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1  drop table Passer;
2  drop table UV;
3  drop table Etudiants;
4  drop table Classes;
5  drop table Profs;
6
7  create table Profs(
8  codeProf char(2),
9  nomProf varchar(30),
10 prenomProf varchar(30),
11 sexeProf char(1),
12 typeProf varchar(9),
13 dateProf date,
14 constraint pk_codeProf primary key (codeProf),
15 constraint ck_typeProf check (typeProf='Titulaire' or typeProf='Vacataire'),
16 constraint nn_typeProf check (typeProf is not null),
17 constraint ck_sexeProf check (sexeProf='M' or sexeProf='F'),
18 constraint nn_sexeProf check (sexeProf is not null),
19 constraint nn_nomProf check (nomProf is not null)
20 );
21
22 create table Classes(
23 nomClasse char(2),
24 codeProfPrincipal char(2),
25 constraint pk_nomClasse primary key (nomClasse),
26 constraint fk_codeProfPrincipal foreign key (codeProfPrincipal) references
27 Profs(codeProf),
28 constraint un_codeProf unique (codeProfPrincipal),
29 constraint nn_codeProf check (codeProfPrincipal is not null)
30 );
31
32 create table Etudiants(
33 numEtudiant char(2),
34 nomEtudiant varchar(30),
35 prenomEtudiant varchar(30),
36 classeEtudiant char(2),
37 numEtudiantParrain char(2),
38 constraint pk_numEtudiant primary key (numEtudiant),
39 constraint fk_classeEtudiant foreign key (classeEtudiant) references
40 Classes(nomClasse),
41 constraint fk_numEtudiantParrain foreign key (numEtudiantParrain) references
42 Etudiants(numEtudiant),
43 constraint nn_nomEtudiant check (nomEtudiant is not null),
44 constraint nn_classeEtudiant check (classeEtudiant is not null)
45 );
46
47 create table UV(
48 codeUV char(2),
49 nomUV varchar(20),
50 nomComposante varchar(30),
51 codeProfResponsable char(2),
52 constraint pk_codeUV primary key (codeUV),
53 constraint fk_codeProfResponsable foreign key (codeProfResponsable) references
54 Profs(codeProf),
55 constraint nn_codeProfResponsable check (codeProfResponsable is not null)
56 );
57
58 create table Passer(
59 numEtudiant char(2),
60 codeUV char(2),
61 note number(2,0),
62 constraint pk_numEtudiant_codeUV primary key (numEtudiant,codeUV),
63 constraint fk_numEtudiant foreign key (numEtudiant) references Etudiants(numEtudiant),
64 constraint fk_codeUV foreign key (codeUV) references UV(codeUV),
65 constraint vingt_note check (note<=20),
66 constraint positif_note check (note>=0)
67 );
68
69 3)Insertion;
70 table prof

