

Conceptual Design

Entity-Relation Diagram

You can access the ER diagram here: [ER Diagram](#).

Assumptions

1. If an attribute is the same for every row in a table, we may omit that attribute. Examples include the 'duration' attribute in the event tables. In many cases, 'duration' is always 0.0 - for those tables we omit the 'duration' attribute entirely.
2. The 'related_events' attribute cannot refer to an event from a different match. This assumption was made for data validation and to significantly reduce json_loader execution times.

Reduction to Relational Schemas

You can access the full schema here: [Reduction to Relational Schemas](#). Otherwise, we have included screenshots below.

matches	
match_id 🔗	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

stadiums	
stadium_id 🔗	integer
name	varchar(50)
country	varchar(35)

managers	
manager_id 🔗	integer
name	varchar(50)
nickname	varchar(50)
dob	date
country	varchar(35)

managers_by_team_and_match	
match_id	integer
manager_id	integer
team_id	integer

competitions	
competition_id 🔗	integer
country	varchar(35)
name	varchar(50)
gender	varchar(6)
youth	boolean
international	boolean

teams	
team_id 🔗	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

players	
player_id 🔗	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)

referees	
referee_id 🔗	integer
name	varchar(50)
country	varchar(35)



lineups	
match_id	integer
team_id	integer
player_id	integer
cards	card[]
positions	position[]
jersey_number	integer

related_events	
event_id_1	uuid
event_id_2	uuid

events_by_type	
event_id 🔗	uuid
table_name	char(8)



event_33	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
out	boolean
outcome	varchar(20)
counterpress	boolean

event_43	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
duration	integer
under_pressure	boolean
end_location	point

event_24	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
off_camera	boolean
card	varchar(20)

event_6	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
counterpress	boolean
deflection	boolean
offensive	boolean
save_block	boolean

event_42	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
outcome	varchar(20)

event_9	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
aerial_won	boolean
body_part	varchar(20)

event_2	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
offensive	boolean
recovery_failure	boolean

event_3	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean

event_14	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
outcome	varchar(20)
nutmeg	boolean
overrun	boolean
no_touch	boolean

event_21	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
advantage	boolean
defensive	boolean
penalty	boolean

event_39	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
off_camera	boolean
counterpress	boolean

event_22	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
advantage	boolean
counterpress	boolean
offensive	boolean
penalty	boolean
card	varchar(20)
type	varchar(20)

event_4	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
counterpress	boolean
type	varchar(20)
outcome	varchar(20)

event_23	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
goalkeeper_position	varchar(20)
technique	varchar(20)
body_part	varchar(20)
type	varchar(20)
outcome	varchar(20)

event_37	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean

event_34	
event_id	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
under_pressure	boolean

event_18	
event_id	uuid
match_id	integer
index	integer
period	integer
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
late_video_start	boolean

event_40	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
under_pressure	boolean
off_camera	boolean
in_chain	boolean

event_20	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point

event_26	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
off_camera	boolean

event_10	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
outcome	varchar(20)

