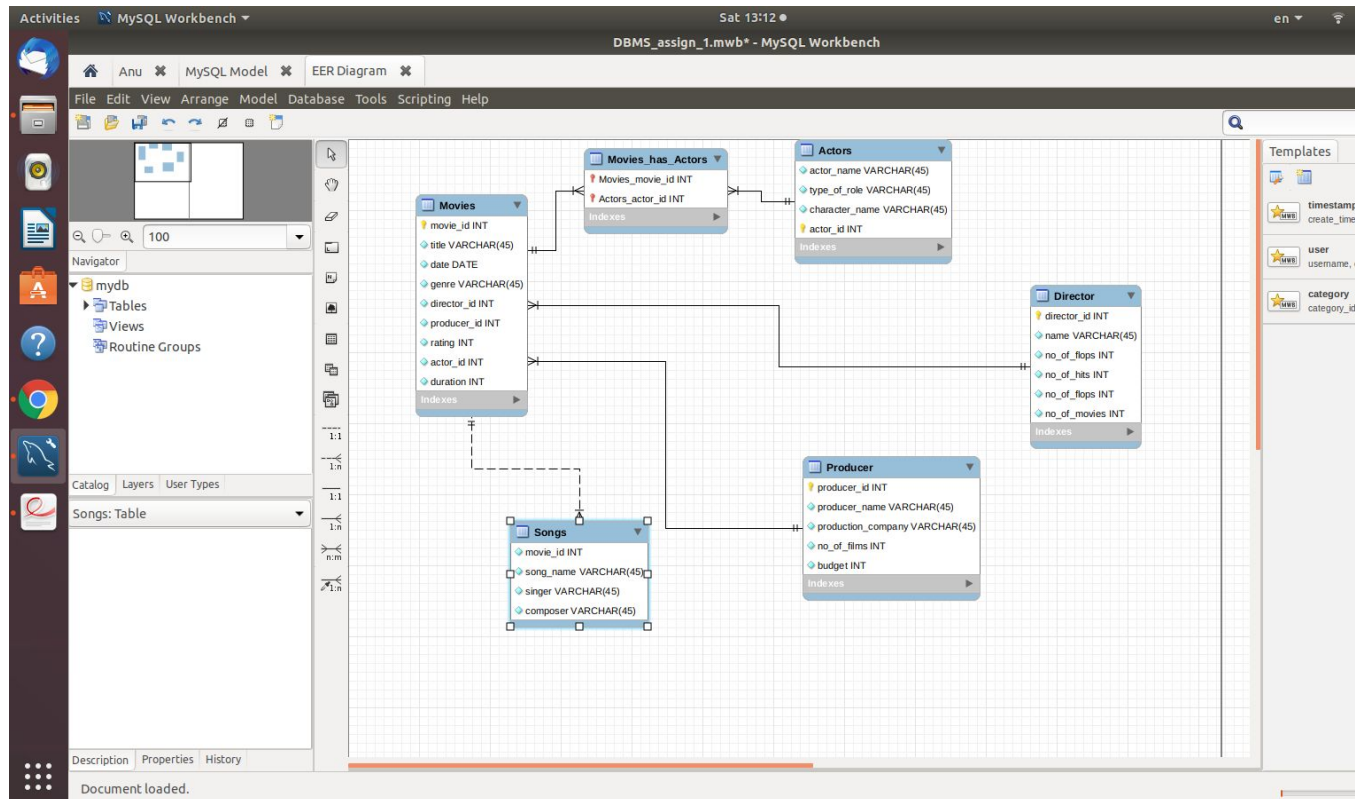1. Showcase one Many-Many relation.
