Live from New York…
It's a Saturday Night Live Database

Designed by Jenna Ficula

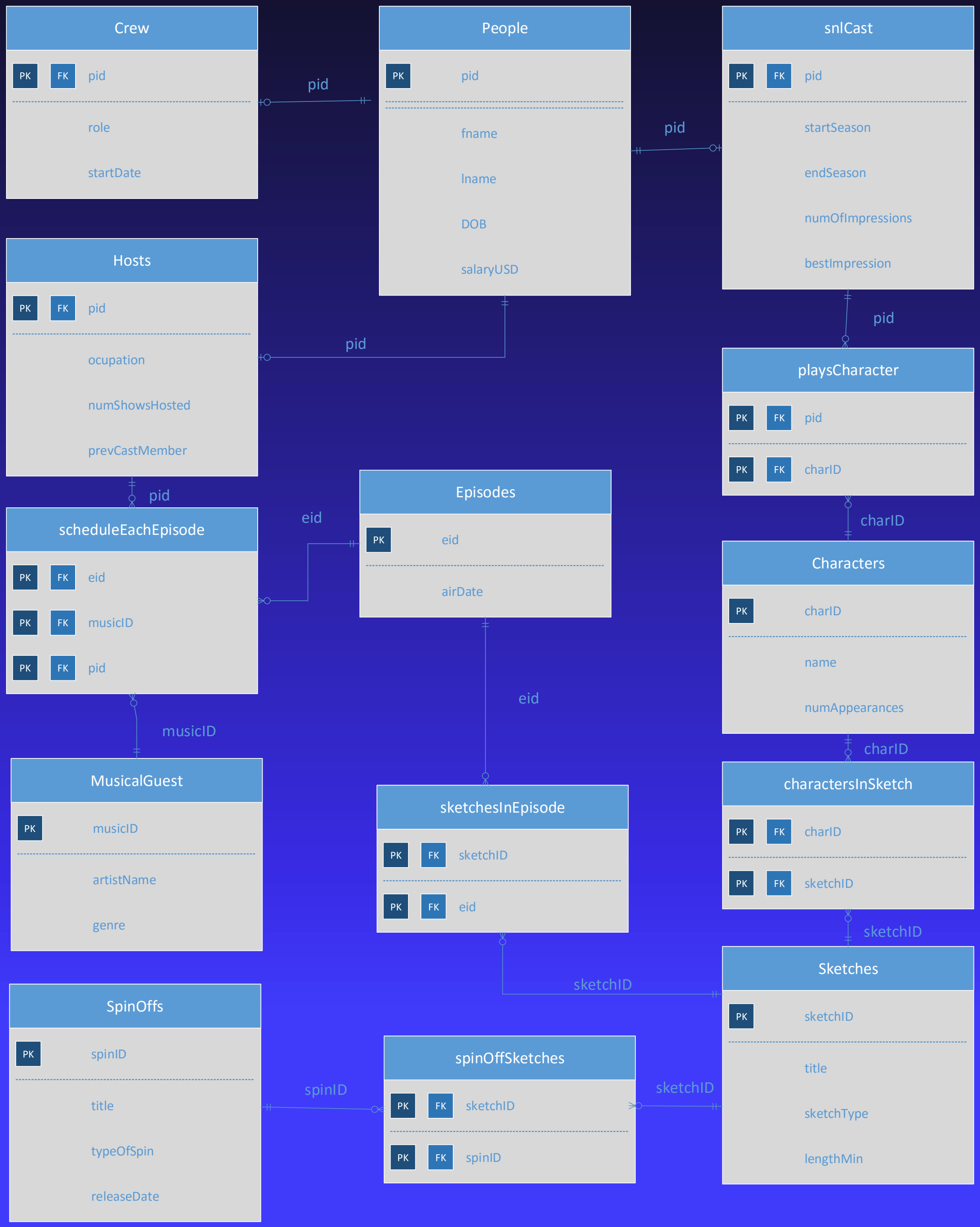
Table of Contents:

Executive Summary

This project depicts the design and functionality of a database created for Saturday Night Live. Since its premiere in 1975, there have been 42 seasons of SNL with upwards of 800 episodes and thousands of skits. Therefore, this database has been compiled contains only certain instances of the show which could scale to a larger implementation the database. The general public are the assumed users, but more specifically, the staff and members of the show.

The goal of this database is to provide snl staff and enthusists with information to manage the many elements such as skits, characters, hosts, musical guests that go into scheduling a show that has such a long run and impact on television history.

ER Diagram



Crew
PK FK pid
role
startDate
People
PK pid
fname
lname
DOB
salaryUSD
snlCast
PK FK pid
startSeason
endSeason
numOfImpressions
bestImpression
Hosts
PK FK pid
ocupation
numShowsHosted
prevCastMember
playsCharacter
PK FK pid
PK FK charID
scheduleEachEpisode
PK FK eid
PK FK musicID
PK FK pid
Episodes
PK eid
airDate
Characters
PK charID
name
numAppearances
MusicalGuest
PK musicID
artistName
genre
sketchesInEpisode
PK FK sketchID
PK FK eid
charactersInSketch
PK FK charID
PK FK sketchID
Sketches
PK sketchID
title
sketchType
lengthMin
SpinOffs
PK spinID
title
typeOfSpin
releaseDate
spinOffSketches
PK FK sketchID
PK FK spinID
pid
pid
pid
pid
pid
eid
charID
musicID
eid
charID
sketchID
sketchID
spinID
sketchID

