
219 22:35:02	SELECT COUNT(DISTINCT l.film_id) AS distinct_movies_10_days -- Co...	1 row(s) returned	0.033 sec / 0.000010...
220 22:35:14	WITH cast_sizes AS (SELECT fa.film_id, -- Film ID CO...	15 row(s) returned	0.0086 sec / 0.00001...
221 22:37:13	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.016 sec / 0.000048...
222 23:05:22	SELECT c.name AS category, -- Category name ROUND(A...	16 row(s) returned	0.046 sec / 0.00006...

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145

146 -- 2 Which categories have the longest and shortest average film lengths?

147 WITH avg_lengths AS (

148 SELECT

149 c.name AS category, -- Category name

150 AVG(f.length) AS avg_len -- Average film length

151 FROM category c

152 JOIN film_category fc ON fc.category_id = c.category_id -- Join to link films and categories

153 JOIN film f ON f.film_id = fc.film_id -- Get each film's length

154 GROUP BY c.name -- Group by category

155)

156 SELECT

157 'longest' AS type,

158 category,

159 ROUND(avg_len, 2) AS avg_length_minutes

160 FROM avg_lengths

161 WHERE avg_len = (SELECT MAX(avg_len) FROM avg_lengths) -- Long category

162 UNION ALL

163 SELECT

164 'shortest', category, ROUND(avg_len, 2)

165 FROM avg_lengths

166 WHERE avg_len = (SELECT MIN(avg_len) FROM avg_lengths); -- Short category

100% 1:166

Result Grid

type	category	avg_length_minut...
longest	Sports	128.20
shortest	Sci-Fi	108.20

Result 48

Action Output

Time	Action	Response	Duration / Fetch Time
219 22:35:02	SELECT COUNT(DISTINCT l.film_id) AS distinct_movies_10_days -- Co...	1 row(s) returned	0.033 sec / 0.000010...
220 22:35:14	WITH cast_sizes AS (SELECT fa.film_id, -- Film ID CO...	15 row(s) returned	0.0086 sec / 0.00001...
221 22:37:13	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.016 sec / 0.000048...
222 23:05:22	SELECT c.name AS category, -- Category name ROUND(A...	16 row(s) returned	0.046 sec / 0.00006...
223 23:06:23	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.026 sec / 0.000018...

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Limit to 1000 rows

```

173 FROM customer cu
174 WHERE EXISTS (
175     SELECT 1
176     FROM rental r
177     JOIN inventory i ON i.inventory_id = r.inventory_id -- Connect rentals to inventory
178     JOIN film_category fc ON fc.film_id = i.film_id -- Link inventory to films
179     JOIN category c ON c.category_id = fc.category_id
180     WHERE r.customer_id = cu.customer_id
181     AND c.name = 'Action' -- Must have rented an Action movie
182 )
183 AND NOT EXISTS ( -- cannot rent comedy or classics
184

```

Result Grid

customer_id	first_name	last_name
433	CON	BONE
432	EDWIN	BURK
139	AMBER	DIXON
223	MELINDA	FERNANDEZ
445	MICHAEL	FORMAN
250	JO	FOWLER
350	JUAN	FRILEY
164	JOANN	GARDNER
361	LAWRENCE	LAWTON
323	MATTHEW	MAHAN
452	TOM	MILNER
232	CONSTAN	REID
330	SCOTT	SHELLEY
17	DOONNA	THOMPSON
171	DOLORES	WAGNER
90	RUBY	WASHINGTON...
213	GINA	WILLIAMSON

Action Output

Time	Action	Response	Duration / Fetch Time
220 22:35:14	WITH cast_sizes AS (SELECT fa.film_id, -- Film ID CO...	15 row(s) returned	0.0086 sec / 0.00001...
221 22:37:13	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.016 sec / 0.000048...
222 23:05:22	SELECT c.name AS category, -- Category name ROUND(A...	16 row(s) returned	0.046 sec / 0.00006...
223 23:06:23	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.026 sec / 0.000018...
224 23:06:59	SELECT DISTINCT cu.customer_id, -- Customer ID cu.firs...	17 row(s) returned	0.111 sec / 0.000014...

Administration Schemas Query 1

Limit to 1000 rows

```

197 SELECT
198     a.actor_id, -- Actor ID
199     a.first_name, -- First name
200     a.last_name, -- Last name
201     COUNT(DISTINCT f.film_id) AS english_films -- distinct english films
202 FROM actor a
203 JOIN film_actor fa ON fa.actor_id = a.actor_id
204 JOIN film f ON f.film_id = fa.film_id
205 JOIN language l ON l.language_id = f.language_id
206 WHERE l.name = 'English' -- filter only english
207 GROUP BY a.actor_id, a.first_name, a.last_name -- group by actor
208 )
209
210 SELECT
211     actor_id,
212     first_name,
213     last_name,
214     english_films
215 FROM actor_counts
216 WHERE english_films = (SELECT MAX(english_films) FROM actor_counts)
217 ORDER BY last_name, first_name;
218

