



League of Legends  
Championship Series  
North America  
Database

By Justin Esposito

# Table of Contents

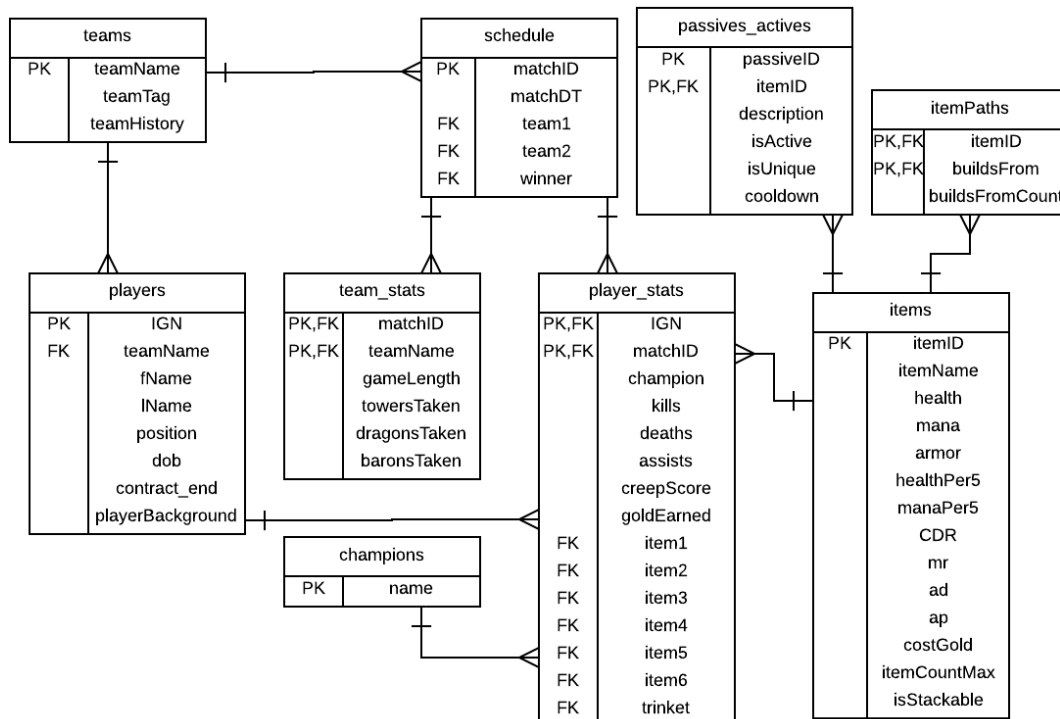
<b>Executive Summary.....</b>	<b>3</b>
<b>E-R Diagram.....</b>	<b>4</b>
<b>Table Create Statements/Functional Dependencies</b>	
Teams.....	5
Players.....	7
Champions.....	9
Schedule.....	11
Items.....	13
passives_actives.....	15
player_stats.....	17
team_stats.....	19
itemPaths.....	21
<b>Views.....</b>	<b>23</b>
<b>Stored Procedures.....</b>	<b>25</b>
<b>Reports.....</b>	<b>28</b>
<b>Security.....</b>	<b>30</b>
<b>Implementation Notes.....</b>	<b>31</b>
<b>Known Problems.....</b>	<b>32</b>

# Executive Summary

This database's goal is to implement a way to keep track of the teams and players in the League of Legends Championship Series in North America (NA LCS). The LCS is the premier league for eSports around the world, featuring millions of viewers daily and unmatched prize money. In real world application, this database would keep track of every player, team, and the schedule as well as in depth player stats and team stats. Item stats and a champion list are also included for the sake of keeping as accurate stats for the teams and their players as possible. Personal details of the players are also included, such as their name, birthdate, contract end date, as well as a short biography for each player. Possible users include fans, players, LCS administrators, and whoever else would like to keep track of the games.

# NA LCS

## Entity Relationship Diagram



# Create Table Statements

This section entails the create statements used to construct the tables of this database along with the functional dependencies for each table. Test data will also be included for each table. Note that while the teams and player information is accurate, the schedule, player and team stats are *not*.

