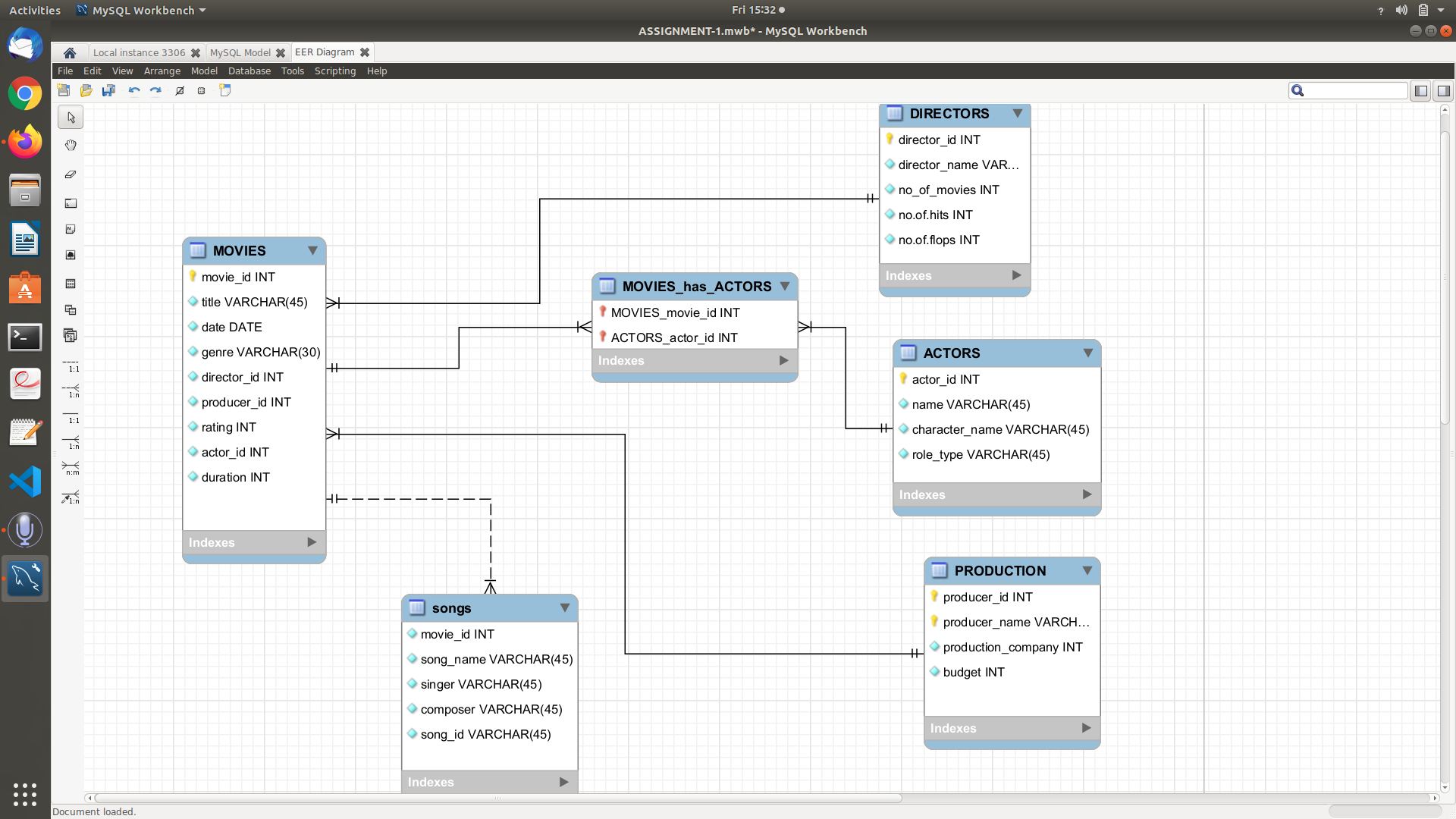
**1. Showcase one Many-Many relation.**

Output: Here MOVIES TO ACTORS has many to many relation.