MOVIES to ACTORS is MANY-MANY relation



2. Represent Composite key and Weak Entity in your Database
Weak entity : "songs" in the above er diagram
(because it has no primary key and it is completely dependent on MOVIES)
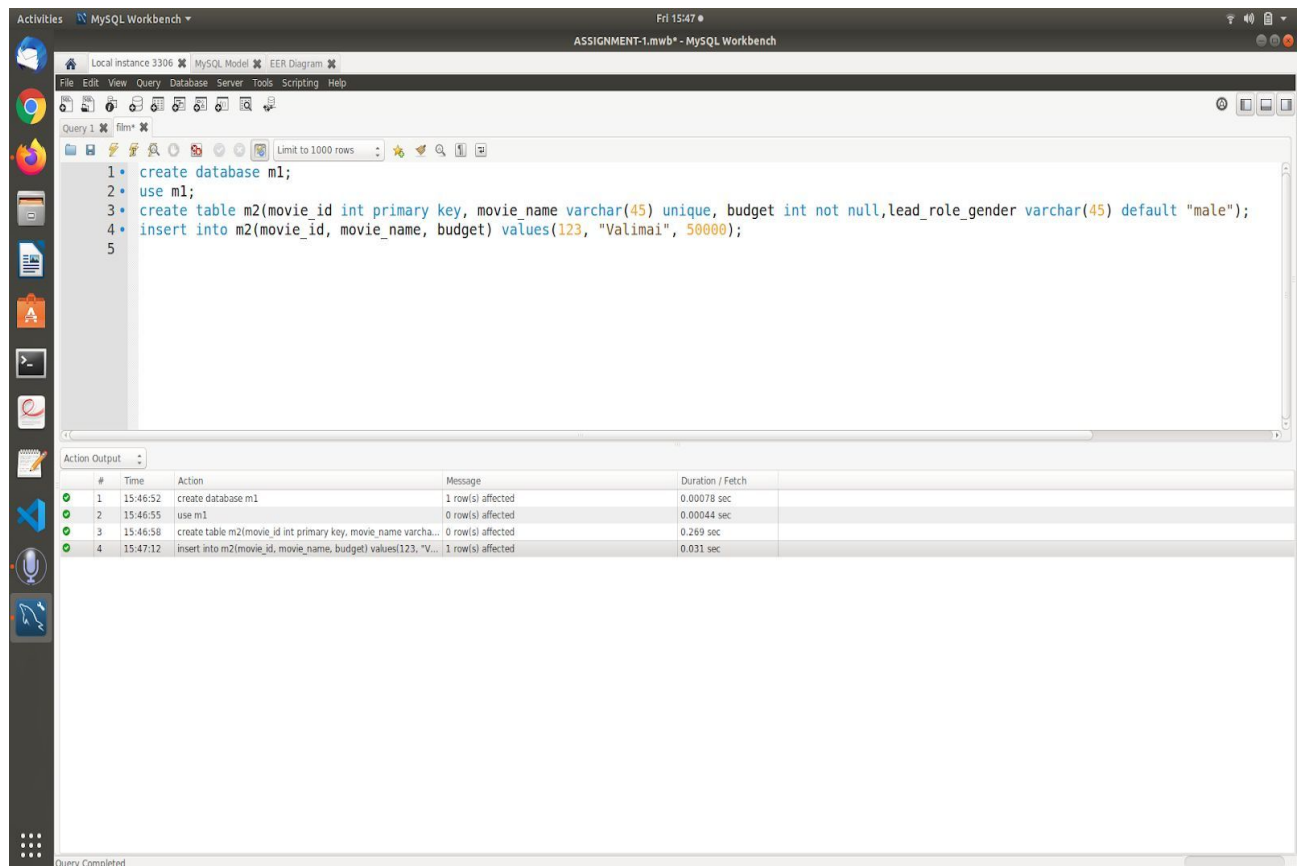
Composite key :
In MOVIES_has_ACTORS entity:
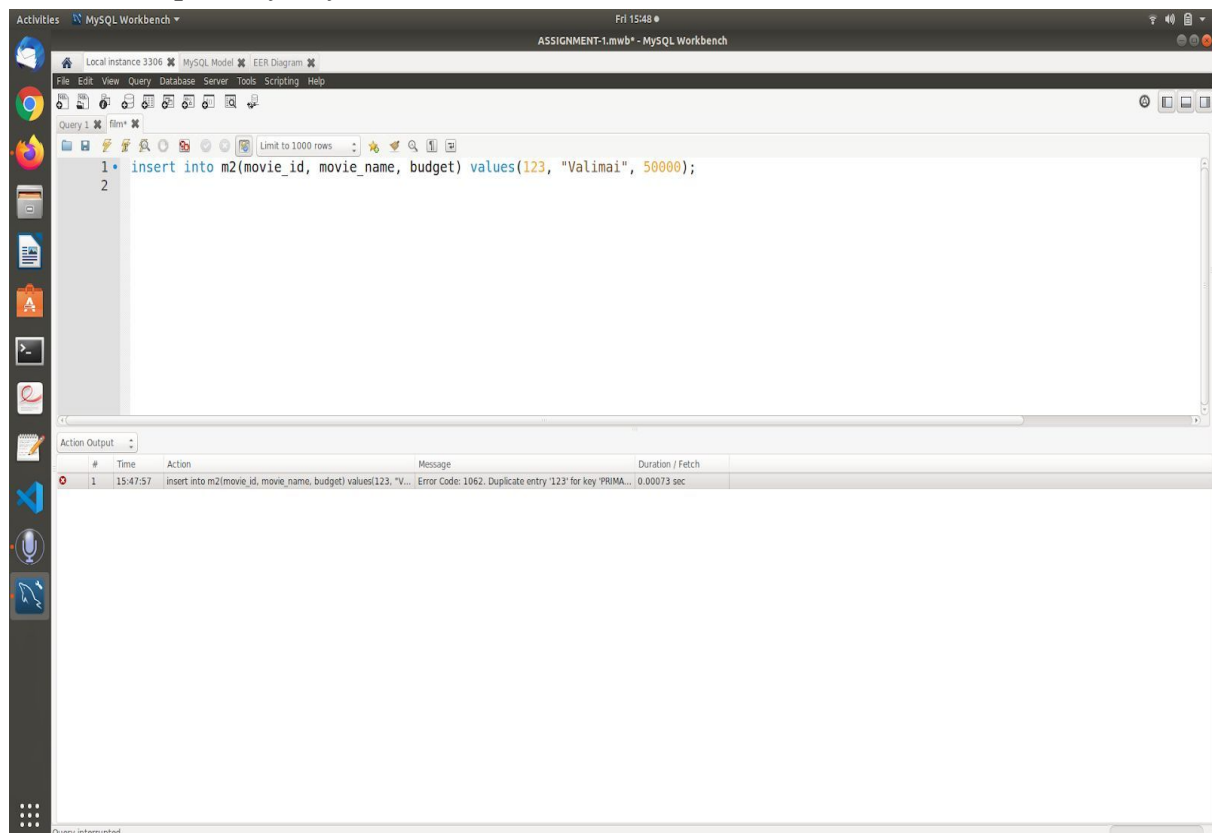primary_key(MOVIES_movie_id,ACTORS_actor_id)

