Relationales Schema: Design

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Designentscheidungen

Das Design des Datenmodells deckt sich in unserem Fall größtenteils mit dem Objektmodell, da wir uns für den Weg entschieden *Hibernate* für das Mapping von Objekt- nach Datenmodell einzusetzen.

Eine Grundlegende Entscheidung war mehrere Turniere in einem Schema zu erlauben. Damit war es uns möglich beliebig viele Turniere zu generieren und auf einem umfangreicheren Testdatensatz zu operieren.

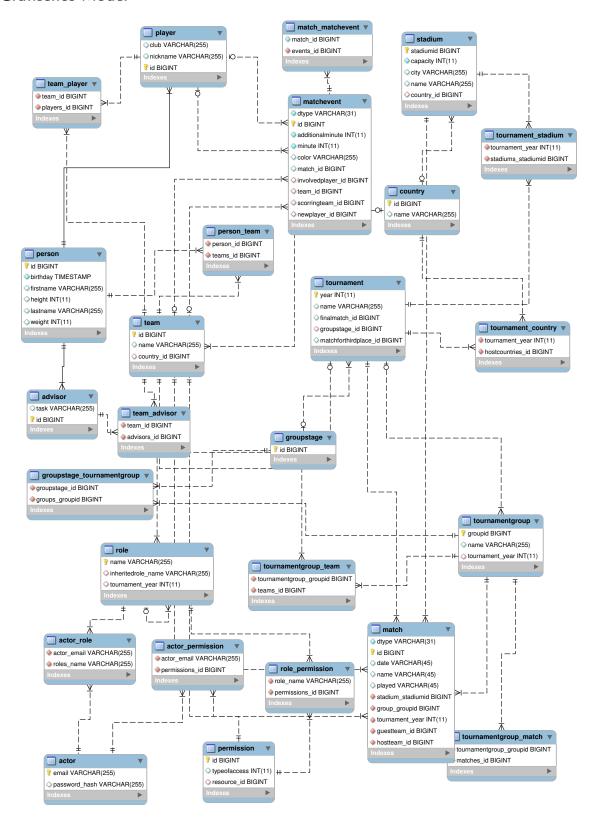
OR-Mapper Vorgehensweise

Wir haben uns entschieden mit *Hibernate* zu Arbeiten. Dabei wurde ausgehend von einem Java-Objektmodell ein relationales Modell erstellt. In unserem Build-Prozess (mittels *Maven*) wird das Schema jedesmal regeneriert und in die Datenbank exportiert. Ein Snapshot der Datenbank inklusive *Stored Procedure* zur Turniererstellung folgt unten.

Alle Testdaten werden von unserer GUI-Anwendung automatisch generiert und in der Datenbank persistiert. Die Turniererstellung aus dem Programm heraus ist sowohl über die *Stored Procedure* als über Java-Methoden möglich.

relationales Schema

Grafisches Model



SQL (Postgres)

```
-\ PostgreSQL\ database\ dump
   SET statement_timeout = 0;
   SET client encoding = 'UTF8';
  SET standard_conforming_strings = off;
   SET check function bodies = false;
9 SET client_min_messages = warning;
10 SET escape_string_warning = off;
12 SET search_path = public , pg_catalog;
{\small 14} \ \hline \textbf{ALTER TABLE ONLY} \ \ \text{public.role\_permission} \ \ \overline{\textbf{DROP CONSTRAINT}} \ \ \text{fkf8a} \\ {\small 569386ac4edcc}; \\
15 ALTER TABLE ONLY public.role_permission DROP CONSTRAINT fkf8a56938401023a7;
   ALTER TABLE ONLY public.stadium DROP CONSTRAINT fkf21d53ddfcf4fc9d;
17 ALTER TABLE ONLY public.matchevent DROP CONSTRAINT fke491d7f5df1dd7b0;
ALTER TABLE ONLY public.matchevent DROP CONSTRAINT fke491d7f5db6578d7;
19 ALTER TABLE ONLY public.matchevent DROP CONSTRAINT fke491d7f5c7168977;
20 ALTER TABLE ONLY public.matchevent DROP CONSTRAINT fke491d7f56a9e6294;
21 ALTER TABLE ONLY public.matchevent DROP CONSTRAINT fke491d7f560766fd;
ALTER TABLE ONLY public.match_match DROP CONSTRAINT fkd7c3a68b884bbd1;
ALTER TABLE ONLY public.match_match DROP CONSTRAINT fkd7c3a68b1fd58223;
24 ALTER TABLE ONLY public.team_player DROP CONSTRAINT fkd4e5f703db6578d7;
ALTER TABLE ONLY public.team_player DROP CONSTRAINT fkd4e5f70318f27aa6;
ALTER TABLE ONLY public.actor_permission DROP CONSTRAINT fkcf243699d36f2a65;
27 ALTER TABLE ONLY public.actor_permission DROP CONSTRAINT fkcf243699401023a7;
ALTER TABLE ONLY public match matchevent DROP CONSTRAINT fkbfc93acfdcc26853;
29 ALTER TABLE ONLY public match matchevent DROP CONSTRAINT fkbfc93acf60766fd;
30 ALTER TABLE ONLY public.tournamentgroup_team DROP CONSTRAINT fkb7678b26d57db48a;
ALTER TABLE ONLY public.tournamentgroup_team DROP CONSTRAINT fkb7678b26cdc8c6de;

ALTER TABLE ONLY public.tournament_stadium DROP CONSTRAINT fkabf317a7db034f8f;
33 ALTER TABLE ONLY public.tournament stadium DROP CONSTRAINT fkabf317a774b12939;
34 ALTER TABLE ONLY public.team_advisor DROP CONSTRAINT fka1d587deea5528a;
   ALTER TABLE ONLY public.team advisor DROP CONSTRAINT fka1d587dedb6578d7;
36 ALTER TABLE ONLY public.player DROP CONSTRAINT fk8ea387019b9d8d6d;
37 ALTER TABLE ONLY public.tournamentgroup DROP CONSTRAINT fk6372df674b12939;
ALTER TABLE ONLY public groupstage tournament group DROP CONSTRAINT fk62cd5967d361fb7; ALTER TABLE ONLY public groupstage tournament group DROP CONSTRAINT fk62cd596526daa28;
40 ALTER TABLE ONLY public.permission DROP CONSTRAINT fk57f7a1ef94470e9c;
ALTER TABLE ONLY public.tournament_country DROP CONSTRAINT fk5625b3409a553667;
ALTER TABLE ONLY public.tournament_country DROP CONSTRAINT fk5625b34074b12939;
43 ALTER TABLE ONLY public.person_team DROP CONSTRAINT fk49fd4907ce781a97;
44 ALTER TABLE ONLY public.person_team DROP CONSTRAINT fk49fd4907cdc8c6de;
45 ALTER TABLE ONLY public.match DROP CONSTRAINT fk46ae9a5f0ec562f;
46 ALTER TABLE ONLY public .match DROP CONSTRAINT fk46ae9a5e2487ff;
47 ALTER TABLE ONLY public.match DROP CONSTRAINT fk46ae9a5d4eaebd3;
48 ALTER TABLE ONLY public .match DROP CONSTRAINT fk46ae9a574b12939;
49 ALTER TABLE ONLY public .match DROP CONSTRAINT fk46ae9a515c9d2b6;
ALTER TABLE ONLY public.tournament DROP CONSTRAINT fk3b743609fcd043a4; ALTER TABLE ONLY public.tournament DROP CONSTRAINT fk3b7436097d361fb7;
52 ALTER TABLE ONLY public.tournament DROP CONSTRAINT fk3b74360966de6d99;
53 ALTER TABLE ONLY public.tournamentgroup_match DROP CONSTRAINT fk3525aa1cd57db48a;
54 ALTER TABLE ONLY public.tournamentgroup_match DROP CONSTRAINT fk3525aa1c2801c0aa;
55 ALTER TABLE ONLY public.team DROP CONSTRAINT fk27b67dfcf4fc9d;
56 ALTER TABLE ONLY public.role DROP CONSTRAINT fk26f496da563832;
ALTER TABLE ONLY public.role DROP CONSTRAINT fk26f49674b12939;

8 ALTER TABLE ONLY public.actor_role DROP CONSTRAINT fk26e2d0c0e4a0b3e5;
59 ALTER TABLE ONLY public.actor role DROP CONSTRAINT fk26e2d0c0d36f2a65;
ALTER TABLE ONLY public.advisor DROP CONSTRAINT fk1fc9f7a09b9d8d6d;
ALTER TABLE ONLY public.tournamentgroup_team DROP CONSTRAINT
        tournamentgroup team teams id key;
62 ALTER TABLE ONLY public.tournamentgroup DROP CONSTRAINT tournamentgroup_pkey;
63 ALTER TABLE ONLY public.tournamentgroup_match DROP CONSTRAINT
        tournamentgroup match matches id key;
64 ALTER TABLE ONLY public.tournament DROP CONSTRAINT tournament pkey;
```

```
65 ALTER TABLE ONLY public.team DROP CONSTRAINT team_pkey;
ALTER TABLE ONLY public.team_advisor DROP CONSTRAINT team_advisor_advisors_id_key;
ALTER TABLE ONLY public.stadium DROP CONSTRAINT stadium_pkey;
68 ALTER TABLE ONLY public.role DROP CONSTRAINT role_pkey;
69 ALTER TABLE ONLY public.role_permission DROP CONSTRAINT
        role permission permissions id key
70 ALTER TABLE ONLY public.resource DROP CONSTRAINT resource pkey;
71 ALTER TABLE ONLY public.player DROP CONSTRAINT player_pkey;
72 ALTER TABLE ONLY public.person DROP CONSTRAINT person_pkey;
73 ALTER TABLE ONLY public.permission DROP CONSTRAINT permission_pkey;
74 ALTER TABLE ONLY public.matchevent DROP CONSTRAINT matchevent pkey;
75 ALTER TABLE ONLY public.match DROP CONSTRAINT match_pkey;