Tables

People

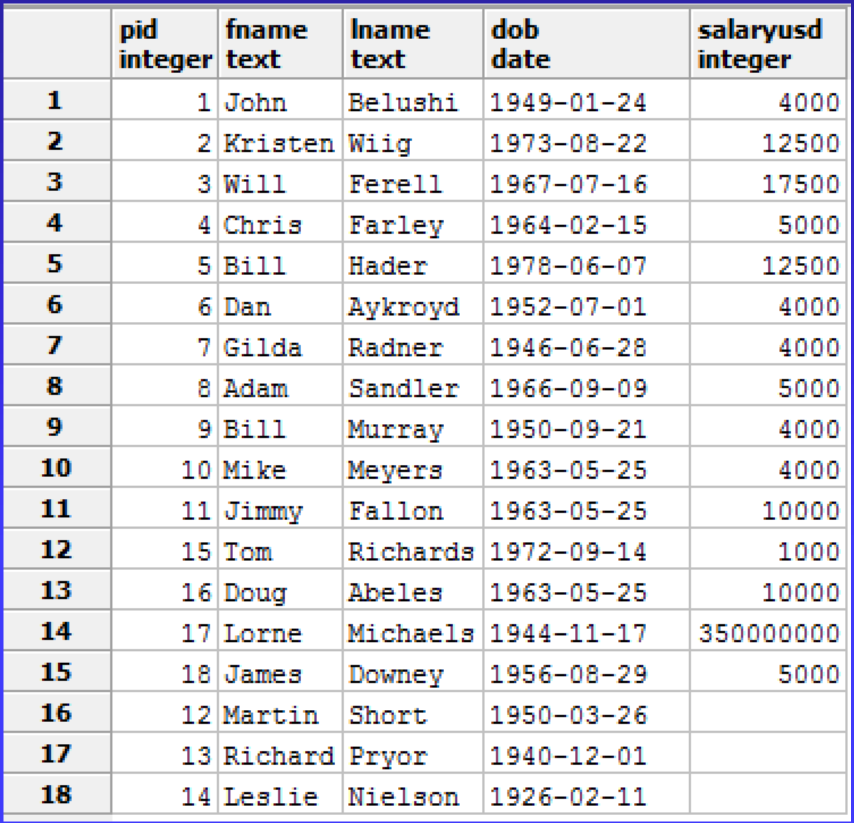
```
CREATE TABLE People(
        pid             integer not null,
        fname           text not null,
        lname           text not null,
        DOB             date,
        salaryUSD       integer,
        primary key(pid)

);
```

Functional Dependencies:

People (pid) →

fname, lname, DOB, salaryUSD



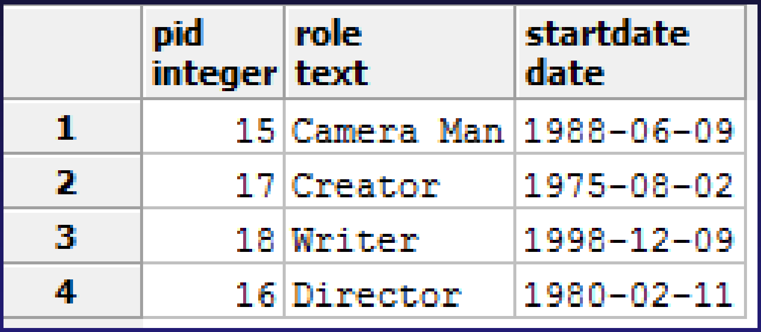
	pid integer	fname text	lname text	dob date	salaryusd integer
1	1	John	Belushi	1949-01-24	4000
2	2	Kristen	Wiig	1973-08-22	12500
3	3	Will	Ferell	1967-07-16	17500
4	4	Chris	Farley	1964-02-15	5000
5	5	Bill	Hader	1978-06-07	12500
6	6	Dan	Aykroyd	1952-07-01	4000
7	7	Gilda	Radner	1946-06-28	4000
8	8	Adam	Sandler	1966-09-09	5000
9	9	Bill	Murray	1950-09-21	4000
10	10	Mike	Meyers	1963-05-25	4000
11	11	Jimmy	Fallon	1963-05-25	10000
12	15	Tom	Richards	1972-09-14	1000
13	16	Doug	Abeles	1963-05-25	10000
14	17	Lorne	Michaels	1944-11-17	350000000
15	18	James	Downey	1956-08-29	5000
16	12	Martin	Short	1950-03-26	
17	13	Richard	Pryor	1940-12-01	
18	14	Leslie	Nielson	1926-02-11	

Crew

```
CREATE TABLE Crew(
        pid             integer not null references People(pid),
        role            text not null,
        startDate       date,
primary key(pid)

);
```

Functional Dependencies:
Crew (pid) → role, startDate



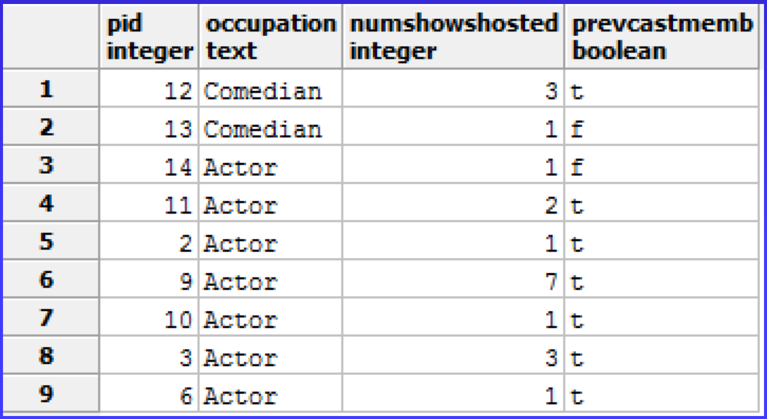
	pid integer	role text	startdate date
1	15	Camera Man	1988-06-09
2	17	Creator	1975-08-02
3	18	Writer	1998-12-09
4	16	Director	1980-02-11

Hosts

```
CREATE TABLE Hosts(
        pid             integer not null references People(pid),
        occupation      text not null,
        numShowsHosted  integer not null,
        prevCastMemb    boolean,
primary key(pid)

);
```

Functional Dependencies:
Hosts (pid) →
occupation, numShowsHosted, prevCastMember