## **Create Teams Table**

This table contains the teams, their tag, and a brief team history. Since two teams cannot share the same name, teamName is denoted the primary key.

teamName-> teamTAG, teamHistory

```
DROP TABLE IF EXISTS teams;
CREATE TABLE teams(
    teamName text NOT NULL PRIMARY KEY,
    teamTAG text NOT NULL,
    teamHistory text NOT NULL
);
```

## Sample Data

	teamname text	teamtag text	teamhistory text
1	Team Solomid	TSM	Widely considered as one of the top teams in North America, TSM eclipsed other teams in the region by consistently reaching the winners podium at major events like IEM, MLG, IPL, and the NA Regionals.
2	Counter-Logic Gaming	CLG	Counter Logic Gaming is one of the oldest teams in the League of Legends competitive scene. Beginning as a small group of friends with a passion for the game, they went on to win WCS 2010, one of the largest
3	Cloud 9	C9	Cloud 9 formed from the remnants of Orbit Gaming, the same team for the Season 3 spring split (losing to Team Marn). Hai and decided to stick with the team and overhaul it, adding Sneaky
4	Team Coast	Coast	Team Coast engineered one of the biggest comebacks in LCS history the mid-season decision to add Miles "Daydreamin" Hoard to the No. 2 team in North America due to (...)
5	Evil Geniuses	EG	Evil Geniuses is one of the largest esports organizations in the world, bringing their team from Europe to compete in the NA LCS. The squad fought and barely missed out on (...)
6	Team Dignitas	DIG	Formed in 2003, Team Dignitas has grown into a major gaming organization. Solid in 2011, they found subsequent success at IPL3. This success representing North America (...)

## **Create Players Table**

This table contains all of the players. Their IGN(In-game Name) acts as the primary key since two players cannot share a name in the LCS. Other information such as their team, names, date of birth, position, contract end date, and brief biography are included. A type was added to make sure that a player does not play a role that does not exist.

IGN->teamName, fName, lName, position, dob, contract\_end,  
playerBackground

```
CREATE TYPE position as ENUM('Top Lane', 'AD Carry', 'Mid Lane', 'Jungler', 'Support');|
DROP TABLE IF EXISTS players;
CREATE TABLE players(
    IGN text NOT NULL PRIMARY KEY,
    teamName text NOT NULL,
    fName text NOT NULL,
    lName text NOT NULL,
    position text NOT NULL,
    dob date NOT NULL,
    contract_end date,
    playerBackground text NOT NULL,
    FOREIGN KEY (teamName) REFERENCES teams(teamName)
);
```

## Sample Data

	ign text	teamname text	fname text	lname text	position text	dob date	contract_en date	playerbackground text
1	Cruzerthebruzer	Team Dignitas	Cruz	Ogden	Top Lane	1990-01-03	2014-10-20	Cruzer joins the Dignitas lineup with a large
2	Crumbzz	Team Dignitas	Alberto	Rengifo	Jungler	1992-09-23	2014-10-20	Crumbzz' story is characterized by versatility
3	Scarra	Team Dignitas	William	Li	Mid Lane	1990-04-12	2014-10-20	William "Scarra" Li is the backbone of Team D
4	Imaqtpie	Team Dignitas	Michael	Santana	AD Carry	1992-03-23	2014-10-20	With his signature long hair, Dignitas' AD Car
5	Kiwikid	Team Dignitas	Alan	Nguyen	Support	1994-04-20	2014-10-20	Team Dignitas recruited KiWiKiD off the North
6	LemonNation	Cloud 9	Daerek	Hart	Support	1990-02-28	2015-10-07	Along with Hai, Daerek "LemonNation" Hart is c
7	Sneaky	Cloud 9	Zachary	Scuderi	AD Carry	1989-06-06	2015-10-07	Once the AD Carry for Dignitas B Team, Zacha
8	Hai	Cloud 9	Hai	Lam	Mid Lane	1989-07-20	2015-10-07	Hai "Hai" Lam is the veteran Mid Lane and tear
9	Meteos	Cloud 9	William	Hartman	Jungler	1992-08-23	2015-10-07	Although William "Meteos" Hartman is the Jung
10	Balls	Cloud 9	An	Le	Top Lane	1994-05-03	2015-10-07	As a former member of mTw.na (a past iteratio
11	Doublelift	Counter-Logic Gaming	Yiliang	Peng	AD Carry	1994-03-12	2014-10-19	Widely regarded as one of the world's best AD
12	Link	Counter-Logic Gaming	Austin	Shin	Mid Lane	1994-04-01	2014-10-19	Austin "Link" Shin replaced veteran member Bi
13	Aphromoo	Counter-Logic Gaming	Zaqueri	Black	Support	1992-07-23	2014-10-19	Aphromoo previously the AD Carry for Team Fe
14	Nien	Counter-Logic Gaming	Zach	Malhas	Top Lane	1994-10-18	2014-10-19	As one of the best farmers in both solo queue
15	Dexter	Counter-Logic Gaming	Marcel	Feldkamp	Jungler	1993-03-13	2014-10-19	Dexter makes the trek across the Atlantic, jo
16	Nintendudex	Team Coast	Josh	Atkins	Jungler	1994-09-09	2014-10-20	The second oldest member of Team Coast, Joshu
17	ZionSpartan	Team Coast	Darshan	Upadhyaya	Top Lane	2014-10-20	2014-10-20	The Top Lane for Team Coast, Darshan "ZionSpa
18	Daydreamin	Team Coast	Miles	Howard	Support	1994-07-30	2014-10-20	Miles "Daydreamin" Hoard first made his appea
19	Shiptur	Team Coast	Danny	Le	Mid Lane	1993-02-13	2014-10-20	Danny "Shiptur" Le, Team Coasts Mid Lane, wa
20	Wizfujiin	Team Coast	Apollo	Price	AD Carry	1994-11-23	2014-10-20	Wizfujiin outperformed several competitors in
21	Xpecial	Team Solomid	Alex	Chu	Support	1993-02-02	2015-10-07	Nicknamed "Hamster" by his teammates, Alex "X
22	Wildturtle	Team Solomid	Jason	Tran	AD Carry	1994-12-20	2015-10-07	A player of many talents and even more smiles,
23	TheOddOne	Team Solomid	Brian	Wyllie	Jungler	1992-01-30	2015-10-07	The General, TheGodOne, OddBro. TSMs Jungler
24	Dyrus	Team Solomid	Marcus	Hill	Top Lane	1994-04-18	2015-10-07	There are few players that have been part of t
25	Bjergsen	Team Solomid	Soren	Bjerg	Mid Lane	1993-11-11	2015-10-07	Soren "Bjergsen" Bjerg enters the 2014 season
26	Krepo	Evil Geniuses	Mitch	Voorspoels	Support	1990-09-29	2014-10-20	The Support player of Evil Geniuses and member
27	Yellowpete	Evil Geniuses	Peter	Wuppen	AD Carry	1990-03-26	2014-10-20	Yellowpete is the stabilizing element of Evil
28	Snoopeh	Evil Geniuses	Stephen	Ellis	Jungler	1991-07-01	2014-10-20	Formerly a part of SK Gaming, Snoopeh is the c
29	Innox	Evil Geniuses	Tyson	Kapler	Top Lane	1993-10-14	2014-10-20	InnoX, much like many other rookie LCS player
30	Pobelter	Evil Geniuses	Eugene	Park	Mid Lane	1996-12-01	2014-10-20	With playmaking abilities that leave his enem



