

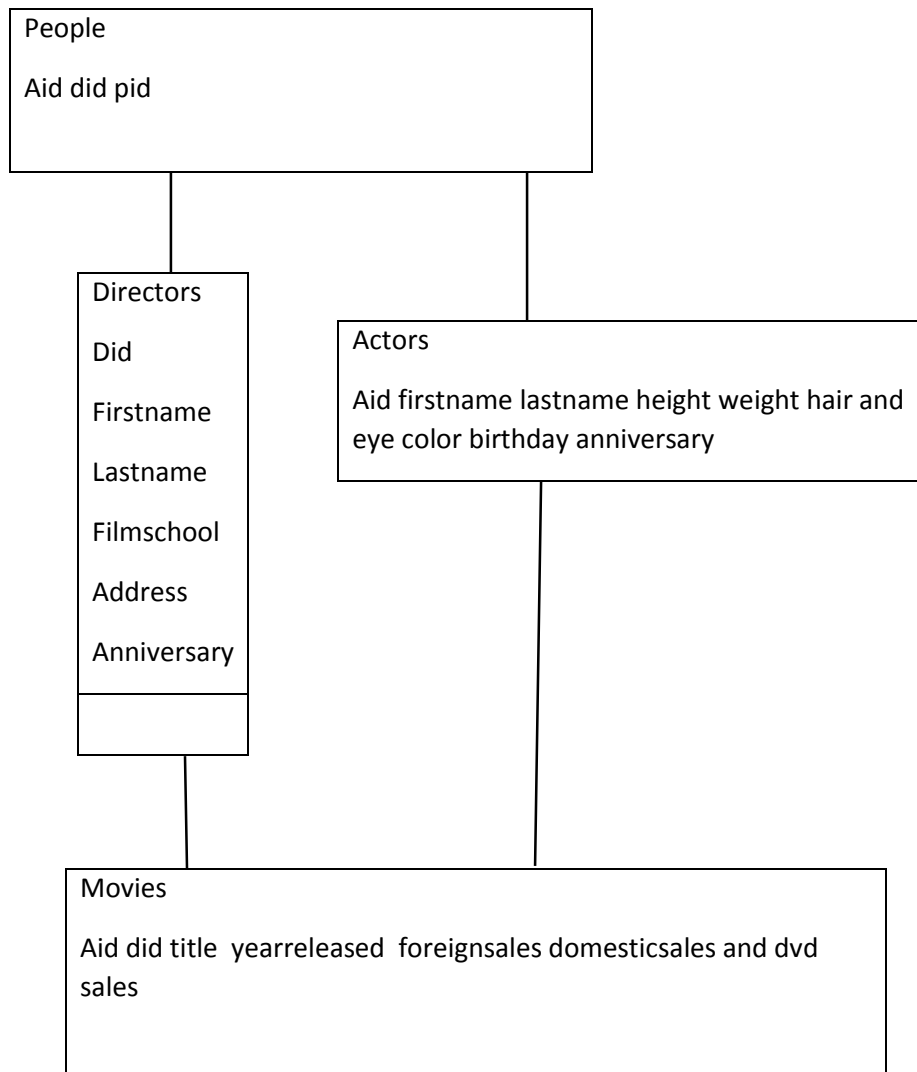
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10/31/13

dbmgmt

Normalization HW 2

ER table



-SQL Scripts

The tables

```
CREATE TABLE actors (  
  aid    char(4) not null,  
  firstname  varchar(16),  
  lastname   varchar(16),  
  haircolor  varchar(20),  
  eyecolor   varchar(20),  
  height     char(4),  
  weight     char(4),  
  pid    char(4) references people(pid),  
  screenactorsguildanniversary timestamp,  
  primary key(aid)  
); alter table actors add birthday date
```

```
CREATE TABLE directors (  
  did    char(4) not null,  
  firstName  varchar(16),  
  lastName   varchar(16),  
  address    varchar(20),  
  filmschool varchar(20),  
  pid    char(4) references people(pid),  
  directorsguildanniversary timestamp,  
  primary key(did)  
);
```

```
CREATE TABLE movies (  
    title varchar(30) not null,  
    yearreleased timestamp,  
    aid char(4) not null references actors(aid),  
    did char(4) not null references directors(did),  
    domesticboxofficesalesinmillionsUSD integer,  
    foreignboxofficesalesinmillionsUSD integer,  
    primary key(title)  
);  
  
alter table movies add DVDsalesinmillionsUSD integer
```

```
CREATE TABLE people (  
    pid varchar(4) not null,  
    aid char(4),  
    did char(4),  
    primary key(pid)  
);
```

The insert statements

People a__na or a__a means not an actor and d__na and d__a ,means not an director.