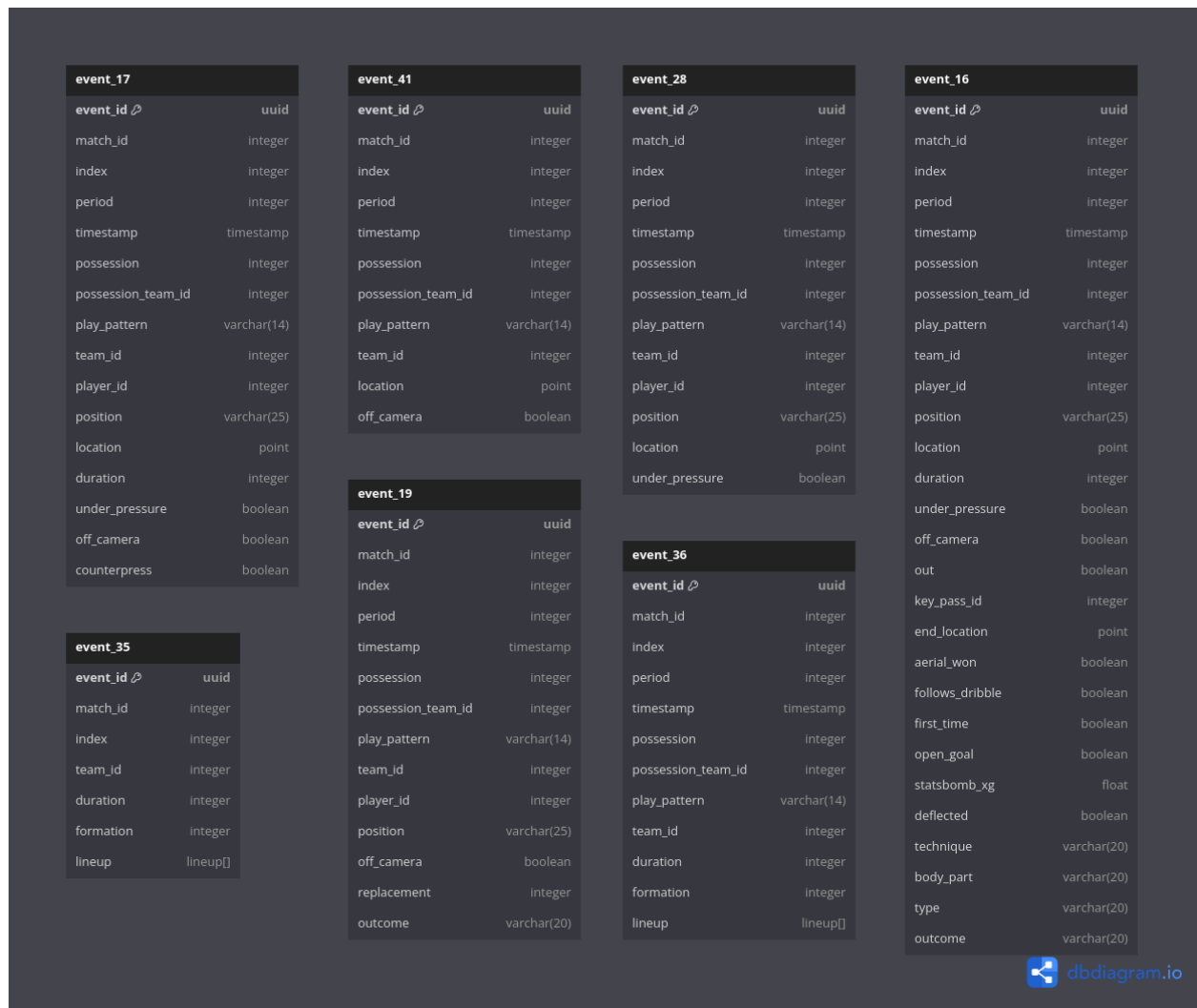
event_25	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point

event_8	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point

event_38	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
aerial_won	boolean

event_27	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
off_camera	boolean

event_30	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
duration	integer
under_pressure	boolean
off_camera	boolean
out	boolean
recipient	integer
length	float
angle	float
height	varchar(20)
end_location	point
assisted_shot_id	integer
backheel	boolean
deflected	boolean
miscommunication	boolean
cross	boolean
cut_back	boolean
switch	boolean
shot_assist	boolean
goal_assist	boolean
body_part	varchar(20)
type	varchar(20)
outcome	varchar(20)
technique	varchar(20)



Database Schema Diagram

You can access the full diagram here: [Database Schema Diagram](#). Otherwise, we have included screenshots below.

managers	
manager_id	integer
name	varchar(50)
nickname	varchar(50)
dob	date
country	varchar(35)

competitions	
competition_id	integer
country	varchar(35)
name	varchar(50)
gender	varchar(6)
youth	boolean
international	boolean