**2. Represent Composite key and Weak Entity in your Database**

**Weak entity :**

Songs

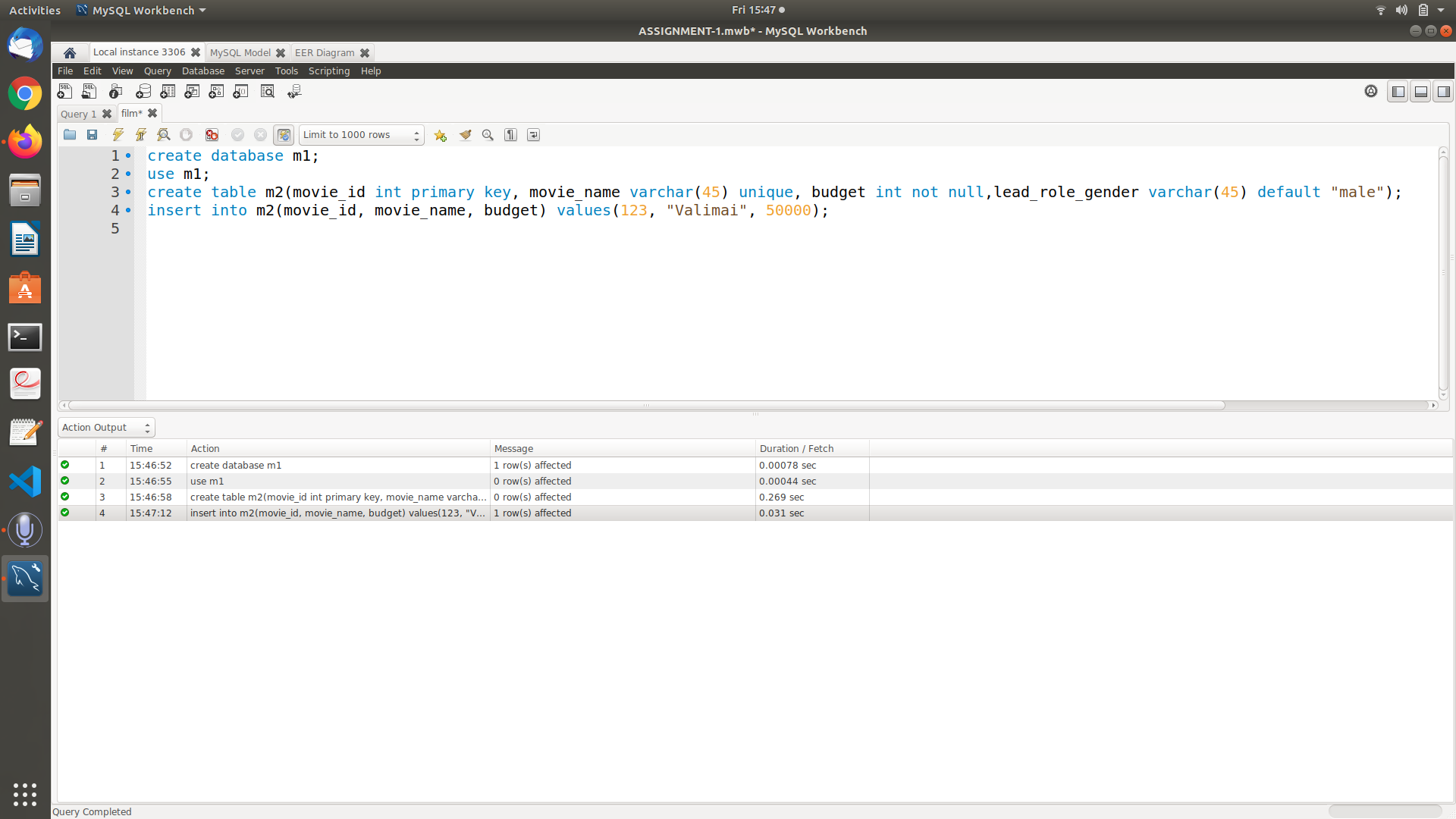
(because it has no primary key and it is completely dependent on MOVIES) **Composite key :**