3. Show Violation of Primary Key, Unique Not Null and default key constraints
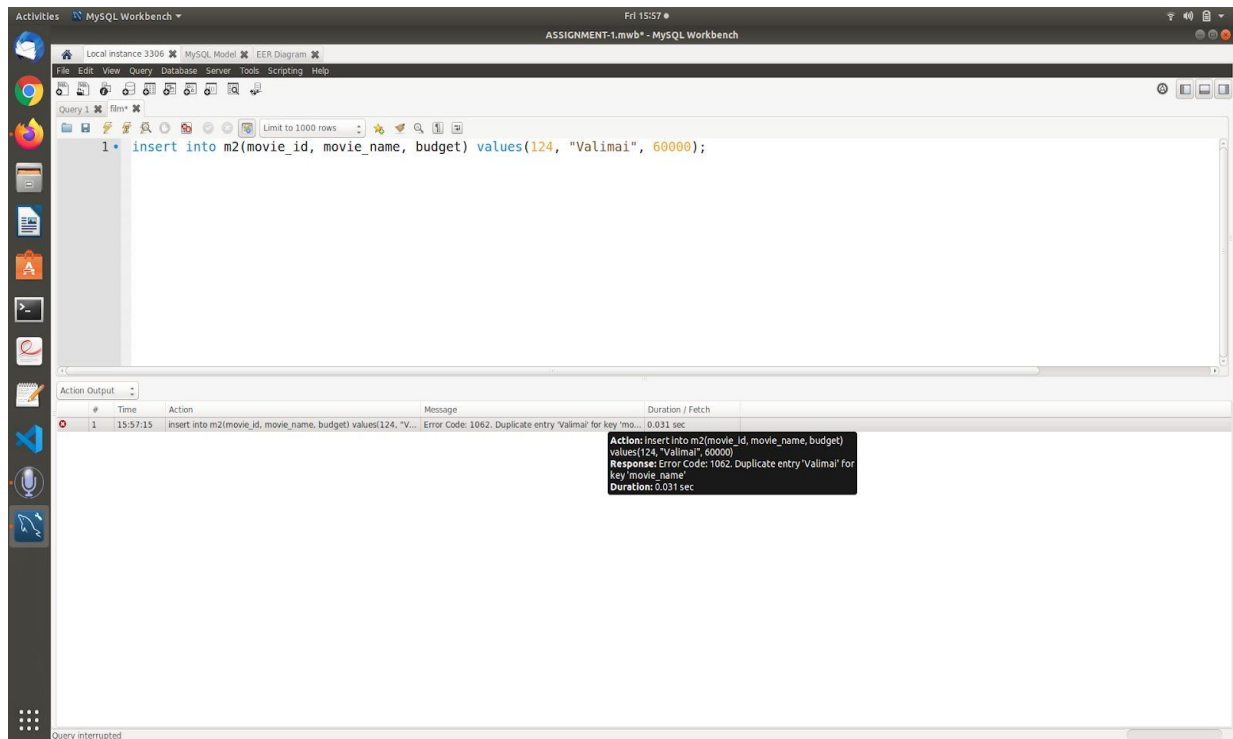through insertion.
i)violation of primary key
Created table m2 with primary key 123 :

Now if we try to insert values with same primary key(123) ,it shows duplicate entry, which means there already tuple with primary key as 123.so it clearly shows the violation of primary key
