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4  #
5  # Conventions:
6  # - Entity table names start with a single capital letter,
7  #   words separated by underscores
8  # - Relationship table names are all capitals, words separated
9  #   by underscores
10 #
11 # NOTE: there are several integrity constraints mentioned that
12 # we could not yet capture (i.e. that the attribute "amount" in
13 # the entity set Donations be nonnegative).
14 #
15 # NOTE: the size of char attributes is subject to change, the
16 # current values were our best estimates of our needs.
17 #
18 # NOTE: we could not fully capture the PROPOSE relationship,
19 # specifically, we could not enforce the total participation
20 # of teacher entities in the PROPOSE relationship. In order
21 # to do this, we'll need to use queries that we have yet to
22 # learn how to implement.
23 create table Projects_PROPOSE_AT(
24     pid integer,
25     fundURL char(300),
26     fundingStatus char(50),
27     fulfillmentTrailer char(300),
28     expirationDate date,
29     totalPrice real,
30     title char(100),
31     subject char(100),
32     shortDescription char(500),
33     proposalURL char(300) not null,
34     percentFunded real,
35     imageURL char(300),
36     numStudents integer,
37     tid int not null,
38     tName char(200) not null,
39     ncesId char(300) not null,
40     primary key (pid),
41     unique (proposalURL),
42     foreign key (tid, tName) references Teachers (tid, name)
43         on delete no action
44         on update cascade,
45     foreign key (ncesId) references Schools (ncesId)
46         on delete no action
47         on update cascade
48 );
49
50 create table Teachers(
51     tid int,
52     name char(200) not null,
53     primary key (tid)
54 );
55
56 create table Users(
57     email char(200),
58     displayName char(200) not null,
59     password char(128) not null,
60     passwordSalt char(200) not null,
61     primary key (email)
62 );
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63
64 create table Donations_FUND(
65     tid int not null,
66     pid int not null,
67     email char(200) not null,
68     amount real not null,
69     donationDate date,
70     did int,
71     primary key (did),
72     foreign key (tid, pid) references PROPOSE(tid, pid),
73     foreign key (email) references Users
74 );
75
76 create table Comments_ABOUT(
77     tid int not null,
78     pid int not null,
79     comment char(500) not null,
80     cDate date,
81     email char(200),
82     primary key (cDate, email),
83     foreign key (email) references Users
84         on delete no action
85         on update cascade,
86     foreign key (tid, pid) references PROPOSE(tid, pid)
87         on delete cascade
88         on update cascade
89 );
90
91 create table VOTE(
92     vDate date,
93     tid int,
94     pid int,
95     email char(200),
96     primary key (tid, pid, email),
97     foreign key (email) references Users
98         on delete no action
99         on update cascade,
100     foreign key (tid, pid) references PROPOSE(tid, pid)
101         on delete cascade
102         on update cascade
103 );
104
105 create table Schools_S_IN_S_HAVE(
106     ncesId char(50),
107     name char(300),
108     avgClassSize real,
109     povertyLevel char(50),
110     avgMathSATScore int,
111     avgReadingSATScore int,
112     avgWritingSATScore int,
113     currentGrade char(2),
114     progressGrade char(2),
115     graduationRate real,
116     percentAPAbove2 real,
117     dNumber int not null,
118     streetNumber char(10) not null,
119     streetName char(150) not null,
120     zipcode int not null,
121     primary key (ncesId),
122     foreign key (dNumber) references School_Districts_D_IN
123         on delete no action
124         on update cascade,
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125     foreign key (streetNumber, streetName, zipcode) references
126                               Addresses(streetNumber, streetName, zipCode)
127                               on delete no action
128                               on update cascade
129 );
130
131 create table Addresses(
132     latitude real,
133     longitude real,
134     streetNumber char(10),
135     streetName char(150),
136     zipcode int,
137     primary key (streetNumber, streetName, zipcode)
138 );
139
140 create table Districts_D_IN(
141     avgAttendance real,
142     precentRecvPublicAsst real,
143     dNumber int,
144     bName char(100) not null,
145     primary key (dNumber),
146     foreign key (bName) references Boroughs
147 );
148
149 create table Boroughs(
150     bName char(100),
151     primary key(bName)
152 );
153
154 create table After_School_Programs_A_HAVE(
155     aid int,
156     name char(300) not null,
157     programType char(300),
158     agencyName char(300),
159     organizationName char(300),
160     elementaryLevel boolean,
161     middleSchoolLevel boolean,
162     highSchoolLevel boolean,
163     organizationPhoneNumber char(20),
164     streetNumber char(10) not null,
165     streetName char(150) not null,
166     zipcode int not null,
167     primary key (aid),
168     foreign key (streetNumber, streetName, zipcode) references
169                               Addresses(streetNumber, streetName, zipCode)
170                               on delete no action
171                               on update cascade
172 );
```