In MOVIES\_has\_ACTORS entity: primary\_key(MOVIES\_movie\_id,ACTORS\_actor\_id)

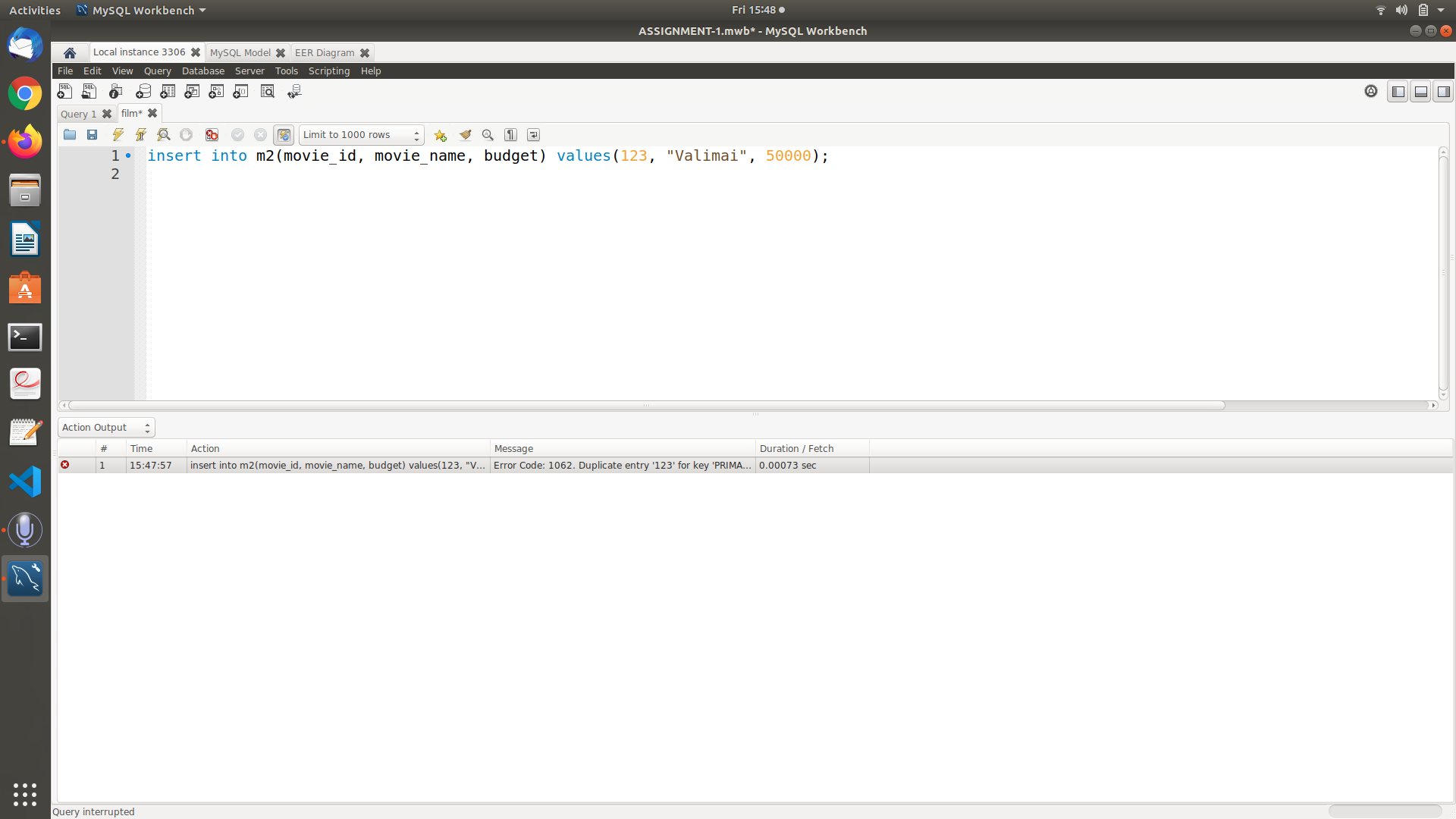
**3. Show Violation of Primary Key, Unique Not Null and default key constraints through insertion.**

