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1  -- AUFGABE 2
2  -- Solution with HAVING
3  SELECT human_name, COUNT(*) AS disaster_count
4  FROM affects
5  GROUP BY human_name, human_birthday
6  HAVING COUNT(*) > 2;
7
8  -- Solution with Subquery (WARNING)
9  SELECT human_name, disaster_count
10 FROM (
11     SELECT human_name, COUNT(*) AS disaster_count
12     FROM affects
13     GROUP BY human_name, human_birthday
14 ) AS subquery
15 WHERE disaster_count > 2;
16 -----
17
18 -- AUFGABE 4
19 -- Solution with less lines of code
20 SELECT
21     c.god_name,
22     MIN(d.death_toll) AS min_killed,
23     MAX(d.death_toll) AS max_killed,
24     AVG(d.death_toll) AS avg_killed
25 FROM caused AS c
26 JOIN disaster AS d ON c.did = d.did
27 JOIN worships AS w ON c.god_name = w.god_name
28 WHERE c.god_name NOT IN (
29     SELECT c2.god_name
30     FROM caused AS c2
31     JOIN disaster AS d2 ON c2.did = d2.did
32     WHERE d2.date > '0037-09-02'
33 )
34 GROUP BY c.god_name
35 HAVING COUNT(DISTINCT c.did) >= 3
36     AND COUNT(DISTINCT (w.human_name, w.human_birthday)) > 3;
37
38 --Solution with set operations (WARNING)
39 SELECT
40     subquery.god_name,
41     MIN(d.death_toll) AS min_killed,
42     MAX(d.death_toll) AS max_killed,
43     AVG(d.death_toll) AS avg_killed
44 FROM
45     (
46     (
47     SELECT god_name
48     FROM caused
49     GROUP BY god_name
50     HAVING COUNT(*) >= 3
51
52     INTERSECT
53
54     SELECT g.name
55     FROM god AS g
56     JOIN worships AS w ON g.name = w.god_name
57     GROUP BY g.name
58     HAVING COUNT(*) > 3
59     )
60
61     EXCEPT
62
63     SELECT c.god_name
64     FROM caused AS c
65     JOIN disaster AS d ON c.did = d.did
66     WHERE date > '0037-09-02'
67     ) AS subquery
68 JOIN caused AS c ON subquery.god_name = c.god_name
69 JOIN disaster AS d ON c.did = d.did
70 GROUP BY subquery.god_name;
71 -----
72
73 -- AUFGABE 5

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74  (
75      SELECT
76          g.name AS name,
77          c.reason AS reason,
78          d.death_toll AS death_toll
79      FROM god AS g
80      JOIN caused AS c ON g.name = c.god_name
81      JOIN disaster AS d ON c.did = d.did
82      WHERE g.name NOT LIKE 'Z%'
83           AND d.death_toll >= 8
84
85      UNION
86
87      SELECT
88          g.name AS name,
89          'oh - so you are a good god' AS reason,
90          NULL AS death_toll
91      FROM god AS g
92      WHERE g.name NOT LIKE 'Z%'
93           AND g.name NOT IN (
94               SELECT DISTINCT g.name
95               FROM god AS g
96               JOIN caused AS c ON g.name = c.god_name
97               JOIN disaster AS d ON c.did = d.did
98               WHERE d.death_toll >= 8
99          )
100 )
101 ORDER BY name ASC, death_toll ASC;
102 -----
103
104 -- AUFGABE 6
105 SELECT
106     d.name,
107     COALESCE(h.description, 'did nothing heroic') AS description,
108     COALESCE(m.monster_name, 'killed no dangerous monster') AS monster_name
109 FROM demigod d
110 LEFT JOIN heroic_deed h ON d.name = h.demigod_name
111 LEFT JOIN (
112     SELECT k.demigod_name, k.date, m.name AS monster_name, m.kill_count
113     FROM killed k
114     JOIN monster m ON k.mid = m.mid
115     WHERE m.kill_count > 5
116 ) AS m ON h.demigod_name = m.demigod_name AND h.date = m.date;
117
118 -----
119
120 -- AUFGABE 8
121 SELECT
122     h.name,
123     h.birthday,
124     h.home_town,
125     SUM(o.amount) AS total_items
126 FROM (
127     SELECT DISTINCT ot.human_name, ot.human_birthday, ot.oid
128     FROM offered_to ot
129 ) AS unique_ot
130 JOIN offering o ON unique_ot.oid = o.oid
131 JOIN human h ON unique_ot.human_name = h.name
132 AND unique_ot.human_birthday = h.birthday
133 GROUP BY h.name, h.birthday
134 HAVING SUM(o.amount) = (
135     SELECT MAX(total_items)
136     FROM (
137         SELECT
138             SUM(o.amount) AS total_items
139         FROM (
140             SELECT DISTINCT ot.human_name, ot.human_birthday, ot.oid
141             FROM offered_to ot
142         ) AS unique_ot_inner
143         JOIN offering o ON unique_ot_inner.oid = o.oid
144         JOIN human h ON unique_ot_inner.human_name = h.name
145         AND unique_ot_inner.human_birthday = h.birthday
146         GROUP BY h.name, h.birthday

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147     ) AS subquery
148 );
149
150 -----
151
152 -- AUFGABE 11
153 SELECT d.did, d.date
154 FROM disaster d
155 JOIN affects a ON d.did = a.did
156 JOIN human h ON a.human_name = h.name AND a.human_birthday = h.birthday
157 WHERE d.death_toll > 5 AND h.home_town LIKE 'A%'
158 GROUP BY d.did, d.date
159 HAVING COUNT(DISTINCT h.home_town) = (
160     SELECT COUNT(DISTINCT h.home_town)
161     FROM disaster d
162     JOIN affects a ON d.did = a.did
163     JOIN human h ON a.human_name = h.name AND a.human_birthday = h.birthday
164     WHERE d.death_toll > 5 AND h.home_town LIKE 'A%'
165 )
166 ORDER BY d.did;
167 -----
168
169 -- AUFGABE 12
170 SELECT d.name AS demigod_name,
171        COALESCE(s.human_count, 0) AS human_count,
172        COALESCE(h.harpy_count, 0) AS harpy_count,
173        COALESCE(c.cyclops_count, 0) AS cyclops_count
174 FROM demigod d
175 LEFT JOIN (
176     SELECT demigod_name, COUNT(*) AS human_count
177     FROM saved
178     GROUP BY demigod_name
179 ) AS s ON d.name = s.demigod_name
180 LEFT JOIN (
181     SELECT k.demigod_name, COUNT(*) AS harpy_count
182     FROM killed k
183     JOIN monster m ON k.mid = m.mid
184     JOIN harpy h ON m.mid = h.mid
185     WHERE h.hair_color = 'red' AND m.kill_count > 0
186     GROUP BY k.demigod_name
187 ) AS h ON d.name = h.demigod_name
188 LEFT JOIN (
189     SELECT k.demigod_name, COUNT(*) AS cyclops_count
190     FROM killed k
191     JOIN monster m ON k.mid = m.mid
192     JOIN cyclops c ON m.mid = c.mid
193     WHERE c.eye_color = 'red' AND m.kill_count > 0
194     GROUP BY k.demigod_name
195 ) AS c ON d.name = c.demigod_name
196 WHERE COALESCE(s.human_count, 0) + COALESCE(h.harpy_count, 0) +
197        COALESCE(c.cyclops_count, 0) > 7
198 ORDER BY d.name ASC;
199 -----

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