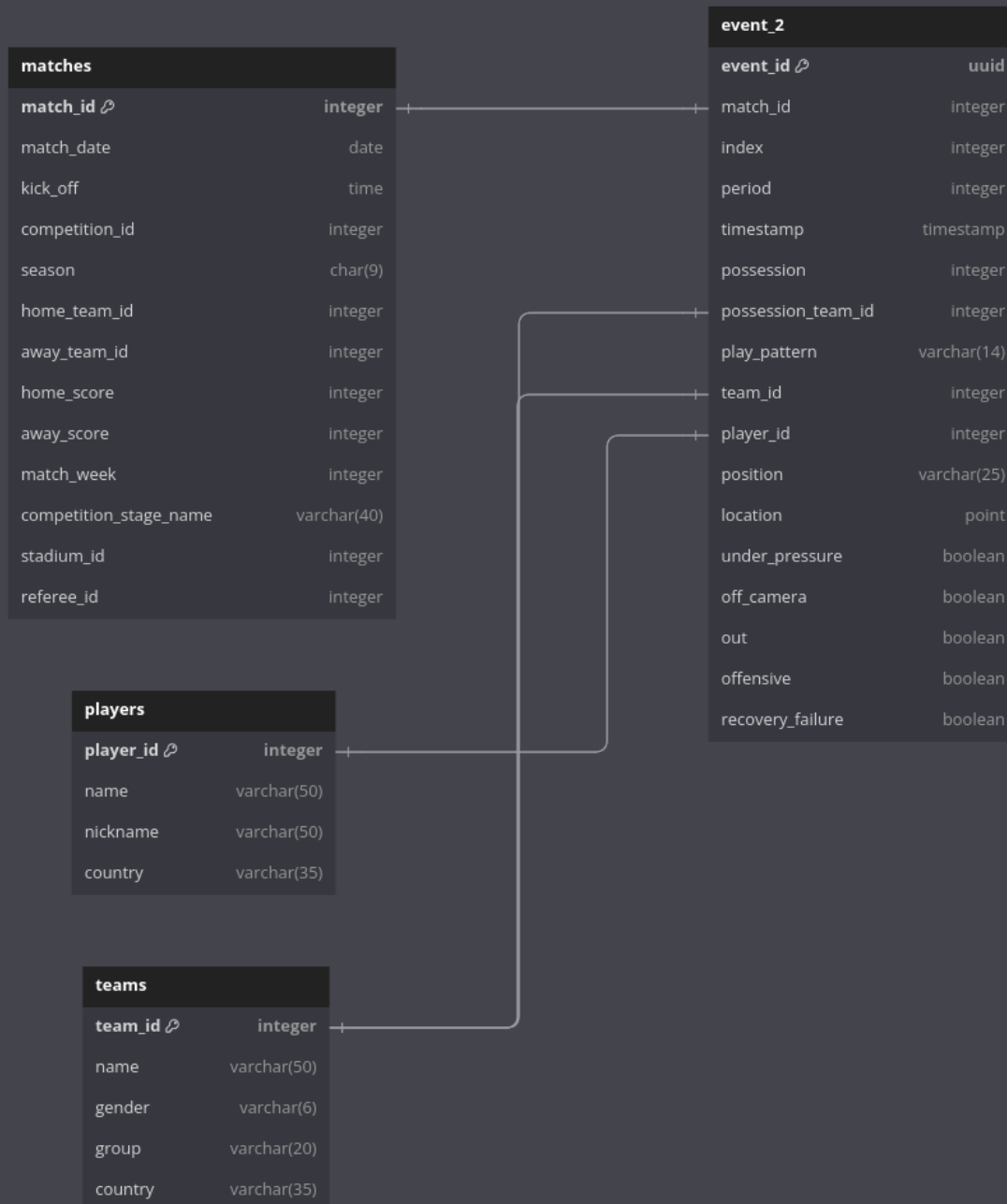
managers_by_team_and_match	
match_id	integer
manager_id	integer
team_id	integer

