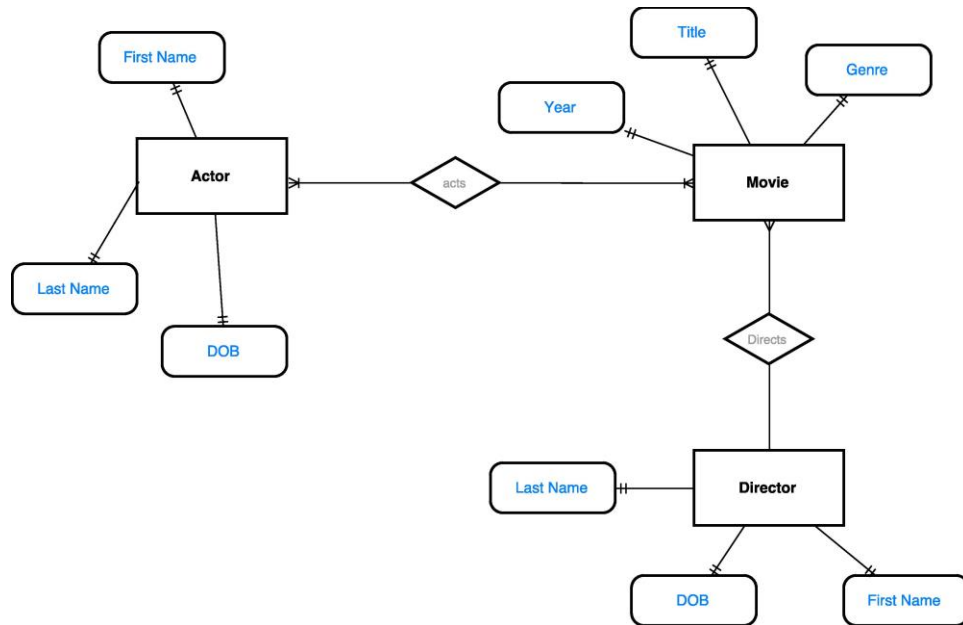# Database Management Systems Laboratory
## Assignmnet 1

- ER Diagram



- We will need 5 tables to represent our data.
  The tables are as following :-

| Table name | Column Name |
| --- | --- |
| **tb_actor** | actorID, fname, lname, DOB |
| **tb_director** | dirID, fname, lname, DOB |
| **tb_movie** | movID, title, year, genre |
| **tb_acted** | actorID, movID |
| **tb_directed** | dirID, movID |

- The following are the SQL statement for the given queries.

**Question 1:**

select *

```
from tb_movie
where tb_movie.movID in
(
   select tb_acted.movID
   from tb_acted
   where tb_acted.actorID in
   (
      select actorID
      from tb_actor
      where tb_actor.fname="Sharukh"
      and  tb_actor.lname="Khan"
   )
);
```

**Question 2:**

```
select *
from tb_movie as M
where M.movID in
(
   select S1.mov_id
   from tb_acted as S1
   where S1.actorID in
   (
      select A1.actorID
      from tb_actor as A
      where A.fname="Sharukh"
      and  A.lname="Khan"
   )
   and S1.movID in
   (
      select D1.movID
      from tb_directed as D1
      where D1.dirIDin
      (
         select D.dirID
         from tb_director as D
         where D.name="Sharukh"
         and  D.name="Khan"
      )
   )
);
```

**Question 3:**

```
select *
from tb_movie
where tb_movie.movID in
(
    select tb_acted.movID
    from tb_acted
    where acted.actorID in
    (
        select tb_actor.actorID
        from tb_actor
        where tb_actor.fname="Sharukh"
        and  tb_actor.lname="Khan"
    )
)
and tb_movie.genre = "thriller"
and tb_movie.year > 2000;
```

**Question 4:**

```
select A2.actorID,A2.fname,A2.lname,A2.DOB
from tb_actor as A1, tb_acted as S1, tb_actor as A2, tb_acted as S2
where A1.actorID = S1.actorID
and A2.actorID = S2.actorID
and S1.movID = S2.movID
and A1.actorID != A2.actorID
and A1.fname = "Sharukh"
and A1.lname = "Khan"
and DATEDIFF(P2.DOB,P1.DOB) >= 3650;
```

**Question 5:**

```
select x.id,x.fname,x.lname,x.DOB
from
(
    select count(D.dirID)as c,D.dirID,D.fname,D.lname,D.DOB
    from tb_actor as A,tb_acted as AC, tb_director as D, tb_directed as DR
    where A.actorID = AC.actorID
    and D.dirID = DR.dirID
    and AC.movID = DR.movID
    and A.fname = "Sharukh"
    and A.lname = "Khan"
```

```
    group by D.dirID
) as x
where x.c =
(
    select max(y.c1)
    from
    (
        select count(P3.id)as c1,P3.id,P3.firstname,P3.lastname,P3.dob
        from tb_actor as A1,tb_acted as AC1, tb_director as D1, tb_directed as DR1
        where A1.actID = AC1.actID
        and D1.dirID = DR1.dirID
        and AC1.movID = DR1.movID
        and A1.ftname = "Sharukh"
        and A1.lname = "Khan"
        group by D1.dirID
    ) as y
)
```