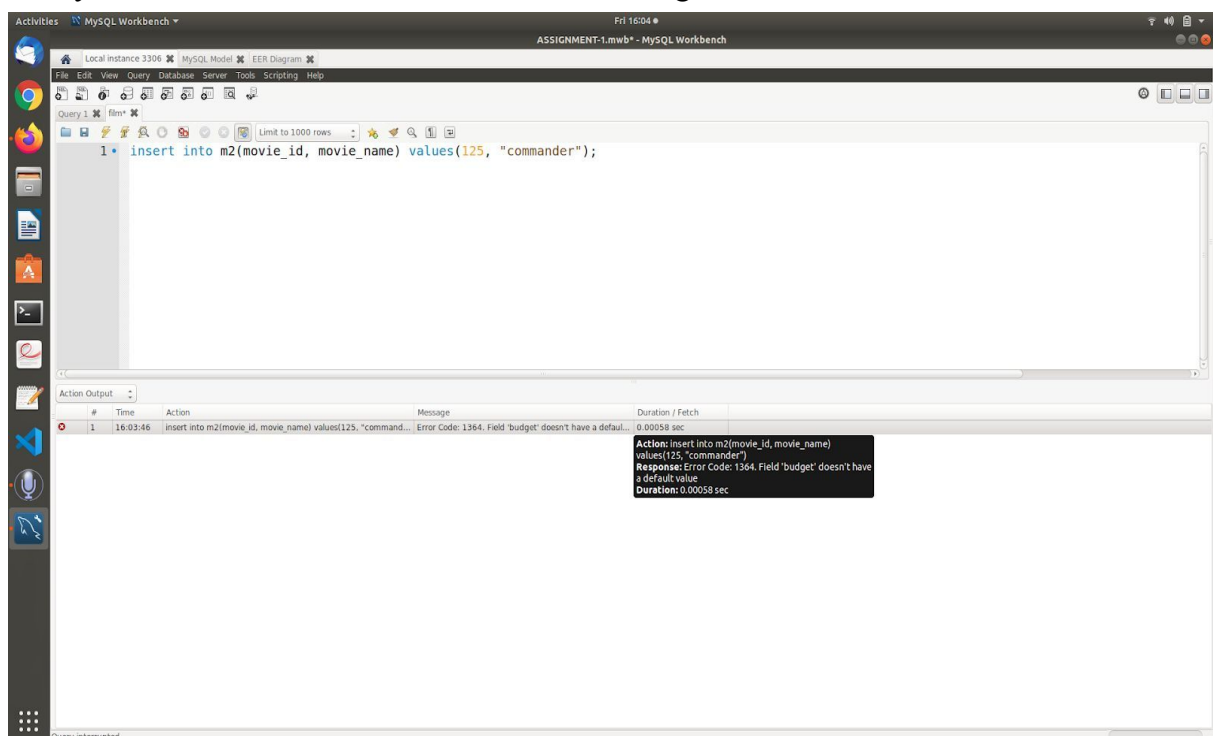
ii)violation of unique constraintIn the above screenshot we can see that movie_name "valimai" has already been

inserted ,now if we try to insert same movie_name "valimai" with different primary key,it
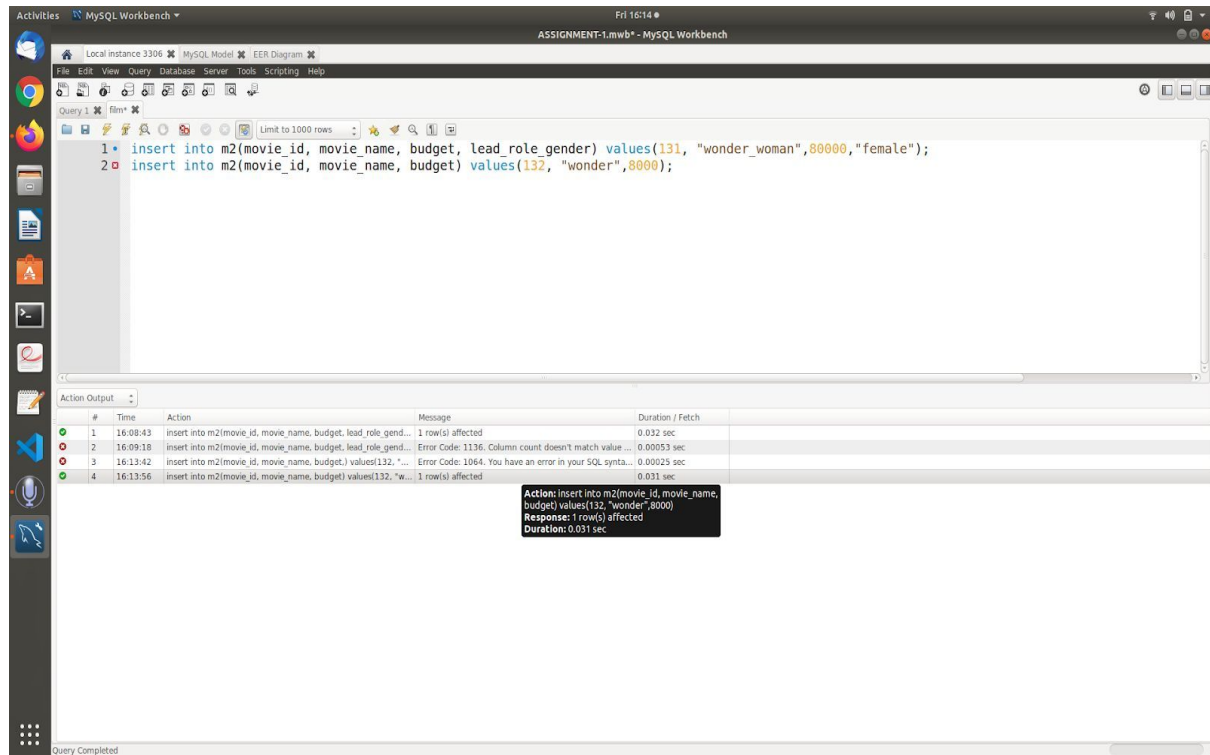
shows that movie_name should be unique