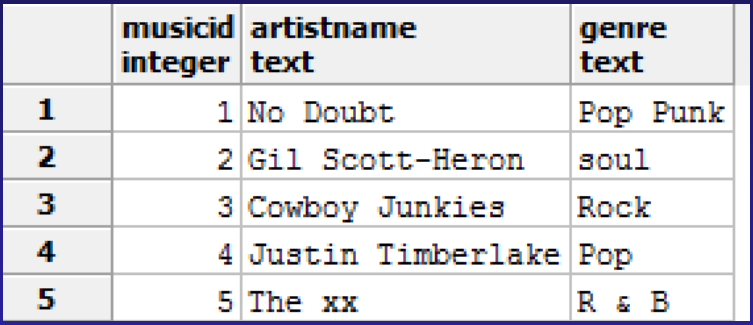


	pid integer	occupation text	numshowshosted integer	prevcastmemb boolean
1	12	Comedian	3	t
2	13	Comedian	1	f
3	14	Actor	1	f
4	11	Actor	2	t
5	2	Actor	1	t
6	9	Actor	7	t
7	10	Actor	1	t
8	3	Actor	3	t
9	6	Actor	1	t

MusicalGuest

```
CREATE TABLE musicalGuest(
        musicID                 integer not null,
        artistName              text not null,
        genre                   text,
primary key(musicID)
);
```

Functional Dependencies:
musicalGuest (musicID) → artistName, genre

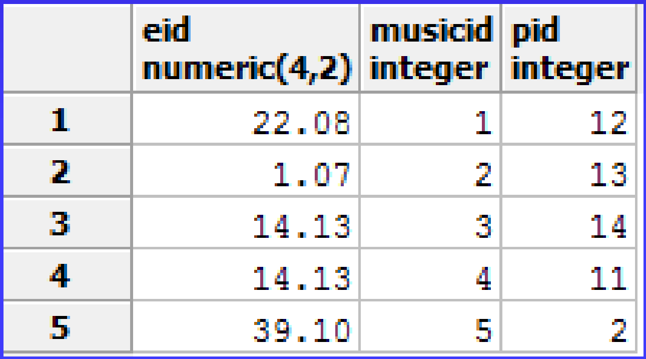


	musicid integer	artistname text	genre text
1	1	No Doubt	Pop Punk
2	2	Gil Scott-Heron	soul
3	3	Cowboy Junkies	Rock
4	4	Justin Timberlake	Pop
5	5	The xx	R & B

scheduleEachEpisode

```
CREATE TABLE scheduleEachEpisode(
        eid         decimal(4,2) not null references Episodes(EID),
        musicID             integer not null references musicalGuest(musicID
        pid         integer not null references People(pid),
primary key(eid, musicID, pid)
);
```

Functional Dependencies:
scheduleEachEpisode
(eid, musicID, pid) →

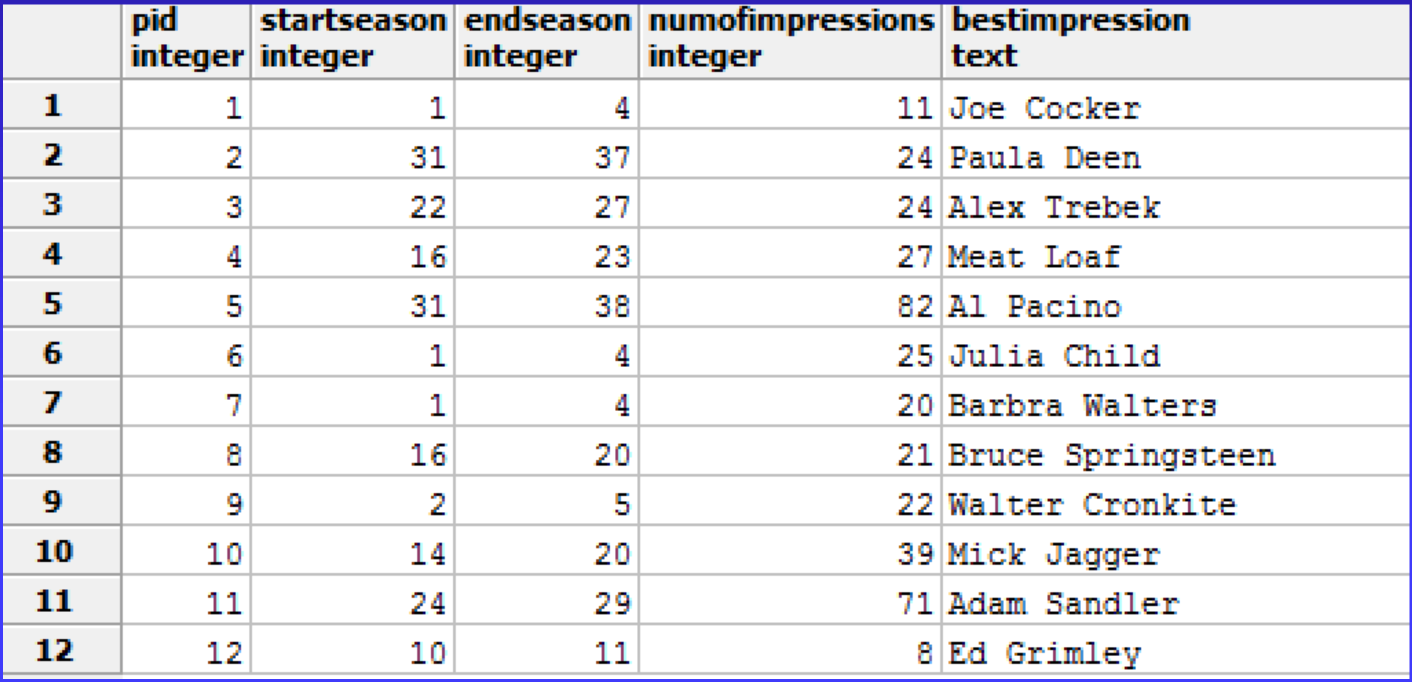


	eid numeric(4,2)	musicid integer	pid integer
1	22.08	1	12
2	1.07	2	13
3	14.13	3	14
4	14.13	4	11
5	39.10	5	2

snlCast

```
CREATE TABLE snlCast(
        pid                     integer not null references People(pid),
        startSeason             integer not null,
        endSeason               integer not null,
        numOfImpressions        integer,
        bestImpression  text
--foreign key(pid)
);
```