**i)violation of primary key**

Created table m2 with primary key 123 :

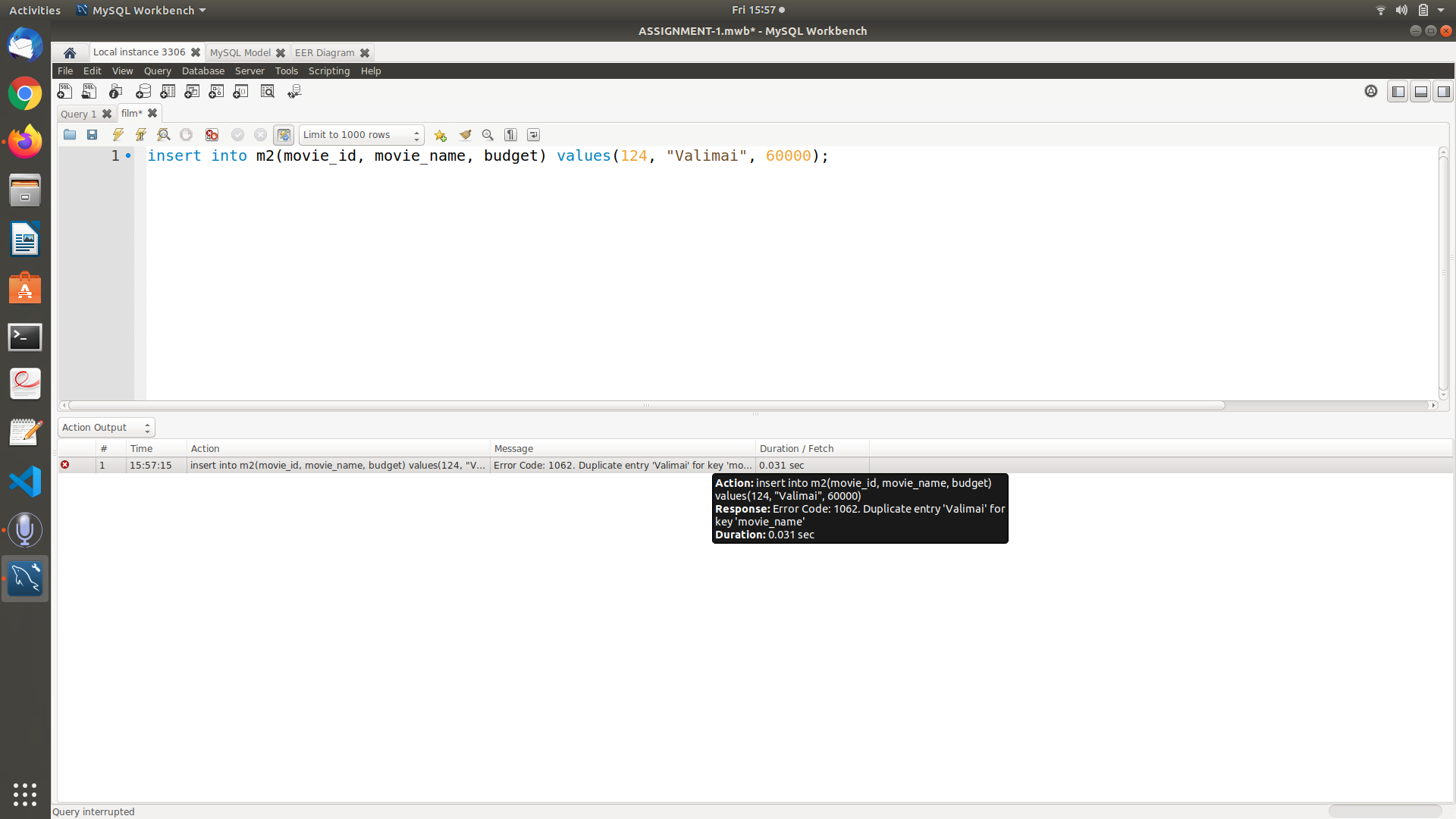


Now if we try to insert values with the same primary key(123) ,it shows duplicate entry, which means there is already a tuple with primary key as 123. So it clearly shows the violation of the primary key.