### **Create Champions Table**

This table only contains champion names for the sake of making sure a champion that does not exist is being played in the matches. Having a check constraint would be inefficient since there are well over 100 champions in the game and new champions are introduced on a bi-monthly basis. Note that the test data does *not* include every champion in the game

```
DROP TABLE IF EXISTS champions;  
CREATE TABLE champions(  
    name text NOT NULL PRIMARY KEY  
);
```

## Sample Data

	name text
1	Volibear
2	Renekton
3	Shyvanna
4	Dr. Mundo
5	Trundle
6	Jax
7	Orianna
8	Gragas
9	Ahri
10	Zed
11	Yasuo
12	LeBlanc
13	Annie
14	Leona
15	Thresh
16	Lulu
17	Blitzcrank
18	Lee Sin
19	Nocturne
20	Vi
21	Elise
22	Tristana
23	Vayne
24	Ezreal
25	Caitlyn
26	Lucian

### **Create Table Schedule**

This table contains the schedule of games to be played in the season. This includes the matchID, date and time of match, the two teams playing, and the winner. Note that sample data includes fictional matches.

matchID->matchDT, team1, team2, winner

```
DROP TABLE IF EXISTS schedule;
CREATE TABLE schedule(
    matchID int NOT NULL PRIMARY KEY,
    matchDT timestamp NOT NULL,
    team1 text NOT NULL,
    team2 text NOT NULL,
    winner text,
    FOREIGN KEY (team1) REFERENCES teams(teamName),
    FOREIGN KEY (team2) REFERENCES teams(teamName),
    FOREIGN KEY (winner) REFERENCES teams(teamName)
);
```

## Sample Data

	<b>matchid</b> integer	<b>matchdt</b> timestamp without time zone	<b>team1</b> text	<b>team2</b> text	<b>winner</b> text
<b>1</b>	1	2014-03-15 06:00:00	Counter-Logic Gaming	Cloud 9	Counter-Logic Gaming
<b>2</b>	2	2014-03-15 07:00:00	Team Dignitas	Team Solomid	Team Solomid
<b>3</b>	3	2014-03-16 06:00:00	Evil Geniuses	Team Coast	Evil Geniuses

## **Create Table Items**

This table contains the items in the game as well as all of their stats. This includes price, max item count, and if they are stackable as well. Note that the sample data does *not* include every item in the game.

