


Preparing to Create a Database: D3 Baseball Analytics DB

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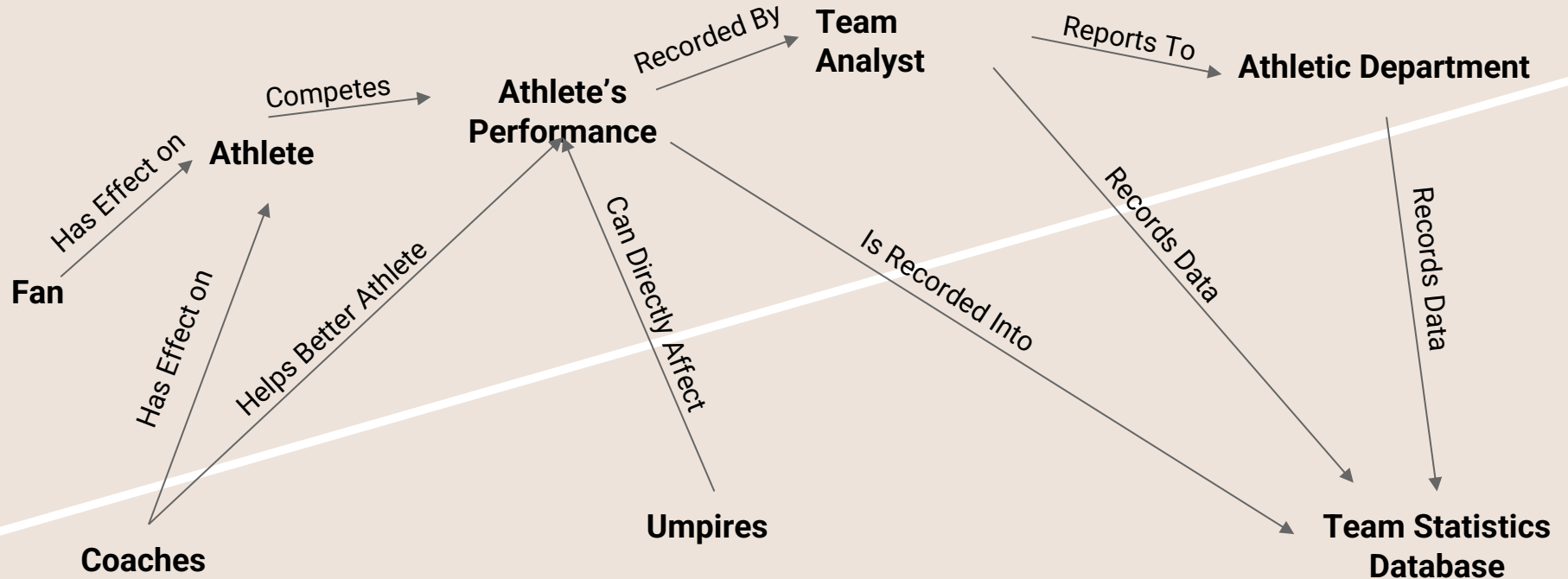
Project Scope

- Problem:
 - The exact formula of developing a winning team is unclear
- Solution:
 - Gather game statistics of every D3 baseball game over the last 10 years
- Goal:
 - Develop a model to predict the performance of players which requires a database