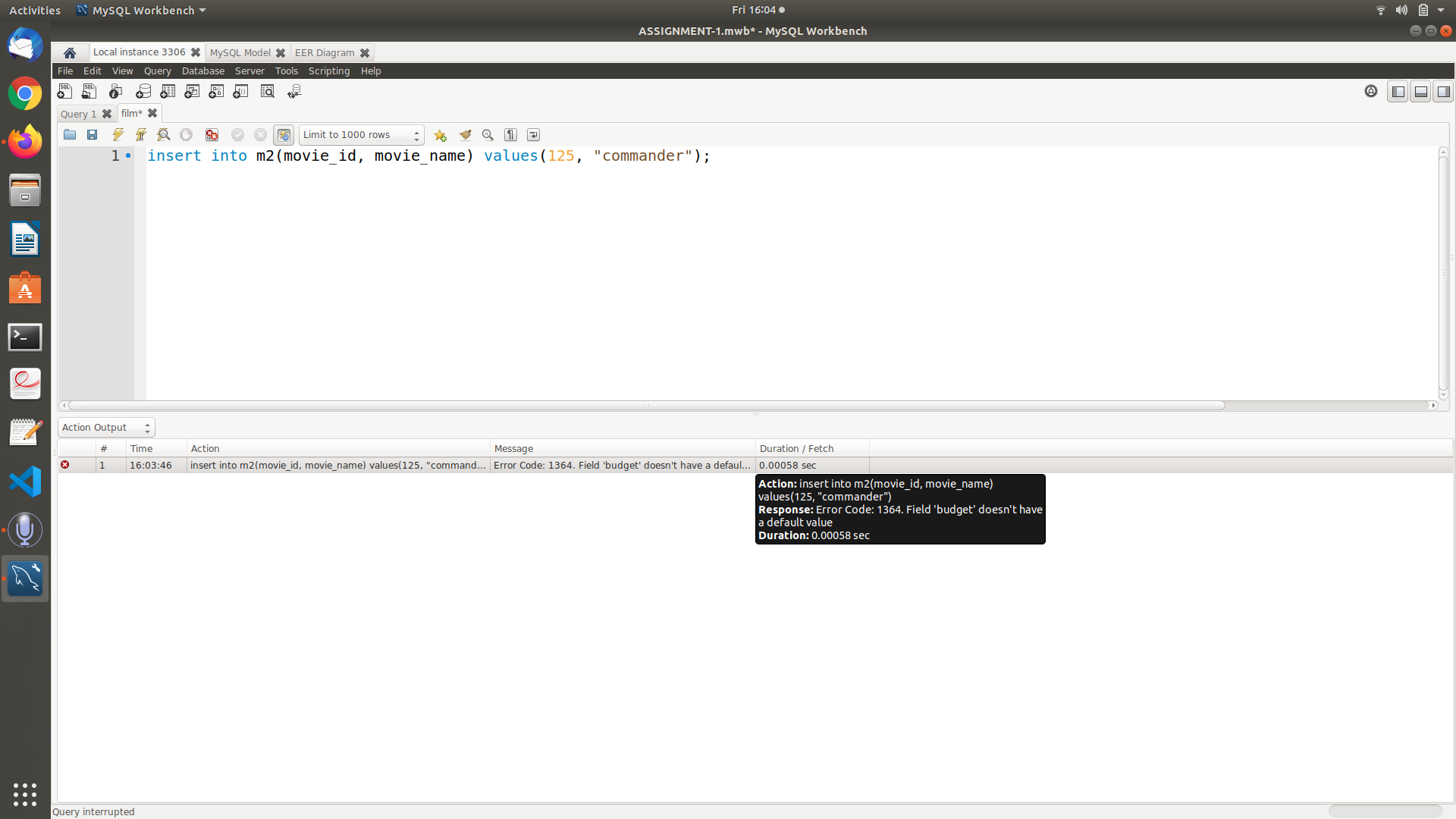
**ii)violation of unique constraint**

In the above screenshot we can see that movie\_name “valimai” has already been inserted ,now if we try to insert the same movie\_name “valimai” with a different primary key,it shows that movie\_name should be unique.