itemID-> itemName, health, mana, healthPer5, manaPer5, CDR, armor,  
mr, ad, ap, atkspd, critchance, lifesteal, spellvamp, ms, costGold,  
itemCountMax, isStackable

```
DROP TABLE IF EXISTS items;  
CREATE TABLE items(  
    itemID int NOT NULL PRIMARY KEY,  
    itemName text NOT NULL,  
    health int,  
    mana int,  
    healthPer5 int,  
    manaPer5 int,  
    CDR int,  
    armor int,  
    mr int,  
    ad int,  
    ap int,  
    atkspd int,  
    critchance int,  
    lifesteal int,  
    spellvamp int,  
    ms int,  
    costGold int check (costGold > -1),  
    itemCountMax int check (itemCountMax > 0),  
    isStackable boolean NOT NULL  
);
```

## Sample Data

	itemid integer	itemname text	health integer	mana integer	healthper5 integer	manaper5 integer	cdr integer	armor integer	mr integer	ad integer	ap integer	atkspd integer	critchance integer	lifesteal integer	spellvamp integer	ms integer	costgold integer	itemcountmax integer	isstackable boolean
1	1	Dorans Sh	80		8												440	6	f
2	2	Dorans Rj	80			5					15						440	6	f
3	3	Dorans Bl	80							8							440	6	f
4	4	Health Po															35	5	t
5	5	Mana Poti															35	5	t
6	6	Sight War															75	3	t
7	7	Vision Wa															100	30	t
8	8	Cloth Arm						15									300	6	f
9	9	Null-Magi							15								400	6	f
10	10	Long Swor								10							360	6	f
11	11	B.F. Swor								45							1450	6	f
12	12	Hexdrinke							25	20							590	6	f
13	13	Wardens b						50									400	6	f
14	14	Giants Be	380														1000	6	f
15	15	Randuins	500					50									1000	6	f
16	16	Ruby Crys	180														400	6	f
17	17	Sapphire		100													400	6	f
18	18	Phage	200							20							565	6	f
19	19	Amplifyir									20						435	6	f
20	20	Sheen		200							25						365	6	f
21	21	Dagger										15					400	6	f
22	22	Brawlers											10				400	6	f
23	23	Zeal										18	10			5	375	6	f
24	24	Trinity F	250	200						30	30	30	10			8	3	6	f
25	25	Fiendish					10				30						385	6	f
26	26	Will of t					10				80				20		480	6	f
27	27	Hextech F									40				12		330	6	f
28	28	Vamperic								10				10			400	6	f
29	90	Warding T															1	0	f
30	91	Scrying C															1	0	f
31	92	Sweeping															0	1	f

### **Create Table passives\_active**

This table keeps the data for the passive active attributes for certain items.

It also states if an item is consumed when use, such as a health potion.

passiveID, itemID-> description, isActive, consumesOnActive, isUnique,  
cooldown

```
DROP TABLE IF EXISTS passives_active;
CREATE TABLE passives_active(
    passiveID int NOT NULL,
    itemID int NOT NULL,
    description text NOT NULL,
    isActive boolean NOT NULL,
    consumesOnActive boolean,
    isUnique boolean NOT NULL,
    cooldown int check (cooldown >= 0),
    PRIMARY KEY(passiveID, itemID),
    FOREIGN KEY (itemID) REFERENCES items(itemID)
);
```

## Sample Data

	passiveid integer	itemid integer	description text	isactive boolean	consumesonactive boolean	isunique boolean	cooldown integer
1	1	90	Places a	t		t	120
2	2	91	Reveals st	t		t	120
3	3	92	Summons a	t		t	60
4	4	2	Restores	f		f	
5	5	3	Basic Att	f		f	
6	6	1	Blocks 8	f		t	
7	7	4	Restores	t	t	f	
8	8	5	Restores	t	t	f	
9	9	6	Places an	t	t	f	
10	10	7	Places a	t	t	f	
11	11	12	LIFELINE:	f		t	90
12	12	13	COLD STE	f		t	
13	13	15	COLD STE	f		t	
14	14	15	Slows the	t	f	t	60
15	15	18	Rage: Ba	f		t	
16	15	24	Rage: Ba	f		t	
17	16	20	SPELLBLAD	f		t	
18	17	24	SPELLBLAD	f		t	



### **Create Table player\_stats**

This table keeps track of player's stats. It includes their items bought, K/D/A, creep score, and their gold earned per match. Note again that these stats are *not* real.