76 ALTER TABLE ONLY public match matchevent DROP CONSTRAINT match matchevent events id key;
77 ALTER TABLE ONLY public.groupstage_tournamentgroup DROP CONSTRAINT
        groupstage_tournamentgroup_groups_groupid_key
78 ALTER TABLE ONLY public groupstage DROP CONSTRAINT groupstage pkey;
79 ALTER TABLE ONLY public.country DROP CONSTRAINT country_pkey;
80 ALTER TABLE ONLY public.advisor DROP CONSTRAINT advisor_pkey;
81 ALTER TABLE ONLY public.actor_role DROP CONSTRAINT actor_role_roles_name_key;
82 ALTER TABLE ONLY public.actor DROP CONSTRAINT actor_pkey;
83 ALTER TABLE ONLY public.actor_permission DROP CONSTRAINT
        actor_permission_permissions_id_key;
84 DROP TABLE public . tournamentgroup _team;
85 DROP TABLE public.tournamentgroup_match;
86 DROP TABLE public.tournamentgroup;
87 DROP TABLE public.tournament_stadium;
88 DROP TABLE public.tournament_country;
89 DROP TABLE public.tournament;
90 DROP TABLE public.team_player;
91 DROP TABLE public.team_advisor;
92 DROP TABLE public.role_permission;
93 DROP TABLE public.role;
94 DROP TABLE public.resource;
95 DROP TABLE public.person_team;
96 DROP TABLE public.person;
97 DROP TABLE public . permission;
98 DROP TABLE public.matchevent;
99 DROP TABLE public.match_matchevent;
100 DROP TABLE public.match_match;
101 DROP TABLE public.match;
102 DROP SEQUENCE public.hibernate_sequence;
103 DROP TABLE public.groupstage_tournamentgroup;
DROP TABLE public.advisor;
105 DROP TABLE public.actor_role;
106 DROP TABLE public . actor _ permission;
107 DROP TABLE public.actor;
108 DROP FUNCTION public.getstadiumsforcountry(bigint);
109 DROP TABLE public . stadium;
110 DROP FUNCTION public getplayer();
111 DROP TABLE public.player;
112 DROP FUNCTION public.getnextsequence();
113 DROP FUNCTION public getcountry();
114 DROP TABLE public.country;
115 DROP FUNCTION public.generateteam();
116 DROP TABLE public.team;
117 DROP FUNCTION public.generatematch(bigint, bigint, bigint);
118 DROP FUNCTION public.generateknockouttree(integer, bigint);
DROP FUNCTION public generategroupstage();
120 DROP TABLE public groupstage;
121 DROP FUNCTION public.generategroupmatches(bigint);
122 DROP FUNCTION public.createchampionship(integer, text);
DROP FUNCTION public.concat(character varying, bigint);
124 DROP FUNCTION public.concat(character varying, integer);
DROP PROCEDURAL LANGUAGE plpgsql;
126 DROP SCHEMA public;
127
    - Name: public; Type: SCHEMA; Schema: -; Owner: postgres
128
```

```
130
   CREATE SCHEMA public;
131
132
133
   ALTER SCHEMA public OWNER TO postgres;
134
135
136
    - Name: plpgsql; Type: PROCEDURAL LANGUAGE; Schema: -; Owner: postgres
137
138
139
140 CREATE PROCEDURAL LANGUAGE plpgsql;
141
142
143 ALTER PROCEDURAL LANGUAGE plpgsql OWNER TO postgres;
144
   SET search_path = public, pg_catalog;
145
146
147
     - \ \textit{Name: concat(character varying, integer); Type: FUNCTION; Schema: public; Owner: \\
148
        postgres
149
150
   CREATE FUNCTION concat(character varying, integer) RETURNS character varying
151
       LANGUAGE plpgsql
152
153
154
        return $1 || ' ' || chr(49 + (\$2\%119));
155
156
   END
157
   $ $;
158
159
   ALTER FUNCTION public.concat(character varying, integer) OWNER TO postgres;
160
161
162
      {\it Name: concat(character\ varying\ ,\ bigint);\ Type:\ FUNCTION;\ Schema:\ public;\ Owner:}
163
        postgres
164
165
   CREATE FUNCTION concat (character varying, bigint) RETURNS character varying
166
       LANGUAGE plpgsql
167
        AS $_$
168
169
        return $1 || ' ' || chr(CAST(49 + ($2%119) AS INT));
170
   END
171
   $ $;
172
173
174
   ALTER FUNCTION public.concat(character varying, bigint) OWNER TO postgres;
175
176
177
     - Name: createchampionship(integer, text); Type: FUNCTION; Schema: public; Owner:
178
        postgres
179
180
   CREATE FUNCTION createchampionship (integer, text) RETURNS void
181
       LANGUAGE plpgsql
182
       AS $_$
183
   DECLARE
184
        yearParam ALIAS FOR $1;
185
186
        nameParam ALIAS FOR $2;
        host country%ROWTYPE;
187
        current Stadium \ stadium \% ROWIYPE;
188
        groupStage groupstage%ROWTYPE;
189
        finalId bigint;
190
   BEGIN
191
        RAISE NOTICE 'Creating a new tournament';
192
193
194
       -Generiert die K.O.-Phase
```

```
195
        finalId := getNextSequence();
        INSERT INTO match(id, name, played, dtype)
VALUES (finalId, 'Finale', false, 'KnockoutMatch');
196
197
        PERFORM generateKnockoutTree(1, finalId);
198
199
200
        -- Generiert die Gruppenphase
        groupStage := generateGroupStage();
201
202
203
         -Speichert das Turnier ab
        INSERT INTO tournament (year, name, finalmatch_id, groupstage_id)
204
        VALUES (yearParam, nameParam, finalId, groupStage.id);
205
206
207
        - Set a random host country
        host := getCountry();
208
209
        INSERT INTO "tournament_country" VALUES (yearParam, host.id);
210
211
        -- Set 8 random stadiums
        FOR currentStadium IN SELECT * FROM getStadiumsForCountry(host.id) LOOP
212
            INSERT INTO tournament stadium VALUES (yearParam, currentStadium.stadiumid);
213
        END LOOP;
214
     RETURN;
215
216 END;
   $_$;
217
218
219
220 ALTER FUNCTION public.createchampionship(integer, text) OWNER TO postgres;
221
222
     - Name: generategroupmatches(bigint); Type: FUNCTION; Schema: public; Owner: postgres
223
224
226 CREATE FUNCTION generategroupmatches (bigint) RETURNS void
227
       LANGUAGE plpgsql
        AS $_$
228
   DECLARE
229
230
        groupId ALIAS FOR $1;
        numberOfTeams int;
231
        currentTeam team%ROWTYPE;
232
        teams team [];
233
        i int;
234
        j int;
235
236
237
        SELECT COUNT(*) INTO numberOfTeams
238
       FROM tournament group team
239
       WHERE tournamentgroup_groupid = groupId;
240
241
         Test ob genuegend Teams in der Gruppe sind
242
243
        if (numberOfTeams < 4) THEN
            RAISE EXCEPTION 'at least 4 teams have to be in a group';
244
            RETURN;
245
       END IF;
246
247
248
         - Erstellt ein Array aus dem Teams der Gruppe
249
        teams := '{}';
250
        FOR current Team IN
251
            SELECT t.*
252
            FROM team t
253
254
            \textbf{JOIN} \ \ tournament group\_team \ \ g \ \ \textbf{ON} \ \ (\ g.\ teams\_id = \ t.id)