iii)violation of not null constraint

While creating table m2 we created attribute "budget" with not null constraint now if we try to insert into table with no value for "budget" it violates the not null constraint
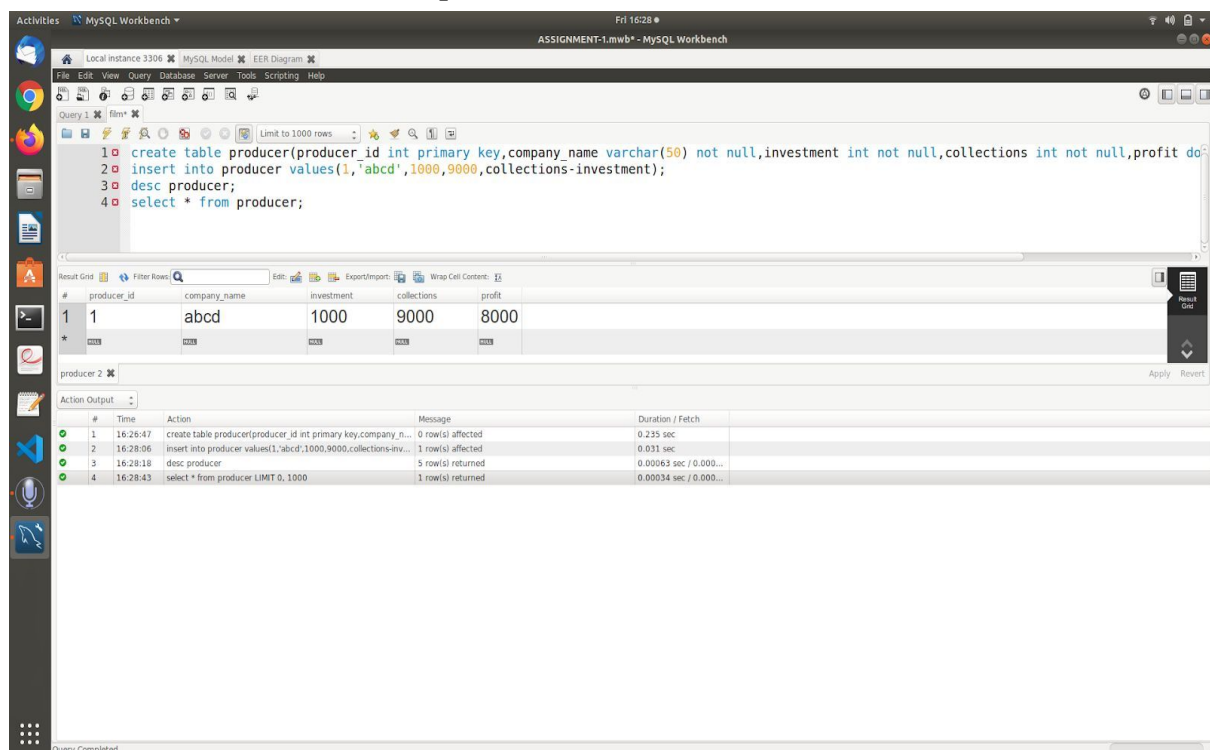
iv) default key constraints

Here for lead_role_gender attribute we gave default value as "male",so if we try