IGN, matchID-> champion, kills, deaths, assists, creepScore, goldEarned,  
item1, item2, item3, item4, item 5, item6, trinket

```
DROP TABLE IF EXISTS player_stats;
CREATE TABLE player_stats(
    IGN text NOT NULL,
    matchID int NOT NULL,
    champion text NOT NULL,
    kills int NOT NULL,
    deaths int NOT NULL,
    assists int NOT NULL,
    creepScore int NOT NULL,
    goldEarned int NOT NULL,
    item1 int,
    item2 int,
    item3 int,
    item4 int,
    item5 int,
    item6 int,
    trinket int,
    PRIMARY KEY(IGN, matchID),
    FOREIGN KEY (IGN) REFERENCES players(ign),
    FOREIGN KEY (champion) REFERENCES champions(name),
    FOREIGN KEY (matchID) REFERENCES schedule(matchID),
    FOREIGN KEY (item1) REFERENCES ITEMS(itemID),
    FOREIGN KEY (item2) REFERENCES ITEMS(itemID),
    FOREIGN KEY (item3) REFERENCES ITEMS(itemID),
    FOREIGN KEY (item4) REFERENCES ITEMS(itemID),
    FOREIGN KEY (item5) REFERENCES ITEMS(itemID),
    FOREIGN KEY (item6) REFERENCES ITEMS(itemID),
    FOREIGN KEY (trinket) REFERENCES ITEMS(itemID)
);
```

Sample Data

	ign text	matchid integer	champion text	kills integer	deaths integer	assists integer	creepscore integer	goldearned integer	item1 integer	item2 integer	item3 integer	item4 integer	item5 integer	item6 integer	trinket integer
1	Cruzerthebruzer	2	Renekton	2	3	2	189	8523	4	2	21	5	18	24	90
2	Crumbzz	2	Vi	1	4	4	82	6425	4	7	15	18			90
3	Scarra	2	Orianna	3	3	4	270	10002	4	7	2	19	23		91
4	Imaqtpie	2	Caitlyn	2	5	5	295	9852	15	4	7	2	28	24	90
5	Kiwikid	2	Thresh	0	4	8	14	6064	4	5	9	20			92
6	Xpecial	2	Lulu	1	1	11	23	8491	4	7	9	12	19		92
7	Wildturtle	2	Vayne	8	2	4	324	12063	8	9	10	23	12	5	90
8	TheOddOne	2	Elise	4	2	12	102	9423	4	7	2	12	15	19	90
9	Dyrus	2	Volibear	4	3	12	298	10423	4	7	15	14	12	21	90
10	Bjergsen	2	Ahri	1	0	9	301	11206	4	7	25	23	12	17	91
11	Krepo	3	Blitzcra	2	1	12	31	7234	4	7	12	14	15		92
12	Yellowpete	3	Lucian	9	1	6	342	13023	6	4	7	21	22	24	90
13	Snoopeh	3	Shyvanna	4	2	12	127	8412	4	7	22	21	27		90
14	Innox	3	Dr. Mund	5	2	13	320	11985	4	7	20	21	22	23	90
15	Pobelter	3	Annie	6	3	9	301	11245	4	7	12	14	15	23	91
16	Nintendudex	3	Elise	1	4	2	78	7009	12	5	18	7	4	25	90
17	ZionSpartan	3	Volibear	4	3	3	279	9142	4	12	14	15	18	20	90
18	Daydreamin	3	Thresh	0	5	4	9	6032	4	7	12	13	14		92
19	Shiptur	3	Orianna	2	6	2	231	8932	4	7	14	21	22		91
20	Wizfujiin	3	Caitlyn	2	7	4	240	9102	4	7	5	19	23		90
21	Doublelift	1	Vayne	10	1	7	390	14002	4	7	19	20	21	22	90
22	Link	1	Gragas	3	0	12	402	13952	4	7	22	24	28	13	90
23	Aphromoo	1	Thresh	0	1	17	23	9234	4	7	19	23	20	22	92
24	Nien	1	Dr. Mund	2	2	12	372	12345	4	7	28	27	25	23	91
25	Dexter	1	Volibear	5	1	12	90	9923	4	7	28	18	12	16	90
26	LemonNation	1	Annie	1	4	3	30	6613	4	7	12	8	3	2	92
27	Sneaky	1	Caitlyn	2	5	3	224	7024	4	7	21	22	23	18	90
28	Hai	1	Ahri	2	5	2	199	7923	4	8	2	3	22	26	90
29	Meteoes	1	Elise	2	5	4	68	7201	4	7	12	14	15	16	91
30	Balls	1	Shyvanna	3	1	4	246	8205	4	7	14	17	19	24	90

### **Create Table team\_stats**

This table keeps track of team stats per game, including the match the game took place, length of the game, and the amount of dragons, towers, and barons taken by the team. Same as player stats, these stats are *not* real.