255
            WHERE tournament group group id = group Id
        LOOP
256
            teams := array_append(teams, currentTeam);
257
       END LOOP;
258
259
         Laesst jede Mannschaft einmal gegen alle anderen Manschaften antreten
260
        FOR i IN 1..4 LOOP
261
262
            FOR j IN (i+1)...4 LOOP
```

```
263
                 PERFORM generateMatch(teams[i].id, teams[j].id, groupId);
            END LOOP;
264
        END LOOP;
265
266
267
        return:
268
269 END
270 $_$;
271
272
273 ALTER FUNCTION public.generategroupmatches(bigint) OWNER TO postgres;
274
275 SET default tablespace = ',';
276
277
   SET default_with_oids = false;
278
279
    - Name: groupstage; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
280
281
282
   CREATE TABLE groupstage (
283
        {\rm id}\ {\rm bigint}\ {\rm \color{red}NOT}\ {\rm \color{blue}NULL}
284
285
286
287
   ALTER TABLE public groupstage OWNER TO postgres;
288
289
290
     - Name: generategroupstage(); Type: FUNCTION; Schema: public; Owner: postgres
291
292
293
294 CREATE FUNCTION generategroupstage() RETURNS groupstage
295
        LANGUAGE plpgsql
        AS $$
296
   DECLARE
297
298
        stageId int;
        stage groupstage;
299
300
        currentTeam team;
        currentGroup tournamentgroup;
301
        currentGroupId bigint;
302
303
        i int;
        j int;
304
   BEGIN
305
306
        stageId := getNextSequence();
307
         \textbf{INSERT INTO} \ \ \texttt{groupstage} \ \ \textbf{VALUES} \ \ (\ \texttt{stageId} \ ) \ ; \\
308
309
          - Fuer alle 8 Gruppen
310
        FOR i IN 1..8 LOOP
311
312
             currentGroupId := getNextSequence();
313
314
            INSERT INTO tournament group (groupid, name)
315
            VALUES (currentGroupId, concat('Gruppe', 10));
316
              - generiere 4 Mannschaften
317
            FOR j IN 1..4 LOOP
318
319
                 currentTeam := generateTeam();
320
                 INSERT INTO tournamentgroup team (tournamentgroup groupid, teams id)
321
322
                 VALUES (currentGroupId, currentTeam.id);
            END LOOP;
323
324
            INSERT INTO groupstage_tournamentgroup VALUES (stageId, currentGroupId);
325
326
         - und trage die Gruppenspiele ein
327
            PERFORM generateGroupMatches(currentGroupId);
328
329
        END LOOP;
330
```

```
331
        SELECT * INTO stage FROM groupstage WHERE id = stageId;
332
333
334
        return stage;
335
336 END
337
   $$;
338
339
   ALTER FUNCTION public.generategroupstage() OWNER TO postgres;
340
341
342
     - Name: generateknockouttree(integer, bigint); Type: FUNCTION; Schema: public; Owner:
343
        postgres
344
345
   CREATE FUNCTION generateknockouttree (integer, bigint) RETURNS void
346
        LANGUAGE plpgsql
347
        AS $_$
348
349
   DECLARE
        height ALIAS FOR $1;
350
        nodeId ALIAS FOR $2;
351
        matchId1 bigint;
352
353
        matchId2 bigint;
354
        newHeight int;
        knockoutMatchType varchar;
355
   BEGIN
356
357
        Rekursionsanker
        IF (height > 3) THEN
358
359
             RETURN;
360
        ELSIF (height = 1) THEN
             knockoutMatchType := 'Halbfinale';
361
        ELSIF (height = 2) THEN
362
             {\tt knockoutMatchType} \; := \;
                                      'Viertelfinale';
363
        ELSIF (height = 3) THEN
364
365
             knockoutMatchType \ := \ 'Achtelfinale';
        END IF;
366
367
368
         Erstellen zweier Kindspiele
369
        matchId1 := getNextSequence();
370
        INSERT INTO match(id, name, played, dtype)
371
        VALUES (matchId1, knockoutMatchType, false, 'KnockoutMatch');
372
373
        matchId2 := getNextSequence();
374
         \textbf{INSERT INTO match}(\operatorname{id}, \operatorname{name}, \operatorname{played}, \operatorname{dtype}) \\
375
376
        VALUES (matchId2, knockoutMatchType, false, 'KnockoutMatch');
377
378
         Hinzufuegen zum Baum
        INSERT INTO match_match(match_id, childs_id) VALUES (nodeId, matchId1);
INSERT INTO match_match(match_id, childs_id) VALUES (nodeId, matchId2);
379
380
381
382
        - rekursiver Aufruf
383
        newHeight := height + 1;
        PERFORM generateKnockoutTree(newHeight, matchId1);
384
        PERFORM generateKnockoutTree(newHeight, matchId2);
385
386
387
        RETURN;
388 END;
389
   $_$;
390
391
   ALTER FUNCTION public.generateknockouttree(integer, bigint) OWNER TO postgres;
392
393
394
       Name: generatematch(bigint, bigint, bigint); Type: FUNCTION; Schema: public; Owner:
395
        postgres
396
```

```
397
   CREATE FUNCTION generatematch (bigint, bigint, bigint) RETURNS void
398
       LANGUAGE plpgsql
399
       AS $_$
400
   DECLARE
401
       hostTeam ALIAS FOR $1;
402
        guestTeam ALIAS FOR $2;
403
        groupId ALIAS FOR $3;
404
405
        matchId bigint;
        i int;
406
   BEGIN
407
       matchId := getNextSequence();
408
409
       INSERT INTO match(id, hostteam_id, guestteam_id, played, dtype, group_groupid)
410
411
       VALUES (matchId, hostTeam, guestTeam, false, GroupMatch', groupId);
412
413
       INSERT INTO tournamentgroup_match
       VALUES (groupId, matchId);
414
415 END
   $_$;
416
417
418
   ALTER FUNCTION public.generatematch(bigint, bigint, bigint) OWNER TO postgres;
419
420
421
    - Name: team; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
422
423
424
   CREATE TABLE team (
425
       id bigint NOT NULL,
426
427
       name character varying (255),
       country_id bigint
428
429
   );
430
431
   ALTER TABLE public.team OWNER TO postgres;
433
434
    - Name: generateteam(); Type: FUNCTION; Schema: public; Owner: postgres
435
436
437
   CREATE FUNCTION generateteam () RETURNS team
438
       LANGUAGE plpgsql
439
440
       AS $$
   DECLARE
441
442
        i int;
443
        j int;
       sequenceValue int;
444
445
        playerId int;
        selectedTeam Team%ROWTYPE;
446
   BEGIN
447
448
       SELECT id INTO i FROM getCountry();
449
450
       sequenceValue := getNextSequence();
451
       INSERT INTO team VALUES (sequenceValue, concat ('Musterteam', sequenceValue), i);
452
       SELECT * INTO selected Team FROM team WHERE id = sequence Value;
453
454