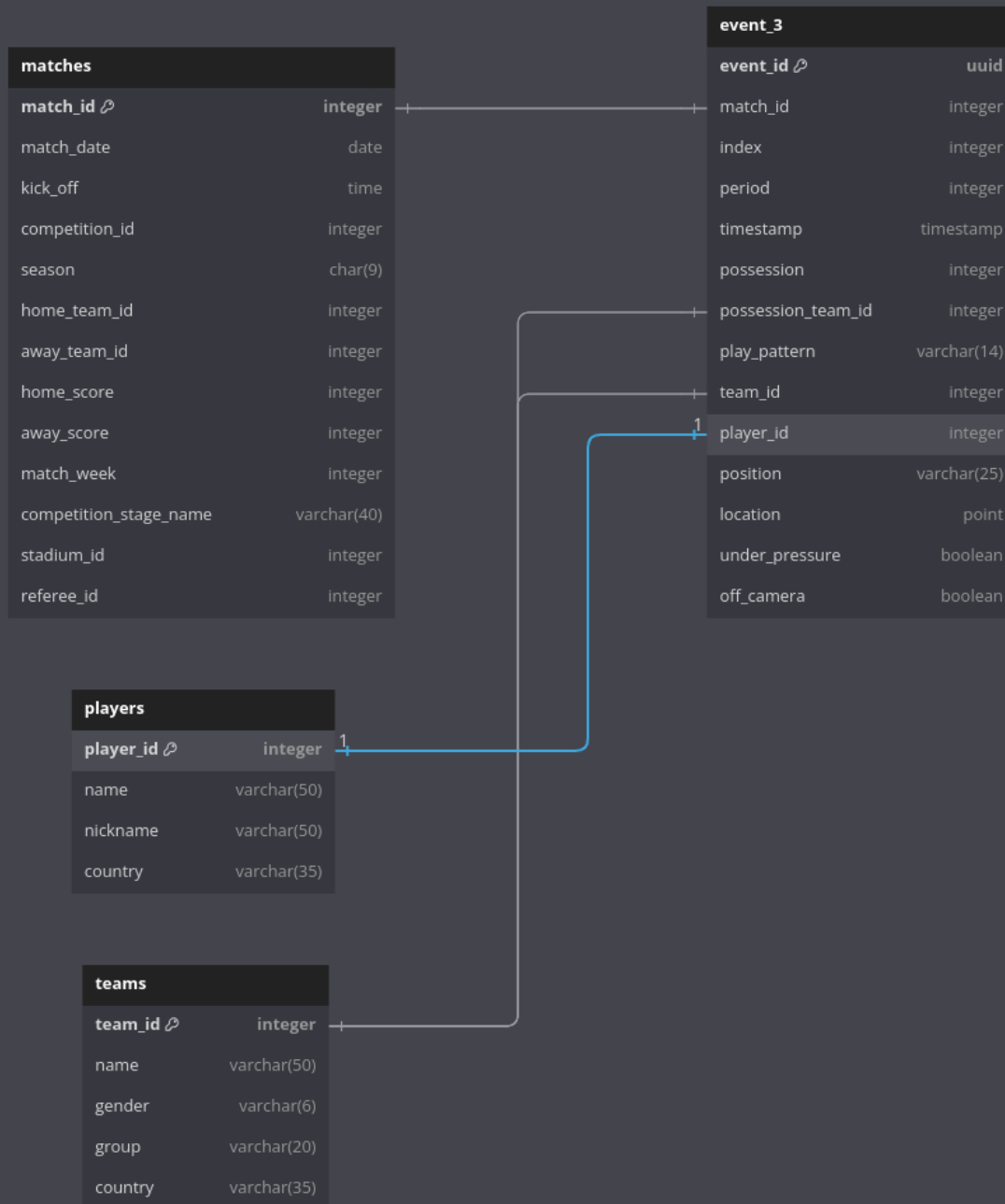
matches	
match_id	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer


teams	
team_id	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)


referees	
referee_id	integer
name	varchar(50)
country	varchar(35)


stadiums	
stadium_id	integer
name	varchar(50)
country	varchar(35)






matches	
match_id 	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

players	
player_id 	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)

teams	
team_id 	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

event_4	
event_id 	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
counterpress	boolean
type	varchar(20)
outcome	varchar(20)

matches	
match_id 🔗	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

players	
player_id 🔗	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)

teams	
team_id 🔗	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

event_6	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
counterpress	boolean
deflection	boolean
offensive	boolean
save_block	boolean

matches	
match_id 🔗	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

event_8	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point

players	
player_id 🔗	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)


teams	
team_id 🔗	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)


matches	
match_id 🔗	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer


players	
player_id 🔗	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)


teams	
team_id 🔗	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

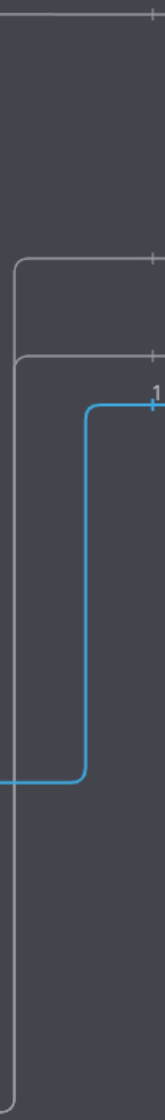
event_9	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
aerial_won	boolean
body_part	varchar(20)

matches	
match_id 	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

event_10	
event_id 	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
outcome	varchar(20)

players	
player_id 	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)