Functional Dependencies:
Cast (pid) → startSeason , endSeason, numOfImpressions, bestImpression

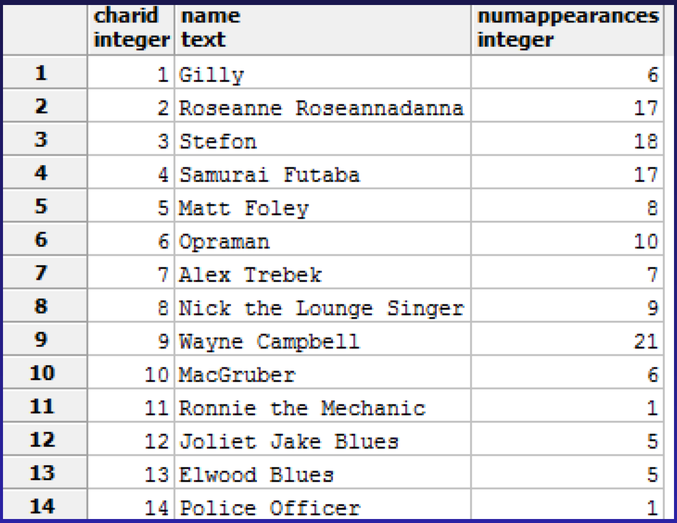


	pid integer	startseason integer	endseason integer	numofimpressions integer	bestimpression text
1	1	1	4	11	Joe Cocker
2	2	31	37	24	Paula Deen
3	3	22	27	24	Alex Trebek
4	4	16	23	27	Meat Loaf
5	5	31	38	82	Al Pacino
6	6	1	4	25	Julia Child
7	7	1	4	20	Barbra Walters
8	8	16	20	21	Bruce Springsteen
9	9	2	5	22	Walter Cronkite
10	10	14	20	39	Mick Jagger
11	11	24	29	71	Adam Sandler
12	12	10	11	8	Ed Grimley

Characters

```
CREATE TABLE Characters(
        charID              integer not null references Characters(charID),
        name                text not null,
        numAppearances                integer,
primary key(charID)
);
```

Functional Dependencies:
Characters (charID) → name, numAppearances

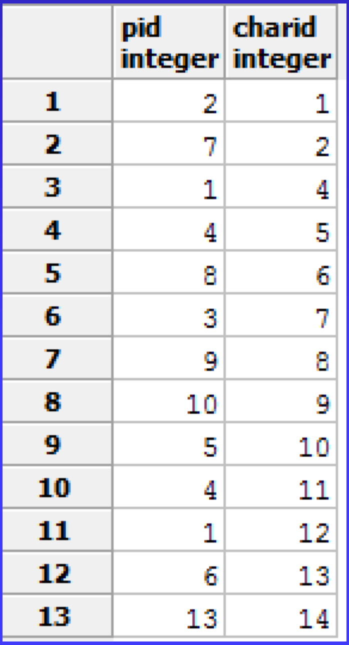


	charid integer	name text	numappearances integer
1	1	Gilly	6
2	2	Roseanne Roseannadanna	17
3	3	Stefon	18
4	4	Samurai Futaba	17
5	5	Matt Foley	8
6	6	Opraman	10
7	7	Alex Trebek	7
8	8	Nick the Lounge Singer	9
9	9	Wayne Campbell	21
10	10	MacGruber	6
11	11	Ronnie the Mechanic	1
12	12	Joliet Jake Blues	5
13	13	Elwood Blues	5
14	14	Police Officer	1

playsCharacter

```
CREATE TABLE playsCharacter(
        pid         integer not null references People(pid),
        charID      integer not null references Characters(charID),
primary key(pid, charID)
);
```

Functional Dependencies:
playsCharacter (pid, charID) →

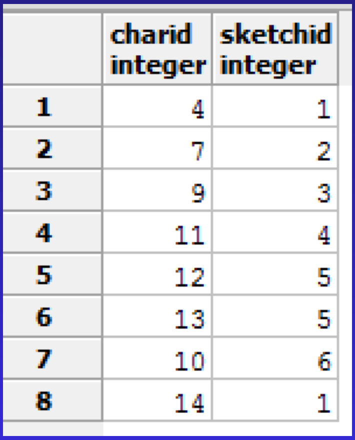


	pid integer	charid integer
1	2	1
2	7	2
3	1	4
4	4	5
5	8	6
6	3	7
7	9	8
8	10	9
9	5	10
10	4	11
11	1	12
12	6	13
13	13	14

Sketches

```
CREATE TABLE Sketches(
        sketchID        integer not null,
        title           text not null,
        sketchType      text not null
                        check(sketchType ='coldOpen' or
                        sketchType ='commercial' or
                        sketchType ='weekendUpdate' or
                        sketchType ='skit'),
        lengthMin decimal (3,2) not null,
primary key(sketchID)
);
```

Functional Dependencies:
Episodes (sketchID) → title, sketchType, lengthMin



	charid integer	sketchid integer
1	4	1
2	7	2
3	9	3
4	11	4
5	12	5
6	13	5
7	10	6
8	14	1