       FOR j IN 1..23 LOOP
455
           SELECT id INTO playerId FROM getPlayer();
456
            INSERT INTO team_player VALUES (selectedTeam.id, playerId);
457
458
            INSERT INTO person_team VALUES (playerId, selectedTeam.id);
       END LOOP;
459
460
        return selected Team;
461
462 END
   $$;
463
464
```

```
465
   ALTER FUNCTION public.generateteam() OWNER TO postgres;
466
467
468
    - Name: country; Type: TABLE; Schema: public; Owner: postqres; Tablespace:
469
470
471
472 CREATE TABLE country (
473
        id bigint NOT NULL,
        name character varying (255)
474
475
   );
476
477
   ALTER TABLE public.country OWNER TO postgres;
478
479
480
     - Name: getcountry(); Type: FUNCTION; Schema: public; Owner: postgres
481
482
483
   CREATE FUNCTION getcountry() RETURNS SETOF country
484
        LANGUAGE plpgsql
485
        AS $$
486
   DECLARE
487
        selectedRow Country%ROWTYPE;
488
489
        n int := 0;
490
        SELECT COUNT(*) INTO n FROM Country;
491
        IF(n < 1) THEN
492
            INSERT INTO Country VALUES (getNextSequence(), 'DummyLand');
493
494
       END IF;
495
        SELECT * INTO selected Row FROM Country ORDER BY RANDOM() LIMIT 1;
496
        RETURN NEXT selected Row;
497
498 END
   $$;
499
500
501
   ALTER FUNCTION public.getcountry() OWNER TO postgres;
502
503
504
     - Name: getnextsequence(); Type: FUNCTION; Schema: <math>public; Owner: postgres
505
506
507
   CREATE FUNCTION getnextsequence() RETURNS bigint
508
        LANGUAGE sql
509
        AS $$
510
511
        SELECT nextval ('hibernate_sequence') FROM hibernate_sequence;
512
513
514
515 ALTER FUNCTION public getnextsequence() OWNER TO postgres;
516
517
   --- Name: player; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
518
519
520
   CREATE TABLE player (
521
        club character varying (255).
522
        nickname character varying (255),
523
524
        {\rm id} \ \ {\rm bigint} \ \ {\rm \color{red} NOT} \ {\rm \color{red} NULL}
525
   );
526
528 ALTER TABLE public. player OWNER TO postgres;
529
530
    - Name: getplayer(); Type: FUNCTION; Schema: public; Owner: postgres
531
```

```
533
   CREATE FUNCTION getplayer() RETURNS player
534
       LANGUAGE plpgsql
535
       AS $$
536
   DECLARE
537
        createdPlayer Player%ROWTYPE;
538
        sequenceValue bigint;
539
   BEGIN
540
541
        sequenceValue := getNextSequence();
542
       INSERT INTO person (id, firstname, lastname)
543
       VALUES (sequenceValue, concat ('Vorname', sequenceValue), concat ('Nachname',
544
            sequenceValue));
545
546
       INSERT INTO player (id, nickname, club)
       VALUES (sequenceValue, concat ('Nick', sequenceValue), 'FC Seehaeusl');
547
548
       SELECT * INTO created Player FROM player WHERE id = sequence Value;
549
550
        return createdPlayer;
551
552 END
553
   $$;
554
555
   ALTER FUNCTION public.getplayer() OWNER TO postgres;
556
557
558
559
      Name: stadium; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
560
561
562
   CREATE TABLE stadium (
        stadiumid bigint NOT NULL,
563
564
        capacity integer NOT NULL,
        city character varying (255),
565
       name character varying (255),
566
567
        country_id bigint
568
569
570
   ALTER TABLE public.stadium OWNER TO postgres;
571
572
573
    - Name: getstadiumsforcountry(bigint); Type: FUNCTION; Schema: public; Owner: postgres
574
575
576
   CREATE FUNCTION getstadiumsforcountry(bigint) RETURNS SETOF stadium
577
578
       LANGUAGE plpgsql
       AS $_$
579
580
   DECLARE
        countryId ALIAS FOR $1;
581
        selected Row\ Stadium\%ROWTYPE;
582
583
       n\ \ \mathbf{int}\ :=\ 0\,;
584
        i int;
   BEGIN
585
       SELECT COUNT(*) INTO n FROM Stadium WHERE country_id = countryId;
586
       IF(n < 8) THEN
587
            FOR i IN 1..(8-n) LOOP
588
                INSERT INTO Stadium VALUES (getNextSequence(), 500, concat('Dummystadt', i),
589
                      concat('Dummystadion',i), countryId);
590
            END LOOP:
       END IF;
591
592
       FOR selected Row IN SELECT * FROM stadium ORDER BY RANDOM() LIMIT 8 LOOP
593
            return next selectedRow;
594
       END LOOP;
595
596
597
        return;
598 END
```

```
599 $_$;
600
601
   ALTER FUNCTION public.getstadiumsforcountry(bigint) OWNER TO postgres;
602
603
604
    - Name: actor;\ Type:\ TABLE;\ Schema:\ public;\ Owner:\ postgres;\ Tablespace:
605
606
607
608 CREATE TABLE actor (
        email character varying (255) NOT NULL,
609
610
        password_hash character varying(255)
611
612
613
614 ALTER TABLE public . actor OWNER TO postgres;
615
616
   --- Name: actor permission; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
617
618
619
620 CREATE TABLE actor_permission (
        actor_email character varying (255) NOT NULL,
621
        permissions_id bigint NOT NULL
622
623
624
625
   ALTER TABLE public.actor_permission OWNER TO postgres;
626
627
628
629
   --- Name: actor_role; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
630
631
   CREATE TABLE actor role (
632
        actor email character varying (255) NOT NULL,
633
        roles_name character varying(255) NOT NULL
634
635
636
637
638 ALTER TABLE public.actor role OWNER TO postgres;
639
640
    - Name: advisor; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
641
642
643
644 CREATE TABLE advisor (
645
        task character varying (255),
        id bigint NOT NULL
646
647
   );
648
649
   ALTER TABLE public.advisor OWNER TO postgres;
650
651
652
      Name: \ groupstage\_tournamentgroup \ ; \ Type: \ TABLE; \ Schema: \ public \ ; \ Owner: \ postgres \ ;
653
        Tablespace:
654
655
656 CREATE TABLE groupstage_tournamentgroup (
        groupstage_id bigint NOT NULL,
657
        groups_groupid bigint NOT NULL
658
659
   );
661
662 ALTER TABLE public.groupstage_tournamentgroup OWNER TO postgres;
663
664
   --- Name: hibernate_sequence; Type: SEQUENCE; Schema: public; Owner: postgres
```

```
666
667
   CREATE SEQUENCE hibernate sequence
668
       START WITH 1
669
       INCREMENT BY 1
670
       NO MAXVALUE
671
       NO MINVALUE
672
       CACHE 1;
673
674
675
676 ALTER TABLE public. hibernate sequence OWNER TO postgres;
677
678
     - Name: match; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