```

Result Grid

actor_id	first_name	last_name	english_films
107	GINA	DEGENERES	42

Action Output

Time	Action	Response	Duration / Fetch Time
222 23:05:22	SELECT c.name AS category, -- Category name ROUND(A...	16 row(s) returned	0.046 sec / 0.00006...
223 23:06:23	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.026 sec / 0.000018...
224 23:06:59	SELECT DISTINCT cu.customer_id, -- Customer ID cu.firs...	17 row(s) returned	0.111 sec / 0.000014...
225 23:07:28	WITH actor_counts AS (SELECT a.actor_id, -- Actor ID...	1 row(s) returned	0.044 sec / 0.00002...
226 23:07:28	-	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to yo...	0.392 sec

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Administration Schemas Query 1

Limit to 1000 rows

SCHEMAS

Filter objects

- class_examples
- Hw3
- Hw4
 - Tables
 - actor
 - address
 - category
 - city
 - country
 - customer
 - film_actor
 - film_category
 - inventory
 - language
 - language_id
 - name
 - Indexes
 - Foreign Keys
 - Triggers
 - payment
 - rental
 - staff
 - store
 - Views
 - Stored Procedures
 - Functions
- Papa_Johns
- sakila
- sys

```

215 FROM actor_counts
216 WHERE english_films = (SELECT MAX(english_films) FROM actor_counts)
217 ORDER BY last_name, first_name;
218
219 -- 5. distinct films rented for exactly 10 days from the store managed by Mike
220
221 SELECT
222   COUNT(DISTINCT i.film_id) AS distinct_movies_10_days -- Count unique film IDs
223 FROM rental r
224 JOIN inventory i ON i.inventory_id = r.inventory_id
225 JOIN store s ON s.store_id = i.store_id
226 WHERE s.store_id = (
227   SELECT st.store_id
228   FROM staff st
229   WHERE st.first_name = 'Mike' -- Find store managed by mike
230   LIMIT 1
231 )
232 AND r.return_date IS NOT NULL
233 AND DATEDIFF(r.return_date, r.rental_date) = 10; -- rented exactly for 10 days
234
235

```

Result Grid

distinct_movies_10_da...
61

Result 61

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	223 23:06:23	WITH avg_lengths AS (SELECT c.name AS category, -- Ca...	2 row(s) returned	0.026 sec / 0.000018...
✓	224 23:06:59	SELECT DISTINCT cu.customer_id, -- Customer ID cu.firs...	17 row(s) returned	0.111 sec / 0.000014...
✓	225 23:07:28	WITH actor_counts AS (SELECT a.actor_id, -- Actor l...	1 row(s) returned	0.044 sec / 0.00002...
✗	226 23:07:28	-	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to yo...	0.392 sec
✓	227 23:08:28	SELECT COUNT(DISTINCT i.film_id) AS distinct_movies_10_days -- Co...	1 row(s) returned	0.037 sec / 0.000014...

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SCHEMAS

Filter objects

- class_examples
- Hw3
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 - actor
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 - store
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- sakila
- sys

```

236 -- 6. largest number of actors and list all actors who appear in those movies.
237
238 WITH cast_sizes AS (
239   SELECT
240     fa.film_id, -- Film ID
241     COUNT(*) AS cast_count -- Number of actors in each film
242   FROM film_actor fa
243   GROUP BY fa.film_id -- Group by film to get cast size
244 ),
245 max_cast AS (
246   SELECT film_id
247   FROM cast_sizes

```

Result Grid

actor_id	first_name	last_name
47	JULIA	BARRYMORE
37	VAL	BOLGER
81	SCARLETT	DAMON
138	LUCILLE	DEE
28	WOODY	HOFFMAN
170	MENA	HOPPER
45	REESE	KILMER
61	CHRISTIAN	NEESON
150	JAYNE	NOLIE
75	BURT	POSEY
53	MENA	TEMPLE
102	WALTER	TORN
147	PAY	WINSLEY
111	CAMERON	ZELLWEGER
188	JULIA	ZELLWEGER

Result 52

Action Output

	Time	Action	Response	Duration / Fetch Time
✓	224 23:06:59	SELECT DISTINCT cu.customer_id, -- Customer ID cu.firs...	17 row(s) returned	0.111 sec / 0.000014...
✓	225 23:07:28	WITH actor_counts AS (SELECT a.actor_id, -- Actor l...	1 row(s) returned	0.044 sec / 0.00002...
✗	226 23:07:28	-	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to yo...	0.392 sec
✓	227 23:08:28	SELECT COUNT(DISTINCT i.film_id) AS distinct_movies_10_days -- Co...	1 row(s) returned	0.037 sec / 0.000014...
✓	228 23:08:45	WITH cast_sizes AS (SELECT fa.film_id, -- Film ID CO...	15 row(s) returned	0.012 sec / 0.000017...