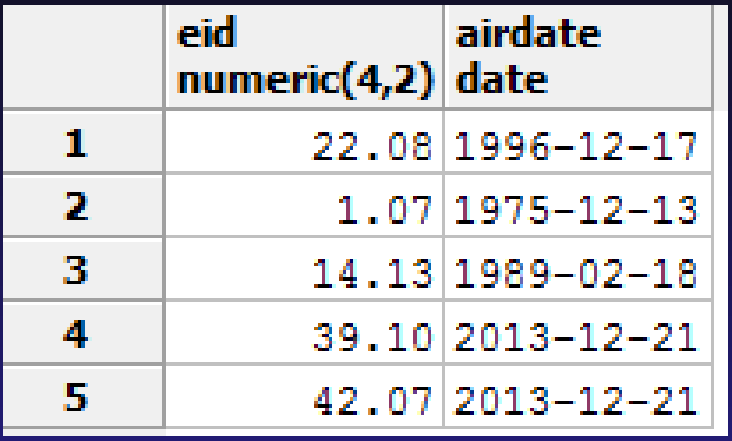
charactersInSketch

```
CREATE TABLE charactersInSketch(
        charID          integer not null references Characters(charID),
        sketchID        integer not null references Sketches(sketchID),
        primary key(charID, sketchID)
);
```

Functional Dependencies:
Episodes (charID, sketchID) →

Episodes

```
CREATE TABLE Episodes(
        eid             decimal(4,2) not null,
        airDate         date not null,
primary key(eid)
);
```

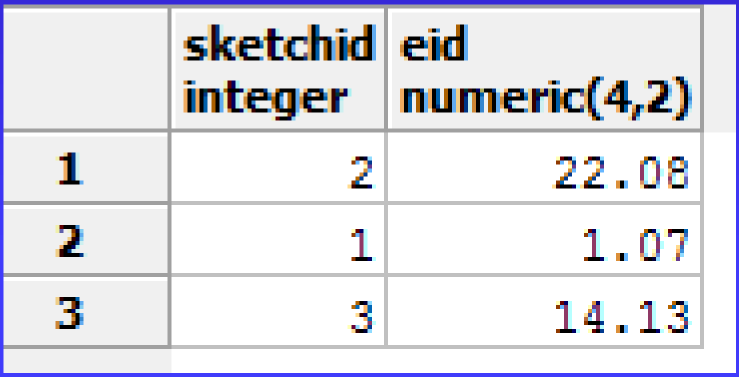


	eid numeric(4,2)	airdate date
1	22.08	1996-12-17
2	1.07	1975-12-13
3	14.13	1989-02-18
4	39.10	2013-12-21
5	42.07	2013-12-21

Functional Dependencies:
Episodes (eid) → airDate

sketchesInEpisode

```
CREATE TABLE sketchesInEpisode(
        sketchID        integer not null references Sketches(sketchID),
        eid             decimal(4,2) not null references Episodes(EID),
primary key(sketchID,eid)
);
```



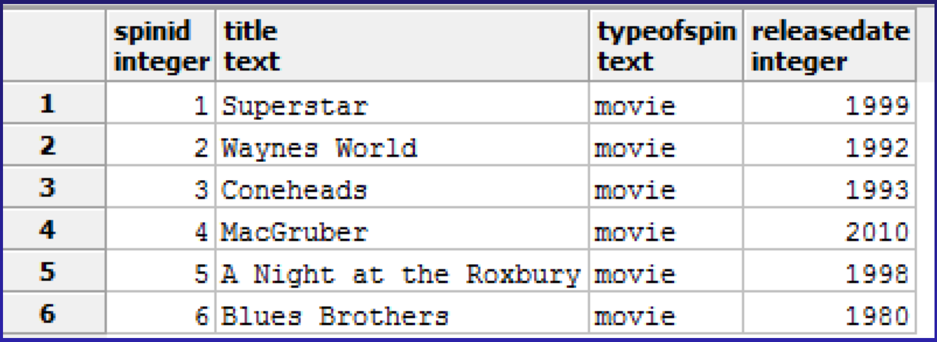
	sketchid integer	eid numeric(4,2)
1	2	22.08
2	1	1.07
3	3	14.13

Functional Dependencies:
Episodes (eid, sketchID) →

SpinOffs

```
CREATE TABLE SpinOffs(
        spinID          integer not null,
        title           text not null,
        typeOfSpin      text not null check(typeOfSpin='movie' or typeOfSpin ='tvShow'),
        releaseDate     integer not null,
primary key(spinID)
);
```

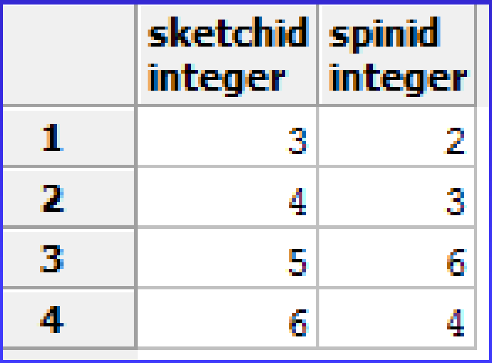
Functional Dependencies:
SpinOffs (spinID) → title, typeOfSpin, relseaseDate



	spinid integer	title text	typeofspin text	releasedate integer
1	1	Superstar	movie	1999
2	2	Waynes World	movie	1992
3	3	Coneheads	movie	1993
4	4	MacGruber	movie	2010
5	5	A Night at the Roxbury	movie	1998
6	6	Blues Brothers	movie	1980

spinOffSketches

```
CREATE TABLE spinOffSketches(
        sketchID        integer not null references Sketches(sketchID),
        spinID          integer not null references SpinOffs(spinID),
primary key(sketchID, spinID)
);
```



	sketchid integer	spinid integer
1	3	2
2	4	3
3	5	6
4	6	4

Functional Dependencies:

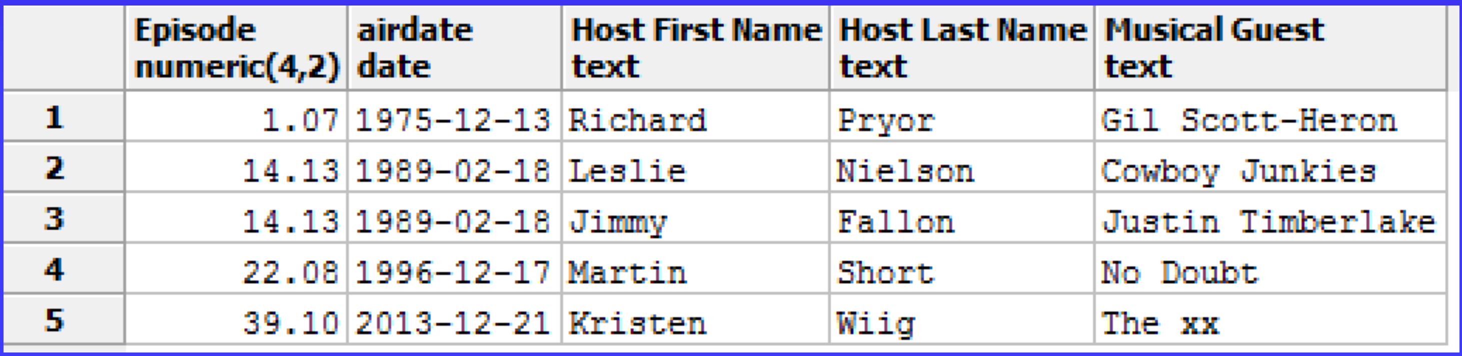
spinOffSketches (sketchID, spinID) →

Views

episodeGuide: Lists the number, celebrity host, musical guest and air date of each episode.

```
CREATE OR REPLACE VIEW episodeGuide as
SELECT    e.eid AS "Episode",
          e.airDate,
          p.fname AS "Host First Name",
          p.lname AS "Host Last Name",
          mg.artistName AS "Musical Guest"
FROM      people p, MusicalGuest mg,
          scheduleEachEpisode shed, episodes e
WHERE     shed.musicID = mg.musicID AND
          shed.pid = p.pid AND
          shed.eid = e.eid
ORDER BY e.eid ASC;
```

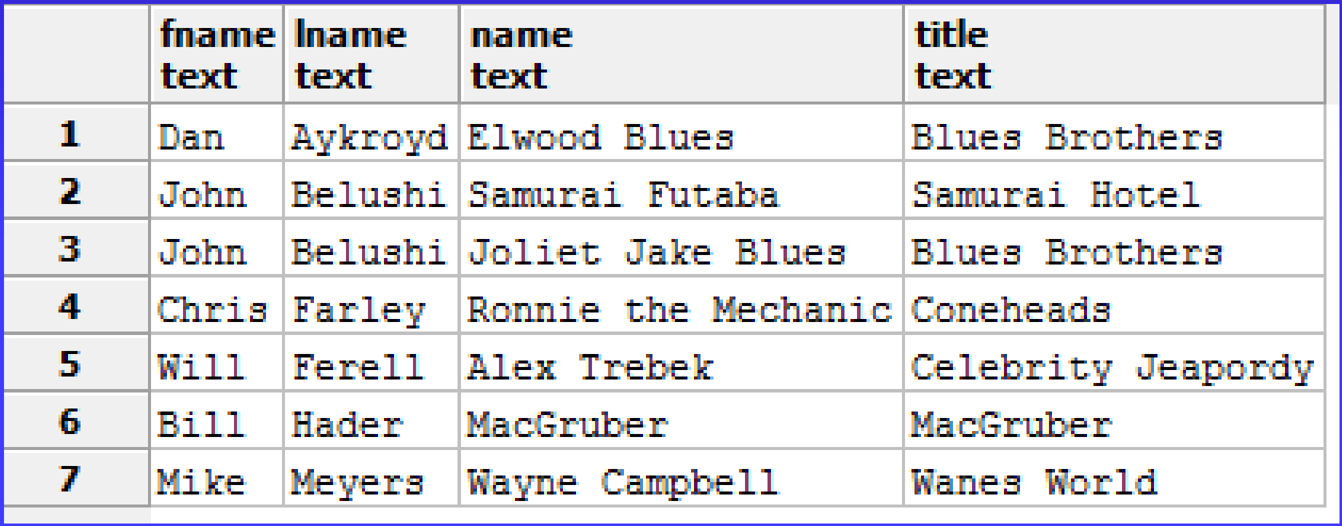
```
select * from episodeGuide;
```



	Episode numeric(4,2)	airdate date	Host First Name text	Host Last Name text	Musical Guest text
1	1.07	1975-12-13	Richard	Pryor	Gil Scott-Heron
2	14.13	1989-02-18	Leslie	Nielson	Cowboy Junkies
3	14.13	1989-02-18	Jimmy	Fallon	Justin Timberlake
4	22.08	1996-12-17	Martin	Short	No Doubt
5	39.10	2013-12-21	Kristen	Wiig	The xx

characterCast: Lists the cast member, the characters they play, and the corresponding sketch the character is in.

```
CREATE OR REPLACE VIEW characterCast as
SELECT sc.pid, c.name, c.charID
        FROM characters c
        INNER JOIN playsCharacter pc        ON c.charID     = pc.charID
        INNER JOIN snlCast sc               ON pc.pid       = sc.pid;
CREATE OR REPLACE VIEW peopleCast as
SELECT p.pid, p.fname, p.lname
        FROM people p
        INNER JOIN snlCast sc               ON p.pid        = sc.pid;
CREATE OR REPLACE VIEW characterSketch as
SELECT s.title, cS.charID
        FROM Sketches s
        INNER JOIN charactersInSketch cS    ON cS.sketchID = s.sketchID
        INNER JOIN characters c             ON cS.charID = c.charID;
select * FROM characterSketch;
Select pc.fname, pc.lname, cc.name, cS.title
from peopleCast pc
INNER JOIN characterCast cc                 ON pc.pid       = cc.pid
INNER JOIN characterSketch cS               ON cS.charID    = cc.charID
ORDER BY lname ASC;
```