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70 insert into Profs (codeProf,nomProf,prenomProf,sexeProf,typeProf,dateProf)
values ('P1','Palleja','Xavier','M','Titulaire','11/04/1966');
71 insert into Profs (codeProf,nomProf,prenomProf,sexeProf,typeProf,dateProf)
values ('P2','Palleja','Nathalie','F','Vacataire','17/11/1982');
72 insert into Profs (codeProf,nomProf,prenomProf,sexeProf,typeProf,dateProf)
values ('P3','Mugnier','Marie-Laure','F','Titulaire','02/09/1970');
73 insert into Profs (codeProf,nomProf,prenomProf,sexeProf,typeProf,dateProf)
values ('P4','Garcia','Francis','M','Titulaire','26/06/1969');
74 insert into Profs (codeProf,nomProf,prenomProf,sexeProf,typeProf,dateProf)
values ('P5','Bellahsene','Zohra','F','Titulaire','01/01/1967');
75 insert into Profs (codeProf,nomProf,prenomProf,sexeProf,typeProf,dateProf)
values ('P6','Zozo','bd','F','Titulaire','01/01/1992');
76
77 table classes
78
79 insert into Classes (nomClasse,codeProfPrincipal) values ('S1','P3');
80 insert into Classes (nomClasse,codeProfPrincipal) values ('S2','P5');
81
82 table etudiant
83
84 insert into
Etudiants (numEtudiant,nomEtudiant,prenomEtudiant,classeEtudiant,numEtudiantParrain) val
ues ('E1','Zétofraï', 'Mélanie', 'S1', null);
85 insert into
Etudiants (numEtudiant,nomEtudiant,prenomEtudiant,classeEtudiant,numEtudiantParrain) val
ues ('E2','Bricot', 'Judas', 'S2', 'E1');
86 insert into
Etudiants (numEtudiant,nomEtudiant,prenomEtudiant,classeEtudiant,numEtudiantParrain) val
ues ('E3','Némard', 'Jean', 'S1', 'E2');
87 insert into
Etudiants (numEtudiant,nomEtudiant,prenomEtudiant,classeEtudiant,numEtudiantParrain) val
ues ('E4','Zéblouze', 'Agathe', 'S1', 'E1');
88 insert into
Etudiants (numEtudiant,nomEtudiant,prenomEtudiant,classeEtudiant,numEtudiantParrain) val
ues ('E5','Ouzy', 'Jacques', 'S2', 'E3');
89
90 table UV
91
92 insert into
UV (codeUV,nomUV,nomComposante,codeProfResponsable) values ('01','PROG','Informatique','P
1');
93 insert into
UV (codeUV,nomUV,nomComposante,codeProfResponsable) values ('02','IHM','Communication','P
3');
94 insert into
UV (codeUV,nomUV,nomComposante,codeProfResponsable) values ('03','PROG','Informatique','P
4');
95
96 table passer
97
98 insert into Passer (numEtudiant,codeUV,note) values ('E1','01','13');
99 insert into Passer (numEtudiant,codeUV,note) values ('E1','02','20');
100 insert into Passer (numEtudiant,codeUV,note) values ('E1','03','9');
101 insert into Passer (numEtudiant,codeUV,note) values ('E3','02','10');
102 insert into Passer (numEtudiant,codeUV,note) values ('E3','03','15');
103 insert into Passer (numEtudiant,codeUV,note) values ('E4','01',null);
104 insert into Passer (numEtudiant,codeUV,note) values ('E4','03','18');
105 insert into Passer (numEtudiant,codeUV,note) values ('E5','02','9');
106
107
108 4)modification
109
110
111 alter table Etudiants add (dateNaissance date);
112
113
114 5)insertion date
115
116 update Etudiants set dateNaissance='17/11/1992' where numEtudiant='E1';
117 update Etudiants set dateNaissance='18/10/1993' where numEtudiant='E2';
118 update Etudiants set dateNaissance='02/09/1992' where numEtudiant='E3';
119 update Etudiants set dateNaissance='25/12/1992' where numEtudiant='E4';
120 update Etudiants set dateNaissance='25/12/1989' where numEtudiant='E5';

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121
122
123 6) passer
124
125 update Passer set note=8 where numEtudiant='E4' and codeUV='01';
126
127
128 7)requetes
129
130 R01:
131 select nomEtudiant,prenomEtudiant
132 from Etudiants
133 where dateNaissance between '01/01/1992' and '31/12/1992';
134
135 R02:
136 select nomProf,prenomProf
137 from Profs p
138 join Classes c on codeProf=codeProfPrincipal
139 join Etudiants e on nomClasse=classeEtudiant
140 where nomEtudiant='Ouzy' and prenomEtudiant='Jacques';
141
142 R03:
143 select nomEtudiant,prenomEtudiant
144 from Etudiants e1
145 join Etudiants e2 on e2.numEtudiant=e1.numEtudiantParrain
146 where nomEtudiant='Ouzy' and prenomEtudiant='Jacques';
147
148 R04:
149 select count(distinct numEtudiant)
150 from Etudiants
151 where classeEtudiant='S1';
152
153
154 R05:
155 select nomEtudiant,prenomEtudiant
156 from Etudiants
157 where numEtudiant in(
158 select numEtudiant
159 from Etudiants
160 minus
161 select numEtudiant
162 from Passer);
163
164 R06:
165 select nomUV
166 from UV
167 where codeUV in(
168 select codeUV
169 from Passer p
170 join Etudiants e on e.numEtudiant=p.numEtudiant
171 where prenomEtudiant='Agathe' and nomEtudiant='Zéblouze'
172 INTERSECT
173 select codeUV
174 From Passer p
175 join Etudiants e on e.numEtudiant=p.numEtudiant
176 where prenomEtudiant='Jean' and nomEtudiant='Némard'
177 );
178
179
180 R07:
181 select classeEtudiant, count(*)
182 from Etudiants
183 group by classeEtudiant
184 order by classeEtudiant;
185
186 R08:
187 select nomEtudiant,prenomEtudiant,avg(note)
188 from Etudiants e
189 join Passer p on e.numEtudiant=p.numEtudiant
190 group by e.numEtudiant,nomEtudiant,prenomEtudiant
191 order by avg(note);
192
193 R09:

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194 select e.numEtudiant,nomEtudiant,prenomEtudiant
195 from Etudiants e
196 join Passer p on e.numEtudiant=p.numEtudiant
197 group by e.numEtudiant,nomEtudiant,prenomEtudiant
198 having count(distinct codeUV)<3;
199
200 R09bis:
201 select e.numEtudiant,nomEtudiant,prenomEtudiant
202 from Etudiants e
203 left join Passer p on e.numEtudiant=p.numEtudiant
204 group by e.numEtudiant,nomEtudiant,prenomEtudiant
205 having count(distinct codeUV)<3;
206
207 R10:
208 select nomEtudiant,prenomEtudiant
209 from Etudiants e
210 join Passer p on e.numEtudiant=p.numEtudiant
211 group by e.numEtudiant,nomEtudiant,prenomEtudiant
212 having avg(note)<13 and count(distinct codeUV)>1;
213
214 R11:
215 select nomProf,prenomProf
216 from Profs
217 where codeProf in(
218 select codeProf
219 from Profs
220 minus
221 select codeProfResponsable
222 from UV
223 minus
224 select codeProfPrincipal
225 from Classes);
226
227 R12:
228 select nomProf,prenomProf
229 from Profs
230 where dateProf>(
231 select min(dateNaissance)
232 from Etudiants);
233
234 R13:
235 select numEtudiant,nomEtudiant,prenomEtudiant
236 from Etudiants
237 where numEtudiant in(
238 select numEtudiant
239 from Passer
240 minus
241 select numEtudiant
242 from Passer
243 where note<10);
244
245 R14:
246 select nomEtudiant,prenomEtudiant
247 from Etudiants e
248 join Passer p on e.numEtudiant=p.numEtudiant
249 join UV u on u.codeUV=p.codeUV
250 where nomUV='BD' and note=(
251 select min(note)
252 from Passer p
253 join UV u on u.codeUV=p.codeUV
254 where nomUV='BD');
255
256 R15:
257 select nomEtudiant,prenomEtudiant
258 from Etudiants
259 where numEtudiant in(
260 select numEtudiant
261 from Passer
262 group by numEtudiant
263 having avg(note)=(
264 select max(avg(note))
265 from Passer
266 group by numEtudiant));

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267
268 R16:
269 select nomUV
270 from UV
271 where codeUV in(
272 select codeUV
273 from Passer p
274 join Etudiants e on e.numEtudiant=p.numEtudiant
275 where prenomEtudiant='Jacques' and nomEtudiant='Ouzy'
276 UNION
277 select codeUV
278 From Passer p
279 join Etudiants e on e.numEtudiant=p.numEtudiant
280 where prenomEtudiant='Jean' and nomEtudiant='Némard'
281 minus
282 select codeUV
283 from Passer p
284 join Etudiants e on e.numEtudiant=p.numEtudiant
285 where prenomEtudiant='Jacques' and nomEtudiant='Ouzy'
286 INTERSECT
287 select codeUV
288 From Passer p
289 join Etudiants e on e.numEtudiant=p.numEtudiant
290 where prenomEtudiant='Jean' and nomEtudiant='Némard');
291
292 R17:
293 select nomEtudiant,prenomEtudiant,nomUV
294 from Passer p
295 join (select codeUV as uv ,max(note) as noteMAx
296 from Passer
297 group by codeUV) a on uv=p.codeUV and noteMAx=note
298 join Etudiants e on e.numEtudiant=p.numEtudiant
299 join UV u on u.codeUV=p.codeUV;
300
301
302 R18:
303 select distinct codeUV
304 from passer
305 natural join UV u
306 where codeUV in(
307 select codeUV
308 from Passer
309 group by codeUV
310 having avg(note) in (
311 select min(avg(note))
312 from Passer
313 natural join UV u1
314 where u1.nomComposante=u.nomComposante
315 group by codeUV));
316
317
318
319
320
321

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