matchID, teamName-> gameLength, towersTaken, dragonsTaken,  
baronsTaken

```
DROP TABLE IF EXISTS team_stats;
CREATE TABLE team_stats(
    matchID int NOT NULL,
    teamName text NOT NULL,
    gameLength time NOT NULL,
    towersTaken int NOT NULL,
    dragonsTaken int NOT NULL,
    baronsTaken int NOT NULL,
    PRIMARY KEY (matchID, teamName),
    FOREIGN KEY (matchID) REFERENCES schedule(matchID),
    FOREIGN KEY (teamName) REFERENCES teams(teamName)
);
```

## Sample Data

	matchid integer	teamname text	gamelength time without time zone	towerstaken integer	dragonstaken integer	baronstaken integer
1	1	Counter-L	00:36:23	8	4	1
2	1	Cloud 9	00:36:23	5	1	0
3	2	Team Dign	00:26:59	3	1	0
4	2	Team Solo	00:26:59	9	4	2
5	3	Evil Geni	00:31:48	9	4	1
6	3	Team Coas	00:31:48	5	2	0

### **Create Table itemPaths**

This table contains information about what items build into other items as well as the amount of a certain item takes to build into another. Note that this is limited to the current items in the items table for the sake of sample data.

itemID, buildsFrom-> buildsFromCount

```
DROP TABLE IF EXISTS itemPaths;
CREATE TABLE itemPaths(
    itemID int not null,
    buildsFrom int not null,
    buildsFromCount int not null,
    primary key (itemid, buildsfrom),
    foreign key (itemID) references items(itemID),
    foreign key (buildsFrom) references items(itemID)
);
```

## Sample Data

	itemid integer	buildsfrom integer	buildsfromcount integer
<b>1</b>	13	8	2
<b>2</b>	12	9	1
<b>3</b>	12	10	1
<b>4</b>	15	13	1
<b>5</b>	15	14	1
<b>6</b>	18	16	1
<b>7</b>	18	10	1
<b>8</b>	20	19	1
<b>9</b>	20	17	1
<b>10</b>	23	21	1
<b>11</b>	23	22	1
<b>12</b>	24	23	1
<b>13</b>	24	20	1
<b>14</b>	24	18	1
<b>15</b>	25	19	1
<b>16</b>	28	19	2
<b>17</b>	26	28	1
<b>18</b>	26	25	1

# Views

## Create Statements in SQL

### View to show items with passive or active abilities and their stats

```
CREATE OR REPLACE VIEW itemsWithPassivesActives AS
select distinct items.itemId, items.itemName, items.health, items.mana, items.armor, items.healthper5, items.manaper5,
items.cdr, items.mr, items.ad, items.ap, items.costGold, items.itemCountMax, items.isStackable, passives_actives.description
from items, passives_actives
where passives_actives.itemID = items.itemid
```

## Sample Data

	itemid integer	itemname text	health integer	mana integer	armor integer	healthper5 integer	manaper5 integer	cdr integer	mr integer	ad integer	ap integer	costgold integer	itemcountmax integer	isstackable boolean	description text
1	12	Hexdrinke							25	20		590	6	f	LIFELINE: Upon taking magic damage that would
2	1	Dorans St	80			8						440	6	f	Blocks 8 damage from champion basic attacks.
3	24	Trinity F	250	200						30	30	3	6	f	Rage: Basic attacks grant 20 movement speed
4	15	Randuins	500		50							1000	6	f	Slows the movement speed of nearby enemy unit
5	18	Phage	200							20		565	6	f	Rage: Basic attacks grant 20 movement speed
6	7	Vision We										100	30	t	Places a visible ward with 1100 Vision Sight
7	90	Warding I										1	0	f	Places a Stealth Ward that lasts 60 / 120 se
8	13	Wardens M			50							400	6	f	COLD STEEL: If you are hit by a basic attack
9	20	Sheen		200							25	365	6	f	SPELLBLADE: On cast, for 10 seconds, your nex
10	92	Sweeping										0	1	f	Summons a drone at the target location for 6
11	5	Mana Poti										35	5	t	Restores 100 mana over 15 seconds.
12	15	Randuins	500		50							1000	6	f	COLD STEEL: When hit by basic attacks, reduc
13	3	Dorans Bl	80							8		440	6	f	Basic Attacks restore 3 health for ranged, an
14	2	Dorans Ri	80				5				15	440	6	f	Restores 4 mana when you kill an enemy unit.
15	4	Health Po										35	5	t	Restores 150 health over 15 seconds.
16	6	Sight War										75	3	t	Places an invisible ward with 1100 range. Las
17	91	Scrying C										1	0	f	Reveals small location within 1500 / 2500 ran
18	24	Trinity F	250	200						30	30	3	6	f	SPELLBLADE: On cast, for 10 seconds, your nex