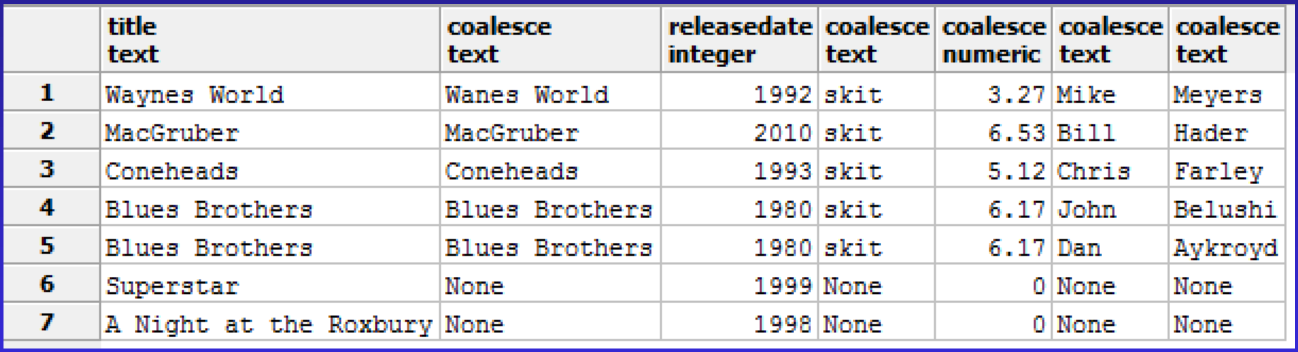


	fname text	lname text	name text	title text
1	Dan	Aykroyd	Elwood Blues	Blues Brothers
2	John	Belushi	Samurai Futaba	Samurai Hotel
3	John	Belushi	Joliet Jake Blues	Blues Brothers
4	Chris	Farley	Ronnie the Mechanic	Coneheads
5	Will	Ferell	Alex Trebek	Celebrity Jeapordy
6	Bill	Hader	MacGruber	MacGruber
7	Mike	Meyers	Wayne Campbell	Wanes World

Reports and Interesting Queries

1. Query to return the Spin Off movies created from SNL sketches including the title, release date, and name of the cast members in the movie.

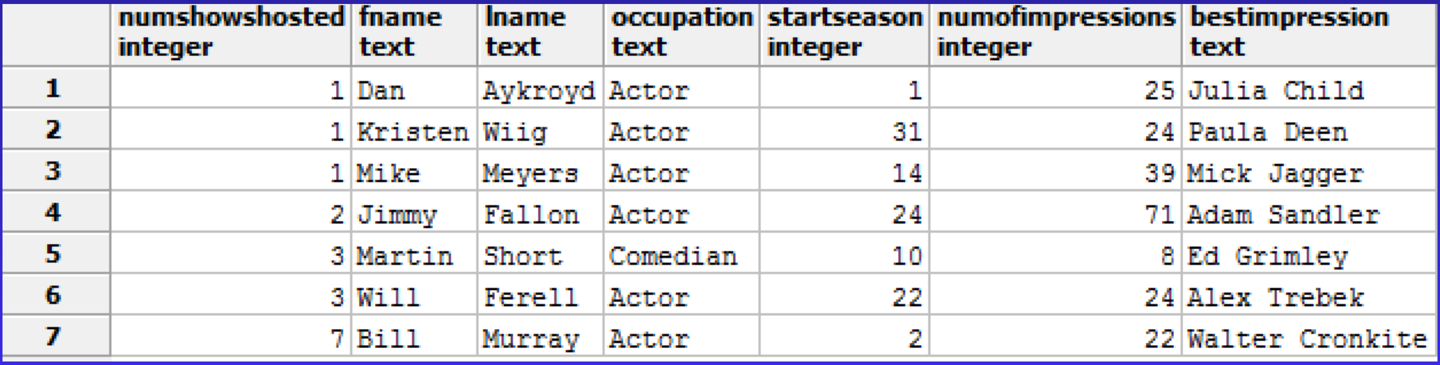
```
SELECT so.title, s.title, so.releaseDate, s.sketchType, s.lengthMin, p.fname, p.lname
FROM SpinOffs so
LEFT OUTER JOIN spinOffSketches ss          ON ss.spinID     = so.spinID
LEFT OUTER JOIN Sketches s                  ON s.sketchID = ss.sketchID
LEFT OUTER JOIN charactersInSketch cs       ON cs.sketchID = s.sketchID
LEFT OUTER JOIN characters c                ON c.charID       = cs.charID
LEFT OUTER JOIN playsCharacter pc           ON pc.charID    = c.charID
LEFT OUTER JOIN people p                    ON p.pid            = pc.pid;
```



	title text	coalesce text	releasedate integer	coalesce text	coalesce numeric	coalesce text	coalesce text
1	Waynes World	Wanes World	1992	skit	3.27	Mike	Meyers
2	MacGruber	MacGruber	2010	skit	6.53	Bill	Hader
3	Coneheads	Coneheads	1993	skit	5.12	Chris	Farley
4	Blues Brothers	Blues Brothers	1980	skit	6.17	John	Belushi
5	Blues Brothers	Blues Brothers	1980	skit	6.17	Dan	Aykroyd
6	Superstar	None	1999	None	0	None	None
7	A Night at the Roxbury	None	1998	None	0	None	None

2. Query to return the show hosts who were previous cast members as well as the season the cast member started, the number of impressions, best impressions, ordered by number of shows hosted

```
SELECT h.numShowsHosted, p.fname, p.lname,
h.occupation,startSeason, numOfImpressions,
bestImpression
FROM  hosts h
INNER JOIN people p              ON p.pid = h.pid
INNER JOIN snlCast sc            ON p.pid = sc.pid
WHERE prevCastMemb = true
ORDER BY numShowsHosted ASC;
```