679
680
681
   CREATE TABLE match (
682
        dtype character varying (31) NOT NULL,
683
        id bigint NOT NULL,
684
        date timestamp without time zone,
685
       name character varying (255),
686
        played boolean NOT NULL,
687
        guestteam_id bigint,
688
        hostteam_id bigint
689
690
       stadium_stadiumid bigint,
691
        tournament_year integer,
        group_groupid bigint
692
693
694
695
696
   ALTER TABLE public.match OWNER TO postgres;
697
698
    - Name: match match; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
699
700
701
   CREATE TABLE match match (
702
       match_id bigint NOT NULL,
703
        childs_id bigint NOT NULL
704
705
   );
706
707
708 ALTER TABLE public.match match OWNER TO postgres;
709
710
   -- Name: match\_matchevent; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
711
712
713
714 CREATE TABLE match_matchevent (
        match_id bigint NOT NULL,
715
        events id bigint NOT NULL
716
717
   );
718
719
   ALTER TABLE public.match matchevent OWNER TO postgres;
720
721
722
    - Name: matchevent; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
723
724
725
   CREATE TABLE matchevent (
726
        dtype character varying (31) NOT NULL,
727
        id bigint NOT NULL,
728
        additionalminute integer NOT NULL,
729
       minute integer NOT NULL,
730
        color character varying (255),
731
       match id bigint
732
        involvedplayer_id bigint,
733
```

```
734
        team_id bigint,
       scorringteam_id_bigint, newplayer_id_bigint
735
736
737
738
739
740 ALTER TABLE public.matchevent OWNER TO postgres;
741
742
     - Name:\ permission;\ Type:\ TABLE;\ Schema:\ public;\ Owner:\ postgres;\ Tablespace:
743
744
745
746 CREATE TABLE permission (
        id bigint NOT NULL,
747
748
        typeofaccess integer,
        resource_id bigint
749
750
   );
751
752
753 ALTER TABLE public.permission OWNER TO postgres;
754
755
   --- Name: person; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
756
757
758
   CREATE TABLE person (
759
        id bigint NOT NULL,
760
761
        birthday timestamp without time zone,
        firstname character varying (255),
762
763
        height integer,
764
        lastname character varying (255),
        weight integer
765
766
   );
767
768
769 ALTER TABLE public.person OWNER TO postgres;
770
771
   -- Name: person\_team; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
772
773
774
   CREATE TABLE person_team (
775
        person_id bigint NOT NULL,
776
777
        teams_id bigint NOT NULL
   );
778
779
780
781 ALTER TABLE public.person team OWNER TO postgres;
782
783
   - Name: resource; Type: TABLE; Schema: public; Owner: postqres; Tablespace:
784
785
786
787 CREATE TABLE resource (
        id bigint NOT NULL,
788
        key bytea,
789
        name character varying (255)
790
791
792
793
794 ALTER TABLE public.resource OWNER TO postgres;
795
   --- Name: role; Type: TABLE; Schema: public; Owner: postqres; Tablespace:
797
798
799
800 CREATE TABLE role (
name character varying (255) NOT NULL,
```

```
inheritedrole_name character varying(255),
802
        tournament_year integer
803
804
805
806
   ALTER TABLE public.role OWNER TO postgres;
807
808
809
810
     - Name: role\_permission; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
811
812
   CREATE TABLE role_permission (
813
        role name character varying (255) NOT NULL,
814
        permissions id bigint NOT NULL
815
816
817
818
   ALTER TABLE public.role permission OWNER TO postgres;
819
820
    - Name: team advisor; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
822
823
824
   CREATE TABLE team_advisor
825
826
        team_id bigint NOT NULL,
827
        advisors_id bigint NOT NULL
828
829
830
   ALTER TABLE public.team_advisor OWNER TO postgres;
831
832
833
   --- Name: team_player; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
834
835
836
837
   CREATE TABLE team_player (
        team_id bigint NOT NULL,
838
        players_id bigint NOT NULL
839
840
841
842
   ALTER TABLE public.team player OWNER TO postgres;
843
844
845
     - Name: tournament; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
846
847
848
   CREATE TABLE tournament (
849
850
        year integer NOT NULL,
        name character varying (255),
851
        finalmatch id bigint,
852
853
        groupstage_id bigint
854
        matchforthirdplace id bigint
855
856
857
   ALTER TABLE public.tournament OWNER TO postgres;
858
859
860
      Name:\ tournament\_country;\ Type:\ TABLE;\ Schema:\ public;\ Owner:\ postgres;\ Tablespace:
861
862
863
   CREATE TABLE tournament_country (
864
        tournament_year integer NOT NULL,
865
        {\tt host countries\_id \ bigint \ \textbf{NOT NULL}}
866
867
   );
868
869
```

```
870 ALTER TABLE public.tournament_country OWNER TO postgres;
871
872
     -\ Name:\ tournament\_stadium\ ;\ Type:\ TABLE;\ Schema:\ public\ ;\ Owner:\ postgres\ ;\ Tablespace:
873
874
875
   CREATE TABLE tournament_stadium (
876
        tournament_year integer NOT NULL,
877
878
        stadiums_stadiumid bigint NOT NULL
879
880
   ALTER TABLE public.tournament stadium OWNER TO postgres;
882
883
884
     - Name: tournamentgroup; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
885
886
887
   CREATE TABLE tournamentgroup (
888
        groupid bigint NOT NULL,
889
       name character varying (255),
890
891
        tournament_year integer
892
   );
893
894
895
   ALTER TABLE public.tournamentgroup OWNER TO postgres;
896
897
      Name: tournamentgroup match; Type: TABLE; Schema: public; Owner: postgres; Tablespace
898
899
900
   CREATE TABLE tournamentgroup_match (
901
        tournamentgroup_groupid bigint NOT NULL,
902
        matches_id bigint NOT NULL
903
904
905
906
   ALTER TABLE public.tournamentgroup_match OWNER TO postgres;
907
908
909
   --- Name: tournamentgroup team; Type: TABLE; Schema: public; Owner: postgres; Tablespace:
910
911
912
   CREATE TABLE tournamentgroup team (
913
        tournamentgroup_groupid bigint NOT NULL,
914
915
        teams_id bigint NOT NULL
916
917
918
   ALTER TABLE public.tournamentgroup_team OWNER TO postgres;
919
920
921
      Name:\ actor\_\ permission\_\ permissions\_\ id\_\ key;\ Type:\ CONSTRAINT;\ Schema:\ public;\ Owner:
922
        postgres; Tablespace:
923
924
   ALTER TABLE ONLY actor permission
925
       ADD CONSTRAINT actor_permission_permissions_id_key UNIQUE (permissions_id);
926
927
928
929
   -- Name: actor\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
930
931
932
   ALTER TABLE ONLY actor
933
       ADD CONSTRAINT actor_pkey PRIMARY KEY (email);
934
935
```

```
936
937
       Name: actor_role_roles_name_key; Type: CONSTRAINT; Schema: public; Owner: postgres;
938
        Tablespace:
939
940
   ALTER TABLE ONLY actor_role
941
        ADD CONSTRAINT actor_role_roles_name_key UNIQUE (roles_name);
942
943
944
945
      Name: advisor_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
946
947
948
949
   ALTER TABLE ONLY advisor
        ADD CONSTRAINT advisor_pkey PRIMARY KEY (id);
950
951
952
953
      Name: country_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
954
955
956
   ALTER TABLE ONLY country
957
        ADD CONSTRAINT country_pkey PRIMARY KEY (id);
958
959
960
961
962
       Name: groupstage_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
963
964
965
   ALTER TABLE ONLY groupstage
        ADD CONSTRAINT groupstage_pkey PRIMARY KEY (id);
966
967
968
969
       Name: groupstage_tournamentgroup_groups_groupid_key; Type: CONSTRAINT; Schema: public
970
        ; Owner: postgres; Tablespace:
971
972
   ALTER TABLE ONLY groupstage tournament group
973
        \textbf{ADD CONSTRAINT} \ \ \texttt{groupstage\_tournamentgroup\_groups\_groupid\_key} \ \ \textbf{UNIQUE} \ \ (\texttt{groups\_groupid})
974
975
976
977
       {\it Name: match\_matchevent\_events\_id\_key; Type: CONSTRAINT; Schema: public; Owner: }
978
        postgres; Tablespace:
979
980
   ALTER TABLE ONLY match matchevent
981
        ADD CONSTRAINT match matchevent events id key UNIQUE (events id);
982
983
984
985
      Name: match_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
986
987
988
   ALTER TABLE ONLY match
989
        ADD CONSTRAINT match pkey PRIMARY KEY (id);
990
991
992
993
    - Name: matchevent\_pkey;\ Type:\ CONSTRAINT;\ Schema:\ public;\ Owner:\ postgres;\ Tablespace:
994
995
996
   ALTER TABLE ONLY matchevent
997
         \begin{tabular}{ll} ADD CONSTRAINT & matchevent\_pkey & PRIMARY & KEY & (id); \\ \end{tabular} 
998
999
```

```
1000
1001
                         Name: permission pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1002
1003
1004
             ALTER TABLE ONLY permission
1005
                             ADD CONSTRAINT permission_pkey PRIMARY KEY (id);
1006
1007
1008
1009
                        Name: person pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1010
1011
1012
             ALTER TABLE ONLY person
1013
1014
                            ADD CONSTRAINT person_pkey PRIMARY KEY (id);
1015
1016
1017
                   - Name: player pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1018
1019
1020
             ALTER TABLE ONLY player
1021
                            ADD CONSTRAINT player_pkey PRIMARY KEY (id);
1022
1023
1024
1025
                        Name: resource pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1026
1027
1028
1029
             ALTER TABLE ONLY resource
1030
                            ADD CONSTRAINT resource_pkey PRIMARY KEY (id);
1031
1032
1033
                         Name: \ \ role\_permission\_permissions\_id\_key; \ \ Type: \ \ CONSTRAINT; \ \ Schema: \ \ public; \ \ Owner: \ \ the public is a substantial of the public 
1034
                             postgres; Table space:
1035
1036
              ALTER TABLE ONLY role_permission
1037
                            ADD CONSTRAINT role permission permissions id key UNIQUE (permissions id);
1038
1039
1040
1041
                        Name: role_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1042
1043
1044
1045
             ALTER TABLE ONLY role
                             \begin{tabular}{ll} ADD CONSTRAINT & role\_pkey & PRIMARY & KEY & (name); \\ \end{tabular} 
1046
1047
1048
1049
                         Name:\ stadium\_pkey;\ Type:\ CONSTRAINT;\ Schema:\ public;\ Owner:\ postgres;\ Tablespace:
1050
1051
1052
             ALTER TABLE ONLY stadium
1053
                             \textbf{ADD CONSTRAINT} \ \operatorname{stadium\_pkey} \ \textbf{PRIMARY KEY} \ (\operatorname{stadiumid}) \ ; \\
1054
1055
1056
1057
                         Name:\ team\_advisor\_advisor\_id\_key;\ Type:\ CONSTRAINT;\ Schema:\ public;\ Owner:\ postgressible and the property of the pro
1058
                              ; Tablespace:
1059
1060
             ALTER TABLE ONLY team advisor
1061
                            ADD CONSTRAINT team _advisor _advisors _id _key UNIQUE (advisors _id);
1062
1063
1064
1065
```

```
- Name: team\_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1067
1068
        ALTER TABLE ONLY team
1069
                 ADD CONSTRAINT team pkey PRIMARY KEY (id);
1070
1071
1072
1073
1074
               Name: tournament_pkey; Type: CONSTRAINT; Schema: public; Owner: postgres; Tablespace:
1075
1076
1077
        ALTER TABLE ONLY tournament
                ADD CONSTRAINT tournament pkey PRIMARY KEY (year);
1078
1079
1080
1081
               Name:\ tournament group\_match\_matches\_id\_key;\ Type:\ CONSTRAINT;\ Schema:\ public;\ Owner:
1082
                  postgres; Tablespace:
1083
1084
        ALTER TABLE ONLY tournament group match
1085
                ADD CONSTRAINT tournamentgroup_match_matches_id_key UNIQUE (matches_id);
1086
1087
1088
1089
               Name: tournamentgroup pkey; Type: CONSTRAINT; Schema: public; Owner: postgres;
1090
                  Tablespace:
1091
1092
        ALTER TABLE ONLY tournament group
1093
1094
                 ADD CONSTRAINT tournamentgroup _pkey PRIMARY KEY (groupid);
1095
1096
1097
               Name: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ tournament group\_team\_teams\_id\_key; \ Type: \ CONSTRAINT; \ Schema: \ public; \ Owner: \ Type: \ Type
1098
                  postgres; Tablespace:
1099
1100
        ALTER TABLE ONLY tournamentgroup_team
1101
                 ADD CONSTRAINT tournamentgroup team teams id key UNIQUE (teams id);
1102
1103
1104
1105
         -- Name: fk1fc9f7a09b9d8d6d; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1106