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p001', 'a001', 'd001');--quentin tarantino
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p002', 'a002', 'd0na');--clint eastwood
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p003', 'a003', 'd1na');--robert deniro
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p004', 'a004', 'd2na');-- brad pitt
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p005', 'a005', 'd3na');-- gwyneth palthrow
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p006', 'a006', 'd4na');--gene hackman
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p007', 'a007', 'd5na');--sean connery
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p008', 'a008', 'd6na');--samuel l jackson
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p009', 'a009', 'd7na');-- david tennant
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p010', 'a010', 'd8na');-- bill murray
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p011', 'a011', 'd9na');-- kevin bacon
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p012', 'a012', 'd10a');-- jack nicholson
```

```
INSERT INTO people( pid,aid,did)
```

```
VALUES('p013', 'a013', 'd013');--woody allen
```

```

INSERT INTO people( pid,aid,did)
VALUES('p014', 'a014', 'd11a');-- robert downy jr
INSERT INTO people( pid,aid,did)
VALUES('p015', 'a015', 'd12a');-- cary grant
INSERT INTO people( pid,aid,did)
VALUES('p016', 'a016', 'd13a');-- christain bale
INSERT INTO people( pid,aid,did)
VALUES('p017', 'a017', 'd14a');-- nicholas cage
INSERT INTO people( pid,aid,did)
VALUES('p018', 'a018', 'd15a');-- kyle maclachlan
-----directors-----
INSERT INTO people( pid,aid,did)
VALUES('p019', 'a0na', 'd002');--guy hamilton
INSERT INTO people( pid,aid,did)
VALUES('p020', 'a1na', 'd003');--david siegel
INSERT INTO people( pid,aid,did)
VALUES('p021', 'a2na', 'd004');--martin scorsese
INSERT INTO people( pid,aid,did)
VALUES('p022', 'a3na', 'd005');--david fincher
INSERT INTO people( pid,aid,did)
VALUES('p023', 'a4na', 'd006');--wes anderson
INSERT INTO people( pid,aid,did)
VALUES('p024', 'a5na', 'd007');--william friedkin
INSERT INTO people( pid,aid,did)
VALUES('p025', 'a6na', 'd008');--chris ellis
INSERT INTO people( pid,aid,did)
VALUES('p026', 'a7na', 'd009');--chris sanders
INSERT INTO people( pid,aid,did)
VALUES('p027', 'a8na', 'd010');-- dean debois

```

```
INSERT INTO people( pid,aid,did)
VALUES('p028', 'a9na', 'd011');--sophia coppola
INSERT INTO people( pid,aid,did)
VALUES('p029', 'a10a', 'd012');--herbert ross
INSERT INTO people( pid,aid,did)
VALUES('p030', 'a11a', 'd013');--stanley kubrick
INSERT INTO people( pid,aid,did)
VALUES('p031', 'a12a', 'd014');--jon foureau
INSERT INTO people( pid,aid,did)
VALUES('p032', 'a13a', 'd015');--frank capra
INSERT INTO people( pid,aid,did)
VALUES('p033', 'a14a', 'd016');--brad anderson
INSERT INTO people( pid,aid,did)
VALUES('p034', 'a15a', 'd017');--neil labute
INSERT INTO people( pid,aid,did)
VALUES('p035', 'a16a', 'd018');--david lynch
select * from people;
INSERT INTO people( aid ,pid ,did)
VALUES('a009', 'p009', 'd16a');
INSERT INTO people( aid ,pid ,did)
VALUES('a012', 'p012', 'd17a');
```

----actors----

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a001', 'Quentin', 'Tarantino','brown','brown','5','150','p001','1987-02-12');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a002', 'Clint', 'Eastwood','white','blue','5','130','p002','1954-06-01','1930-05-31');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a003', 'Robert', 'DeNiro','grey','brown','4','180','p003','1963-12-15','1943-08-17');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a004', 'Brad', 'Pitt','blond','blue','5','152','p004','1987-01-01','1963-12-18');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a005', 'Gwyneth', 'Paltrow','blond','blue','6','167','p005','1991-05-06','1972-09-27');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a006', 'Gene', 'Hackman','brown','brown','6','178','p006','1956-07-18','1930-01-30');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a007', 'Sean', 'Connery','white','brown','6','120','p007','1953-01-15','1930-08-25');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a008', 'SamuelL', 'Jackson','bald','brown','6','157','p008','1972-12-12','1948-12-21');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a009', 'David', 'Tennant','brown','brown','6','149','p009','1990-07-21','1971-04-18');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a010', 'Bill', 'Murray','brown','brown','5','146','p010','1974-08-10','1950-09-21');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid
,screenactorsguildanniversary,birthday)
```

```
VALUES('a011', 'Kevin', 'Bacon','brown','blue','5','135','p011','1978-10-31','1958-07-08'  
);
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a012', 'Jack', 'Nicholson','brown','blue','4','125','p012','1958-11-12','1937-04-22');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a013', 'Woody', 'Allen','grey','grey','4','117','p013','1969-05-05','1935-12-01');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a014', 'Robert', 'Downy Jr','brown','brown','4','199','p014','1983-01-01','1965-04-04');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a015', 'Cary', 'Grant','brown','brown','6','200','p015','1931-03-03','1904-01-18');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a016', 'Christian', 'Bale','brown','brown','5','219','p016','1986-05-07','1974-01-30');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a017', 'Nicholas', 'Cage','brown','blue','5','123','p017','1982-07-10','1964-01-07');
```

```
INSERT INTO actors( aid ,firstname,lastname,haircolor,eyecolor,height,weight,pid  
,screenactorsguildanniversary,birthday)
```

```
VALUES('a018', 'Kyle', 'MacLachlan','brown','brown','6','163','p018','1982-10-10','1959-02-22');
```