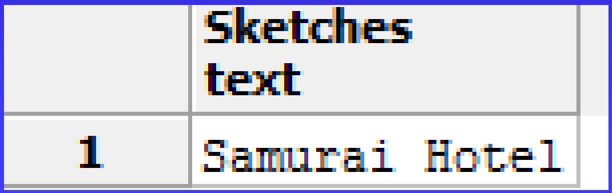
	numshowshosted integer	fname text	lname text	occupation text	startseason integer	numofimpressions integer	bestimpression text
1	1	Dan	Aykroyd	Actor	1	25	Julia Child
2	1	Kristen	Wiig	Actor	31	24	Paula Deen
3	1	Mike	Meyers	Actor	14	39	Mick Jagger
4	2	Jimmy	Fallon	Actor	24	71	Adam Sandler
5	3	Martin	Short	Comedian	10	8	Ed Grimley
6	3	Will	Ferell	Actor	22	24	Alex Trebek
7	7	Bill	Murray	Actor	2	22	Walter Cronkite

Stored Procedures

skitsPerEpisode: Takes an episode number as and argument and returns the titles of the sketches for the given episode.

```
CREATE OR REPLACE FUNCTION skitsPerEpisode(decimal(4,2),
REFCURSOR)
RETURNS refcursor as $$
DECLARE
        episodeInput decimal(4,2) := $1;
        resultset REFCURSOR := $2;
BEGIN
 open resultset for
        SELECT s.title AS "Sketches"
        FROM sketches s
        INNER JOIN sketchesInEpisode se
        ON s.sketchID = se.sketchID
        INNER JOIN episodes e
        ON e.eid = se.eid
                WHERE episodeInput = se.eid;
 return resultset;
end;
$$
language plpgsql;

SELECT skitsPerEpisode('01.70', 'results');
FETCH ALL FROM results;
```

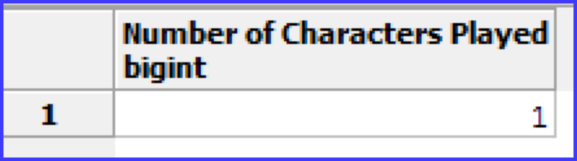


	Sketches text
1	Samurai Hotel

numbOfCharacters: Takes a cast member name as an argument and returns the number of characters they play.

```
CREATE OR REPLACE FUNCTION numbOfCharacters(text,
REFCURSOR)
RETURNS refcursor as $$
DECLARE
        castMembInput text := $1;
        resultset REFCURSOR := $2;
BEGIN
 open resultset for
        SELECT  count(pc.pid) AS "Number of Characters Played"
        FROM playsCharacter pc
        INNER JOIN people p
        ON p.pid = pc.pid
                WHERE castMembInput = p.fname;
 return resultset;
end;
$$
language plpgsql;

SELECT numbOfCharacters('Adam', 'results');
FETCH ALL FROM results;
```

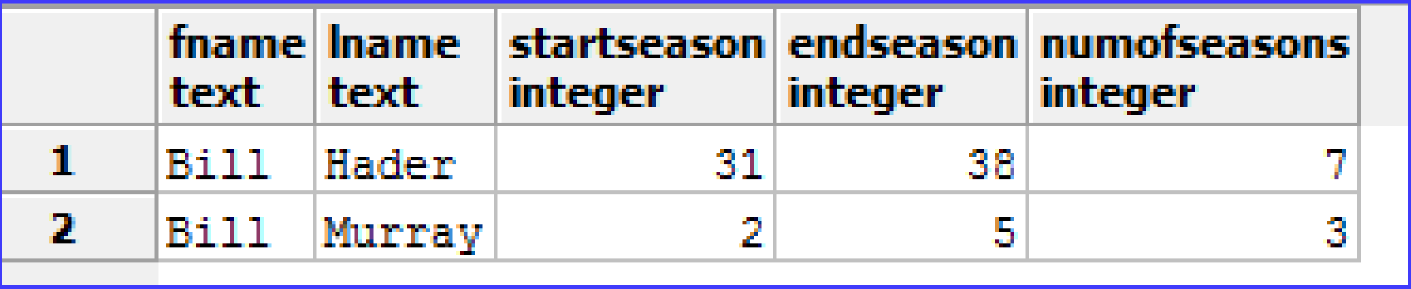


	Number of Characters Played bigint
1	1

seasonsInCast: Takes cast member name as a function and returns the number of seasons they were on SNL

```
CREATE OR REPLACE FUNCTION seasonsInCast(text, REFCURSOR)
RETURNS refcursor as $$
DECLARE
        castInput text := $1;
        resultset REFCURSOR := $2;
BEGIN
 open resultset for
        SELECT  p.fname, p.lname, sc.startSeason, sc.endSeason,
        (sc.endSeason - sc.startSeason) AS numOfSeasons
        FROM people p INNER JOIN snlCast sc on p.pid = sc.pid
                WHERE castInput = p.fname;
 return resultset;
end;
$$
language plpgsql;

SELECT seasonsInCast('Bill', 'results');
FETCH ALL FROM results;
```



	fname text	lname text	startseason integer	endseason integer	numofseasons integer
1	Bill	Hader	31	38	7
2	Bill	Murray	2	5	3

Triggers

```
create or replace function quitShow() returns trigger as
$$
begin
if new.endSeason is not null
and (select endSeason
from snlCast
where pid = new.pid) is null
then
update snlCast
set endSeason = new.endSeason
where pid = new.pid;
end if;
return new;
end;
$$
language plpgsql;


create trigger quitShow
after update on snlCast
for each row
execute procedure quitShow();
```

Security

```
CREATE ROLE admin;
GRANT ALL ON TABLES
IN SCHEMA PUBLIC
TO admin;

CREATE ROLE user
GRANT SELECT
ON ALL TABLES IN SCHEMA PUBLIC
TO user;
```

Implementation Notes

Known Problems & Future Enhancements