1107
1108
1109
        ALTER TABLE ONLY advisor
                ADD CONSTRAINT fk1fc9f7a09b9d8d6d FOREIGN KEY (id) REFERENCES person (id);
1110
1111
1112
1113
               Name: fk26e2d0c0d36f2a65; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1114
1115
1116
        ALTER TABLE ONLY actor role
1117
                ADD CONSTRAINT fk26e2d0c0d36f2a65 FOREIGN KEY (actor email) REFERENCES actor (email);
1118
1119
1120
1121
               Name:\ fk26e2d0c0e4a0b3e5\ ;\ Type:\ FK\ CONSTRAINT;\ Schema:\ public\ ;\ Owner:\ postgres
1122
1123
1124
        ALTER TABLE ONLY actor role
1125
                 ADD CONSTRAINT fk26e2d0c0e4a0b3e5 FOREIGN KEY (roles name) REFERENCES role (name);
1126
1127
1128
1129
           - Name: fk26f49674b12939; Type: FK CONSTRAINT; Schema: <math>public; Owner: postgres
1130
```

```
1131
1132
    ALTER TABLE ONLY role
1133
        ADD CONSTRAINT fk26f49674b12939 FOREIGN KEY (tournament year) REFERENCES tournament (
1134
             vear):
1135
1136
1137
       Name: fk26f496da563832; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1138
1139
1140
1141
    ALTER TABLE ONLY role
        ADD CONSTRAINT fk26f496da563832 FOREIGN KEY (inheritedrole name) REFERENCES role (
1142
             name);
1143
1144
1145
     - Name: fk27b67dfcf4fc9d; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1146
1147
1148
    ALTER TABLE ONLY team
1149
        ADD CONSTRAINT fk27b67dfcf4fc9d FOREIGN KEY (country_id) REFERENCES country(id);
1150
1151
1152
1153
      - Name: fk3525aa1c2801c0aa; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1154
1155
1156
    ALTER TABLE ONLY tournament group match
1157
        ADD CONSTRAINT fk3525aa1c2801c0aa FOREIGN KEY (matches id) REFERENCES match(id);
1158
1159
1160
1161
       Name: fk3525aa1cd57db48a; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1162
1163
1164
    ALTER TABLE ONLY tournament group match
1165
         \textbf{ADD CONSTRAINT} \  \, \text{fk} 3525 \text{aa} 1 \text{cd} 57 \overline{\text{db}} 48 \text{a} \  \, \textbf{FOREIGN KEY} \  \, \text{(tournamentgroup groupid)} \  \, \text{REFERENCES} 
1166
             tournament group (groupid);
1167
1168
1169
       Name: fk3b74360966de6d99; Type: FK CONSTRAINT; Schema: public; Owner: postqres
1170
1171
1172
    ALTER TABLE ONLY tournament
1173
1174
        ADD CONSTRAINT fk3b74360966de6d99 FOREIGN KEY (finalmatch_id) REFERENCES match(id);
1175
1176
1177
     - Name: fk3b7436097d361fb7; Type: FK CONSTRAINT; Schema: public; Owner: postqres
1178
1179
1180
    ALTER TABLE ONLY tournament
1181
        ADD CONSTRAINT fk3b7436097d361fb7 FOREIGN KEY (groupstage_id) REFERENCES groupstage(
1182
             id);
1183
1184
1185
       Name: fk3b743609fcd043a4; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1186
1187
1188
    ALTER TABLE ONLY tournament
1189
        ADD CONSTRAINT fk3b743609fcd043a4 FOREIGN KEY (matchforthirdplace id) REFERENCES
1190
             match(id);
1191
1192
1193
```

```
-- Name: \mathit{fk46ae9a515c9d2b6}; \mathit{Type}: \mathit{FK} CONSTRAINT; \mathit{Schema}: \mathit{public}; \mathit{Owner}: \mathit{postgres}
1195
1196
    ALTER TABLE ONLY match
1197
        ADD CONSTRAINT fk46ae9a515c9d2b6 FOREIGN KEY (stadium stadiumid) REFERENCES stadium (
1198
             stadiumid);
1199
1200
1201
       Name: fk46ae9a574b12939; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1202
1203
1204
    ALTER TABLE ONLY match
1205
        ADD CONSTRAINT fk46ae9a574b12939 FOREIGN KEY (tournament year) REFERENCES tournament
1206
             (year);
1207
1208
1209
     - Name: fk46ae9a5d4eaebd3; Type: FK CONSTRAINT; Schema: public; Owner: postqres
1210
1211
1212
    ALTER TABLE ONLY match
1213
        ADD CONSTRAINT fk46ae9a5d4eaebd3 FOREIGN KEY (group_groupid) REFERENCES
1214
             tournamentgroup (groupid);
1215
1216
1217
       Name: fk46ae9a5e2487ff; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1218
1219
1220
1221
    ALTER TABLE ONLY match
        ADD CONSTRAINT fk46ae9a5e2487ff FOREIGN KEY (guestteam id) REFERENCES team(id);
1222
1223
1224
1225
1226
       Name: fk46ae9a5f0ec562f; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1227
1228
    ALTER TABLE ONLY match
1229
        ADD CONSTRAINT fk46ae9a5f0ec562f FOREIGN KEY (hostteam id) REFERENCES team(id);
1230
1231
1232
1233
       Name: fk49fd4907cdc8c6de; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1234
1235
1236
    ALTER TABLE ONLY person_team
1237
        ADD CONSTRAINT fk49fd4907cdc8c6de FOREIGN KEY (teams id) REFERENCES team(id);
1238
1239
1240
1241
       Name: fk49fd4907ce781a97; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1242
1243
1244
    ALTER TABLE ONLY person_team
1245
        ADD CONSTRAINT fk49fd4907ce781a97 FOREIGN KEY (person id) REFERENCES person(id);
1246
1247
1248
1249
       Name: fk5625b34074b12939; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1250
1251
1252
    ALTER TABLE ONLY tournament country
1253
        ADD CONSTRAINT fk5625b34074b12939 FOREIGN KEY (tournament year) REFERENCES
1254
             tournament (year);
1255
1256
1257
```

```
1258
     - Name: \mathit{fk5625b3409a553667}; \mathit{Type}\colon\mathit{FK} CONSTRAINT; \mathit{Schema}\colon\mathit{public}; Owner: \mathit{postgres}
1259
1260
    ALTER TABLE ONLY tournament country
1261
        ADD CONSTRAINT fk5625b3409a553667 FOREIGN KEY (hostcountries id) REFERENCES country (
1262
             id);
1263
1264
1265
       Name: fk57f7a1ef94470e9c; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1266
1267
1268
    ALTER TABLE ONLY permission
1269
        ADD CONSTRAINT fk57f7a1ef94470e9c FOREIGN KEY (resource id) REFERENCES resource(id);
1270
1271
1272
1273
       Name: fk62cd596526daa28; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1274
1275
1276
    ALTER TABLE ONLY groupstage tournament group
1277
        ADD CONSTRAINT fk62cd596526daa28 FOREIGN KEY (groups_groupid) REFERENCES
1278
             tournament group (groupid);
1279
1280
1281
       Name: fk62cd5967d361fb7; Type: FK CONSTRAINT; Schema: public; Owner: postqres
1282
1283
1284
1285
    ALTER TABLE ONLY groupstage_tournamentgroup
1286
        ADD CONSTRAINT fk62cd5967d361fb7 FOREIGN KEY (groupstage_id) REFERENCES groupstage(
             id):
1287
1288
1289