## View to show items that are built from a recipe

```
CREATE OR REPLACE VIEW itemsMadeFromRecipe AS
```

```
select items.itemID, items.itemName, items.health, items.mana, items.armor, items.healthper5, items.manaper5,
items.cdr, items.mr, items.ad, items.ap, items.costGold, items.itemCountMax, items.isStackable, itemPaths.buildsFrom, itempaths.buildsFromCount
from items, itempaths
where items.itemID = itempaths.itemID
```

## Sample Data

	itemid integer	itemname text	health integer	mana integer	armor integer	healthper5 integer	manaper5 integer	cdr integer	mr integer	ad integer	ap integer	costgold integer	itemcountmax integer	isstackable boolean	buildsfrom integer	buildsfromcount integer
1	13	Wardens M			50							400	6	f	8	2
2	12	Hexdrinke							25	20		590	6	f	9	1
3	12	Hexdrinke							25	20		590	6	f	10	1
4	15	Randuins	500		50							1000	6	f	13	1
5	15	Randuins	500		50							1000	6	f	14	1
6	18	Phage	200							20		565	6	f	16	1
7	18	Phage	200							20		565	6	f	10	1
8	20	Sheen		200							25	365	6	f	19	1
9	20	Sheen		200							25	365	6	f	17	1
10	23	Zeal										375	6	f	21	1
11	23	Zeal										375	6	f	22	1
12	24	Trinity F	250	200						30	30	3	6	f	23	1
13	24	Trinity F	250	200						30	30	3	6	f	20	1
14	24	Trinity F	250	200						30	30	3	6	f	18	1
15	25	Fiendish						10			30	385	6	f	19	1
16	28	Hextech F									40	330	6	f	19	2
17	26	Will of t						10			80	480	6	f	28	1
18	26	Will of t						10			80	480	6	f	25	1



# Stored Procedures

Create Statements in SQL

**Stored procedure to see what player has played a certain champion and his or her stats per game with that champion**

```
CREATE OR REPLACE FUNCTION PlayerStatsWithChampion(text, REFCURSOR) returns refcursor as
$$
declare name text          := $1;
        resultset REFCURSOR := $2;
begin
    open resultset for
    select ign, kills, deaths, assists, creepscore, goldearned
    from player_stats
    where $1 = player_stats.champion;
    return resultset;
end;
$$
language plpgsql;
```

## Sample Data

(when executing `select playerstatswithchampion('Volibear', 'results');`  
`Fetch all from results;` )

	ign text	kills integer	deaths integer	assists integer	creepscore integer	goldearned integer
1	Dyrus	4	3	12	298	10423
2	ZionSpartan	4	3	3	279	9142
3	Dexter	5	1	12	90	9923

## Stored procedure to check the amount of wins a team has

```
CREATE OR REPLACE FUNCTION CheckWinsForTeam(text, REFCURSOR) returns refcursor as
$$
declare teamName text          := $1;
        resultset REFCURSOR    := $2;
begin
    open resultset for
    select COUNT(winner) as Wins
    from schedule
    where winner = $1;
    return resultset;
end;
$$
language plpgsql;
```

## Sample Data

(when executing `select checkwinsforteam('Evil Geniuses', 'results');`  
`Fetch all from results;` )

	wins bigint
1	1

## Stored procedure to see what players play a specific role/position

```
CREATE OR REPLACE FUNCTION PlayersThatPlayPosition(text, REFCURSOR) returns refcursor as
$$
declare position text          := $1;
        resultset REFCURSOR    := $2;
begin
    open resultset for
        select ign, teamname, fname, lname, dob, contract_end, playerbackground
        from players
        where players.position = $1;
        return resultset;
end;
$$
language plpgsql;
```

### Sample Data

(when executing 

```
select PlayersThatPlayPosition('Top Lane', 'results');
Fetch all from results;
```

 )

	ign text	teamname text	fname text	lname text	dob date	contract_en date	playerbackground text
1	Cruzerthebruzer	Team Dignitas	Cruz	Ogden	1990-01-03	2014-10-20	Cruzer joins the Dignitas lineup
2	Balls	Cloud 9	An	Le	1994-05-03	2015-10-07	As a former member of mTw.na (a
3	Nien	Counter-Logic Gaming	Zach	Malhas	1994-10-18	2014-10-19	As one of the best farmers in bot
4	ZionSpartan	Team Coast	Darshan	Upadhyaha	2014-10-20	2014-10-20	The Top Lane for Team Coast, Dars
5	Dyrus	Team Solomid	Marcus	Hill	1994-04-18	2015-10-07	There are few players that have b
6	Innox	Evil Geniuses	Tyson	Kapler	1993-10-14	2014-10-20	InnoX, much like many other rooki