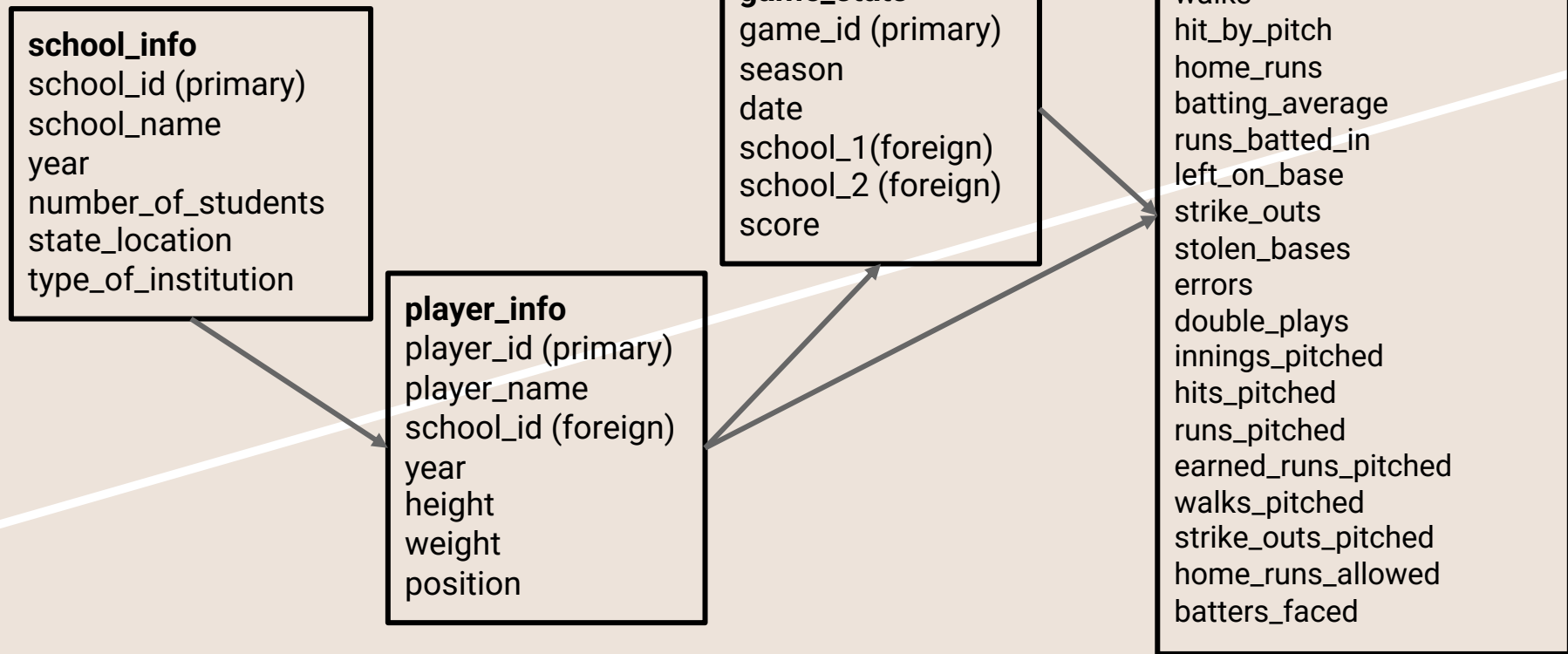
Project Stakeholders

- Athletic departments
- Coaches/Team Managers
- Team Analysts
- Athletes
- Fans
- Refs/Officials

Conceptual Data Model



Logical Data Model



Physical Data Model

school_info

school_id	int(5) [PK]
school_name	varchar(70)
year	int(4)
number_of_students	int(5)
state_location	varchar(70)
type_of_institution	varchar(70)

game_stats

game_id	int(6) [PK]
year	int(4)
date	int(8)
school_1	int(5) [FK]
school_2	int(5) [FK]

player_info

player_id	int(5) [PK]
player_name	varchar(70)
school_id	varchar(70) [FK]
year	int(4)
height (in.)	int(3)
weight (lbs.)	

individual_stats

game_id (primary)	int [PK]
player_id (foreign)	int [FK]
hits	
int	
at_bats	int
walks	
int	
hit_by_pitch	int
home_runs	int
batting_average	dec
runs_batted_in	int
left_on_base	int
int	
strike_outs	int
stolen_bases	int
errors	int
int	
double_plays	int
innings_pitched	dec
dec	
hits_pitched	int
runs_pitched	int

Type of Database

- Relational Database
 - 4 tables
- Can use a SQL DB
 - Like MySQL or PostgreSQL
- Centralized
- Cloud-Based
- Commercial Processing Power