to insert values into table without mentioning any value for lead_role_gender ,it will
successfully execute without any error



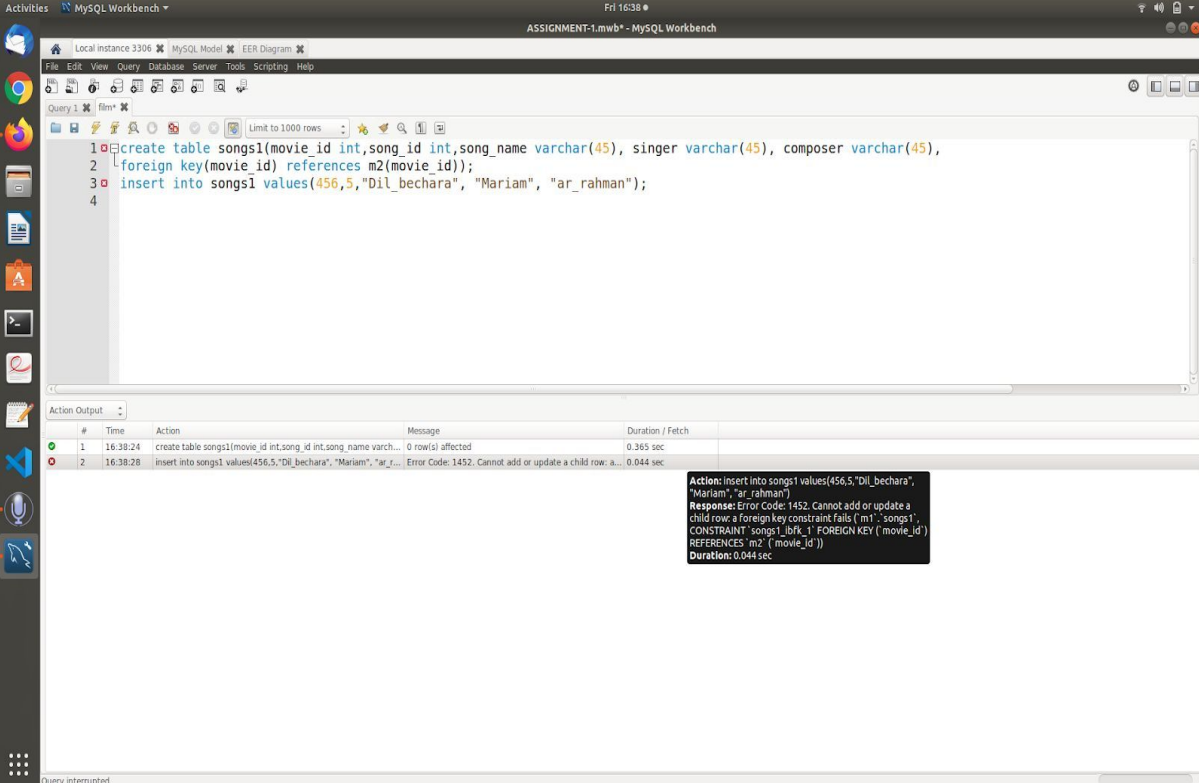4. One Derived attribute should be added to the Database design

Here in the table producer,the attribute  profits is derived from attributes
collections and investments i.e,profits=collections-investments

5. Insert tuples into the table and see how foreign key constraint works if you try to insert into the dependent table first.

Here in table songs1 the foreign key is "movie_id" referencing table "m2".

Initially we did not insert any value with primary key "456" in table "m2",so if we try to insert values to table "songs1" with movie_id as "456" it violates foreign key constraint