# Reports

## Queries in SQL

### Report to show the most popular champions in the LCS

```
select champion, count(champion)
from player_stats
group by champion
order by count desc
```

## Sample Data

	champion text	count bigint
1	Volibear	3
2	Caitlyn	3
3	Thresh	3
4	Elise	3
5	Dr. Mund	2
6	Shyvanna	2
7	Annie	2
8	Vayne	2
9	Orianna	2
10	Ahri	2
11	Vi	1
12	Gragas	1
13	Renekton	1
14	Lucian	1
15	Blitzcrab	1
16	Lulu	1

## Report to show players that bought a consumable item

```
select distinct players.fName, players.lname
from players, player_stats, items, passives_actives
where players.ign = player_stats.ign and
      player_stats.item1 = items.itemID or
      player_stats.item2 = items.itemID or
      player_stats.item3 = items.itemID or
      player_stats.item4 = items.itemID or
      player_stats.item5 = items.itemID or
      player_stats.item6 = items.itemID and
      items.itemID = passives_actives.itemID and
      passives_actives.consumesonactive = true
```

### Sample Data

	fname text	lname text
3	Soren	Bjerg
4	Peter	Wuppen
5	William	Hartman
6	An	Le
7	Marcel	Feldkamp
8	Alex	Chu
9	Alberto	Rengifo
10	Darshan	Upadhyaha
11	Mitch	Voorspoels
12	Apollo	Price
13	Zach	Malhas
14	Tyson	Kapler
15	Eugene	Park
16	Yiliang	Peng
17	Michael	Santana
18	Daerek	Hart
19	Miles	Howard
20	William	Li
21	Brian	Wyllie
22	Jason	Tran
23	Zaqueri	Black
24	Austin	Shin
25	Danny	Le
26	Zachary	Scuderi
27	Hai	Lam
28	Marcus	Hill
29	Stephen	Ellis
30	Cruz	Ogden

# Security

For security reasons, certain restrictions will be in place of the database for users. Administrators will reserve the right to insert, update, and delete items in the database while generic users will only be able to the select command.

```
CREATE USER LCSadmin WITH PASSWORD 'admin';

REVOKE ALL on teams from LCSadmin;
REVOKE ALL on players from LCSadmin;
REVOKE ALL on items from LCSadmin;
REVOKE ALL on schedule from LCSadmin;
REVOKE ALL on team_stats from LCSadmin;
REVOKE ALL on champions from LCSadmin;
REVOKE ALL on player_stats from LCSadmin;
REVOKE ALL on passives_actives from LCSadmin;
REVOKE ALL on itemPaths from LCSadmin;

GRANT insert, update, delete, select on players to LCSadmin;
GRANT insert, update, delete, select on teams to LCSadmin;
GRANT insert, update, delete, select on items to LCSadmin;
GRANT insert, update, delete, select on schedule to LCSadmin;
GRANT insert, update, delete, select on team_stats to LCSadmin;
GRANT insert, update, delete, select on champions to LCSadmin;
GRANT insert, update, delete, select on player_stats to LCSadmin;
GRANT insert, update, delete, select on passives_actives to LCSadmin;
GRANT insert, update, delete, select on itemPaths to LCSadmin;

CREATE USER genericUser;
REVOKE ALL on teams from genericUser;
REVOKE ALL on players from genericUser;
REVOKE ALL on items from genericUser;
REVOKE ALL on schedule from genericUser;
REVOKE ALL on team_stats from genericUser;
REVOKE ALL on champions from genericUser;
REVOKE ALL on player_stats from genericUser;
REVOKE ALL on passives_actives from genericUser;
REVOKE ALL on itemPaths from genericUser;

GRANT select on players to genericUser;
GRANT select on teams to genericUser;
GRANT select on items to genericUser;
GRANT select on schedule to genericUser;
GRANT select on team_stats to genericUser;
GRANT select on champions to genericUser;
GRANT select on player_stats to genericUser;
GRANT select on passives_actives to genericUser;
GRANT select on itemPaths to genericUser;
```

## **Implementation Notes**

- Implementation should be as simple as executing the script on a server running PostgreSQL
- Be sure to edit custom things (mainly users) to suit future needs
- Be sure to properly update the items and itemPaths table to be up-to-date with live patches
- Allows easy and quick access to future, current, and post LCS games for fans, players, and admins alike

## Known Problems

- Positions *do not* account for lane swaps. A future meta may also require the need for the role types to be changed in the future.
- The itemPaths table is messy at best.
- Test data does *not* include all LCS teams and players, items, and champions. Current schedule and game results are also inaccurate.