       Name: fk6372df674b12939; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1290
1291
1292
    ALTER TABLE ONLY tournament group
1293
        ADD CONSTRAINT fk6372df674b12939 FOREIGN KEY (tournament year) REFERENCES tournament
1294
             (year);
1295
1296
1297
       Name: fk8ea387019b9d8d6d; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1298
1299
1300
    ALTER TABLE ONLY player
1301
        ADD CONSTRAINT fk8ea387019b9d8d6d FOREIGN KEY (id) REFERENCES person(id);
1302
1303
1304
1305
1306
       Name: fka1d587dedb6578d7; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1307
1308
    ALTER TABLE ONLY team advisor
1309
        ADD CONSTRAINT fka1d587dedb6578d7 FOREIGN KEY (team id) REFERENCES team(id);
1310
1311
1312
1313
       Name: fka1d587deea5528a; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1314
1315
1316
    ALTER TABLE ONLY team advisor
1317
        ADD CONSTRAINT fka1d587deea5528a FOREIGN KEY (advisors id) REFERENCES advisor(id);
1318
1319
1320
1321
```

```
- Name: \mathit{fkabf317a774b12939}; \mathit{Type}: \mathit{FK} CONSTRAINT; \mathit{Schema}: \mathit{public}; \mathit{Owner}: \mathit{postgres}
1322
1323
1324
    ALTER TABLE ONLY tournament stadium
1325
        ADD CONSTRAINT fkabf317a774b12939 FOREIGN KEY (tournament year) REFERENCES
1326
             tournament (year);
1327
1328
1329
       Name: fkabf317a7db034f8f; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1330
1331
1332
    ALTER TABLE ONLY tournament stadium
1333
        ADD CONSTRAINT fkabf317a7db034f8f FOREIGN KEY (stadiums stadiumid) REFERENCES
1334
             stadium (stadiumid);
1335
1336
1337
       Name: fkb7678b26cdc8c6de; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1338
1339
1340
    ALTER TABLE ONLY tournamentgroup_team
1341
        ADD CONSTRAINT fkb7678b26cdc8c6de FOREIGN KEY (teams_id) REFERENCES team(id);
1342
1343
1344
1345
       Name: fkb7678b26d57db48a; Type: FK CONSTRAINT; Schema: public; Owner: postqres
1346
1347
1348
    ALTER TABLE ONLY tournamentgroup_team
1349
1350
        ADD CONSTRAINT fkb7678b26d57db48a FOREIGN KEY (tournamentgroup_groupid) REFERENCES
             tournament group (groupid);
1351
1352
1353
       Name: fkbfc93acf60766fd; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1354
1355
1356
    ALTER TABLE ONLY match matchevent
1357
        ADD CONSTRAINT fkbfc93acf60766fd FOREIGN KEY (match id) REFERENCES match(id);
1358
1359
1360
1361
1362
       Name: fkbfc93acfdcc26853; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1363
1364
1365
    ALTER TABLE ONLY match matchevent
        ADD CONSTRAINT fkbfc93acfdcc26853 FOREIGN KEY (events id) REFERENCES matchevent(id);
1366
1367
1368
1369
       Name: fkcf243699401023a7; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1370
1371
1372
    ALTER TABLE ONLY actor_permission
1373
        ADD CONSTRAINT fkcf243699401023a7 FOREIGN KEY (permissions id) REFERENCES permission
1374
             (id);
1375
1376
1377
       Name: fkcf243699d36f2a65; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1378
1379
1380
    ALTER TABLE ONLY actor permission
1381
        ADD CONSTRAINT fkc 243699d36f2a65 FOREIGN KEY (actor_email) REFERENCES actor(email);
1382
1383
1384
1385
```

```
- Name: \mathit{fkd4e5f70318f27aa6}; \mathit{Type}: \mathit{FK} CONSTRAINT; \mathit{Schema}: \mathit{public}; \mathit{Owner}: \mathit{postgres}
1386
1387
1388
    ALTER TABLE ONLY team_player
1389
        ADD CONSTRAINT fkd4e5f70318f27aa6 FOREIGN KEY (players id) REFERENCES player(id);
1390
1391
1392
1393
1394
       Name: fkd4e5f703db6578d7; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1395
1396
1397
    ALTER TABLE ONLY team player
        ADD CONSTRAINT fkd4e5f703db6578d7 FOREIGN KEY (team id) REFERENCES team(id);
1398
1399
1400
1401
       Name: fkd7c3a68b1fd58223; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1402
1403
1404
    ALTER TABLE ONLY match match
1405
        ADD CONSTRAINT fkd7c3a68b1fd58223 FOREIGN KEY (match id) REFERENCES match(id);
1406
1407
1408
1409
    -- Name: fkd7c3a68b884bbd1; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1410
1411
1412
1413
    ALTER TABLE ONLY match match
        ADD CONSTRAINT fkd\overline{7}c3a68b884bbd1 FOREIGN KEY (childs id) REFERENCES match(id);
1414
1415
1416
1417
      - Name: fke491d7f560766fd; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1418
1419
1420
1421
    ALTER TABLE ONLY matchevent
        ADD CONSTRAINT fke491d7f560766fd FOREIGN KEY (match id) REFERENCES match(id);
1422
1423
1424
1425
       Name: fke491d7f56a9e6294; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1426
1427
1428
1429
    ALTER TABLE ONLY matchevent
        ADD CONSTRAINT fke491d7f56a9e6294 FOREIGN KEY (scorringteam id) REFERENCES team(id);
1430
1431
1432
1433
     - Name: fke491d7f5c7168977; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1434
1435
1436
    ALTER TABLE ONLY matchevent
1437
1438
        ADD CONSTRAINT fke491d7f5c7168977 FOREIGN KEY (newplayer id) REFERENCES player(id);
1439
1440
1441
    — Name: fke491d7f5db6578d7; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1442
1443
1444
    ALTER TABLE ONLY matchevent
1445
        ADD CONSTRAINT fke491d7f5db6578d7 FOREIGN KEY (team id) REFERENCES team(id);
1446
1447
1448
1449
     - Name: fke491d7f5df1dd7b0; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1450
1451
1452
1453 ALTER TABLE ONLY matchevent
```

```
1454
           id);
1455
1456
1457
    --- Name: fkf21d53ddfcf4fc9d; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1458
1459
1460
   ALTER TABLE ONLY stadium
1461
       ADD CONSTRAINT fkf21d53ddfcf4fc9d FOREIGN KEY (country_id) REFERENCES country(id);
1462
1463
1464
1465
      Name: fkf8a56938401023a7; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1466
1467
1468
   ALTER TABLE ONLY role_permission
1469
       ADD CONSTRAINT fkf8a56938401023a7 FOREIGN KEY (permissions_id) REFERENCES permission
1470
           (id);
1471
1472
1473
     - Name: fkf8a569386ac4edcc; Type: FK CONSTRAINT; Schema: public; Owner: postgres
1474
1475
1476
   ALTER TABLE ONLY role permission
1477
       ADD CONSTRAINT fkf8a569386ac4edcc FOREIGN KEY (role name) REFERENCES role(name);
1478
1479
1480
1481
1482
    -- PostgreSQL database dump complete
1483
```