Directors

```
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d001', 'Quentin', 'Tarantino','123 MaybreakDB Tpke','none','p001','1987-10-15');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d002', 'Guy', 'Hamilton','007 Bound Lane','none','p019','1978-09-13');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d003', 'Donald', 'Siegel','124 Smith Road','Beaux Arts','p020','1945-01-21');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d004', 'Martin', 'Scorsese','147 Drive Lane','NYU','p021','1963-07-13');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d005', 'David', 'Fincher','459 Coz St','Film School','p022','1987-10-14');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d006', 'Wes', 'Anderson','785 Artfilm Way','none','p023','1996-07-05');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d007', 'William', 'Friedkin','125 Brow Lane','none','p024','1971-01-24');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d008', 'Chris', 'Ellis','258 Vine Road','none','p026','1978-09-21');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d009', 'Dean', 'DeBois','148 Jon Lane','CIA','p027','2006-12-14');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d010', 'Sofia', 'Coppola','777 Rich Lane','Mills and CIA','p028','1988-06-16');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d011', 'Herbert', 'Ross','198 Rand Road','none','p029','1995-07-31');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d014', 'Stanley', 'Kubrick','131 Symmentry Street','CCNY','p030','1951-11-11');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d013', 'Woody', 'Allen','154 Creeper','CCNY','p013','1965-07-19');
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d012', 'Jon', 'Farreau','555 Sue Lane','Queens COLlege','p031','2001-04-10');
```

```
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d015', 'Frank', 'Capra','1927 Talkie','CIT','p032','1915-02-14');
```

```
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d016', 'Brad', 'Anderson','278 Mental Drive','Bourdoin College','p033','1998-03-22');
```

```
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d017', 'Neil', 'LaBite','398 Hill Cliff Road','BYC','p034','1992-07-23');
```

```
INSERT INTO directors( did ,firstName,lastName,address,filmschool,pid ,directorsguildanniversary)
VALUES('d018', 'David', 'Lynch','874 Weirido Lane','Cooper Union','p035','1966-12-12');
```

movies

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('Gold Finger', '1964-05-18', 'a007','d002',124,132,10);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('Pulp Fiction', '1994-04-12', 'a001','d001',213,500,11);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('Drity Harry', '1971-02-04', 'a002','d003',35,4,5);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('Taxi Driver', '1976-12-25', 'a003','d004',28,6,14);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('Fight Club', '1999-09-10', 'a004','d005',100,60,41);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('The Royal Tennenbaums', '2001-06-12', 'a005','d006',71,52,2);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```
VALUES('The French Connection', '1971-02-10', 'a006','d007',126,156,1);
```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
```

```

VALUES('Snakes on a Plane', '2006-05-14', 'a008','d008',62,59,500);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('How to Train Your Dragon', '2010-10-12', 'a009','d009',494,323,660);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('How to Train Your Dragon', '2010-10-12', 'a009','d010',494,323,660);- 0 instead of o to keep
uniqueness

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('Lost in Translation', '2003-05-07', 'a010','d011',119,125,100);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('Footloose', '1984-07-18', 'a011','d012',80,92,35);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('The Shining', '1980-10-31', 'a012','d014',44,500,75);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('Annie Hall', '1977-11-15', 'a013','d013',38,14,2);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('Iron Man', '2008-12-24', 'a014','d012',585,661,300);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('Arsenic and Old Lace', '1944-05-17', 'a015','d015',1,2,1);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('The Machinist', '2004-10-19', 'a016','d016',8,16,5);

INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )

VALUES('The Wicker Man', '2006-07-25', 'a017','d017',38,999,999);

```

```
INSERT INTO movies(title , yearreleased,aid,did,domesticboxofficessalesinmillionsUSD,
foreignboxofficessalesinmillionsUSD,DVDsalesinmillionsUSD )
VALUES('Blue Velvet', '1986-04-12', 'a018','d018',8,12,13);
```

Functional Dependencies

For actors

Firstname depends on lastname

Height depends on weight

For directors

Firstname depends on Lastname

For movies

There are none, they are all independent of one another

For people

Aid depends on the table actors

Did depends on the table directors

Query for Sean Connery

Select firstname,lastname

From directors

Where did in (Select did

Form movies

Where aid in (Select aid

Form actors

Where firstname='Sean' and lastname='Connery'))