teams	
team_id 	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

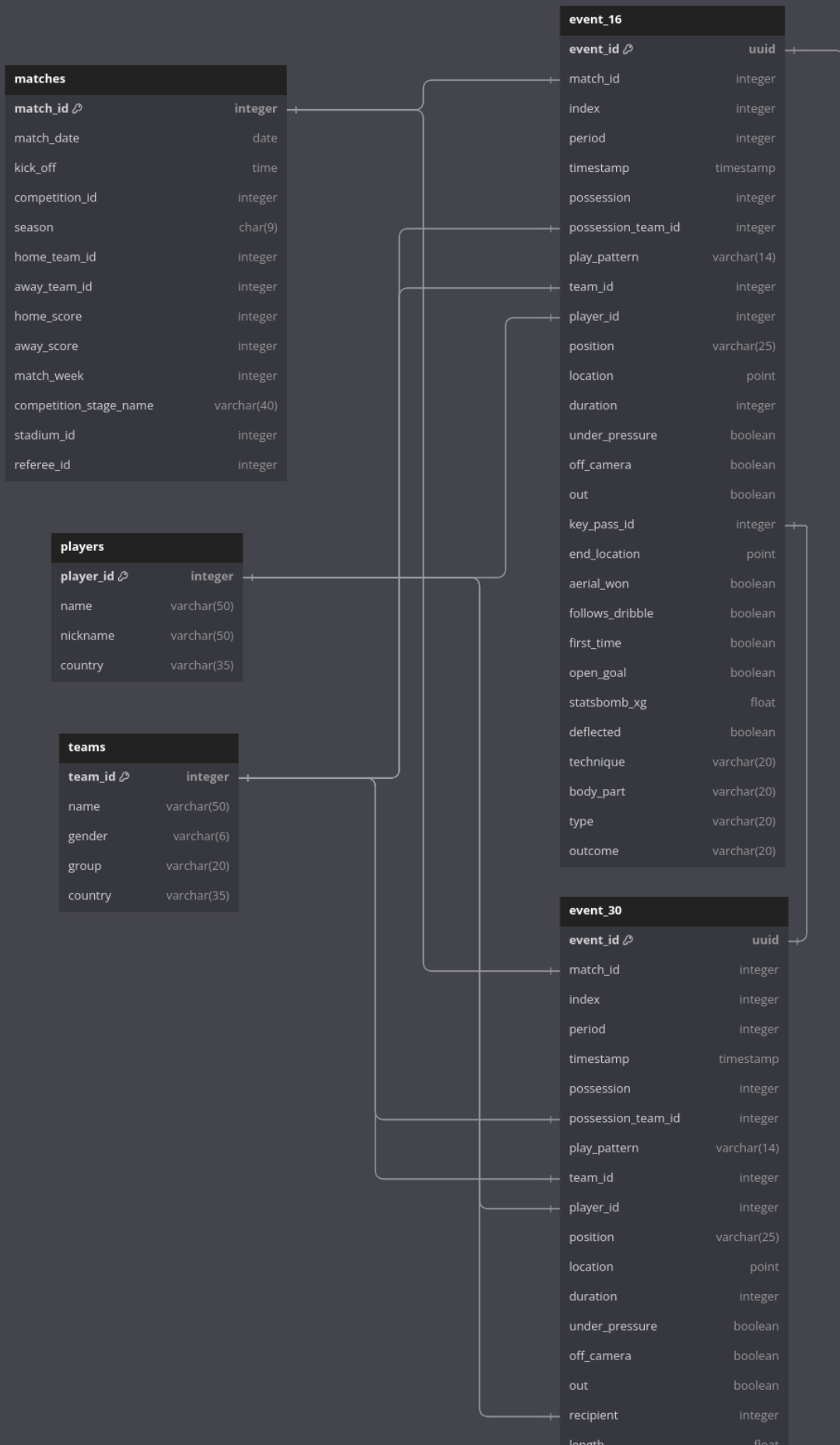


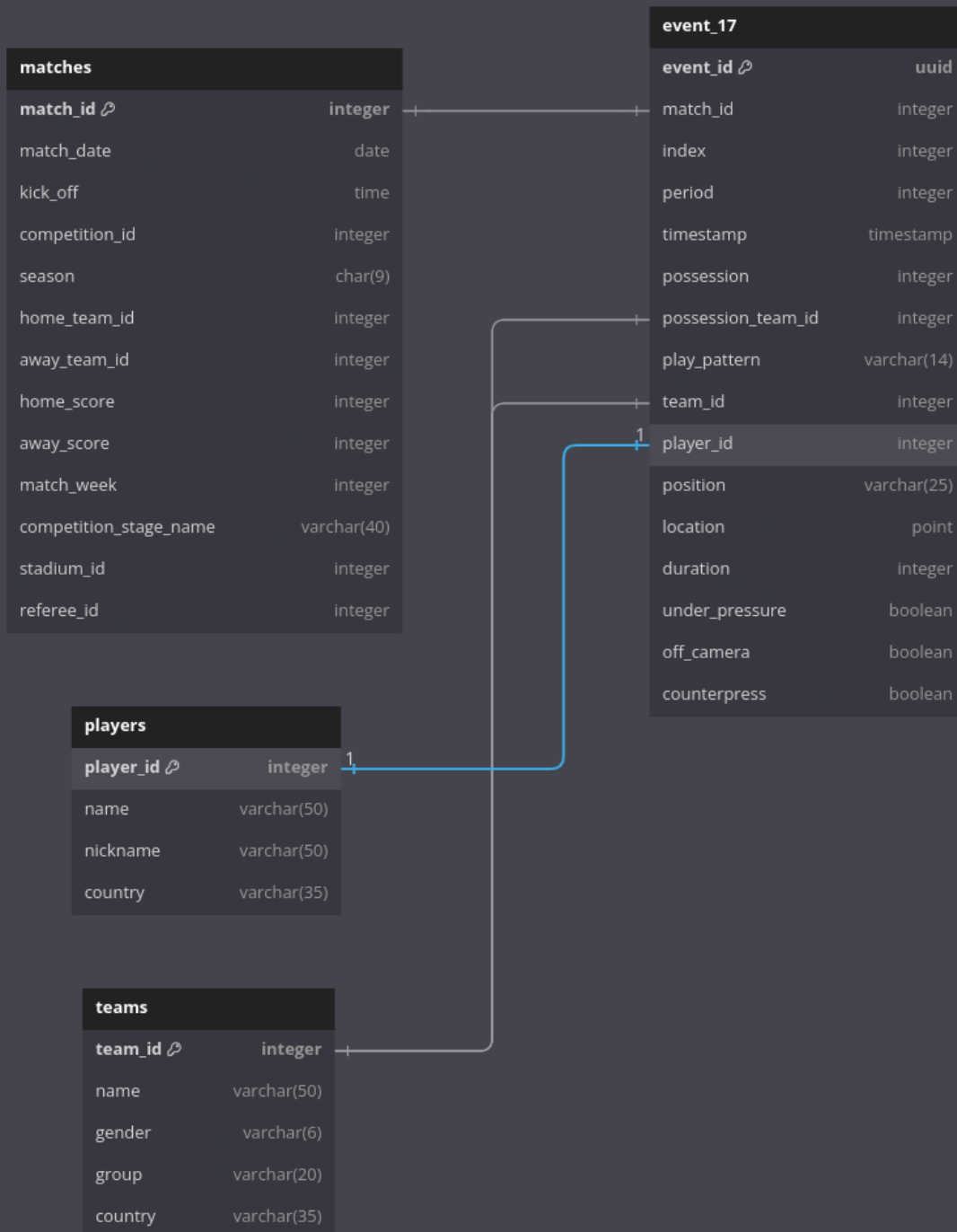
matches	
match_id 🔗	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

players	
player_id 🔗	integer
name	varchar(50)
nickname	varchar(50)
country	varchar(35)

teams	
team_id 🔗	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

event_14	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
timestamp	timestamp
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
player_id	integer
position	varchar(25)
location	point
under_pressure	boolean
off_camera	boolean
out	boolean
outcome	varchar(20)
nutmeg	boolean
overrun	boolean
no_touch	boolean





matches	
match_id 🔗	integer
match_date	date
kick_off	time
competition_id	integer
season	char(9)
home_team_id	integer
away_team_id	integer
home_score	integer
away_score	integer
match_week	integer
competition_stage_name	varchar(40)
stadium_id	integer
referee_id	integer

teams	
team_id 🔗	integer
name	varchar(50)
gender	varchar(6)
group	varchar(20)
country	varchar(35)

event_18	
event_id 🔗	uuid
match_id	integer
index	integer
period	integer
possession	integer
possession_team_id	integer
play_pattern	varchar(14)
team_id	integer
late_video_start	boolean