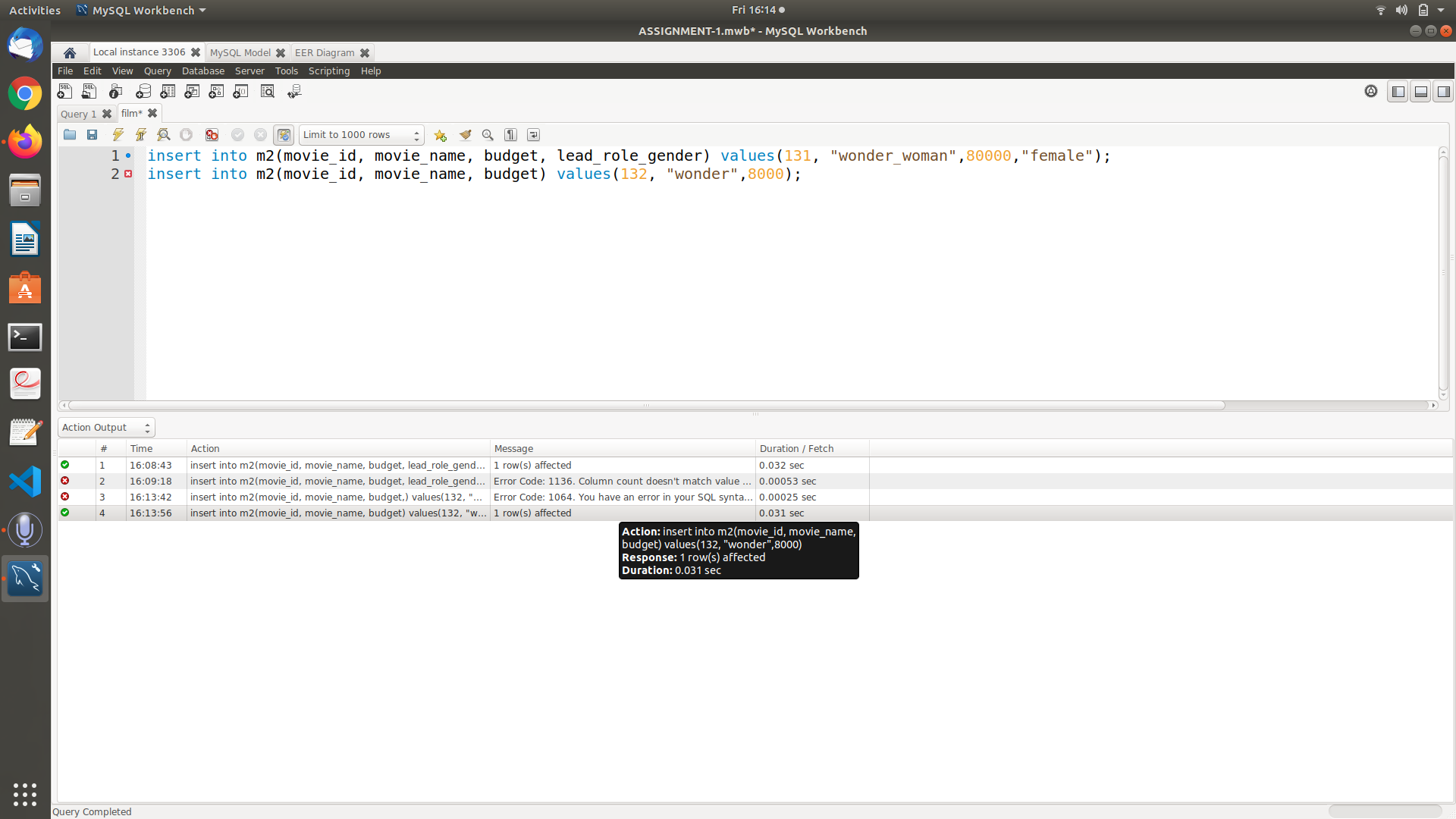
**iii)violation of not null constraint**

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



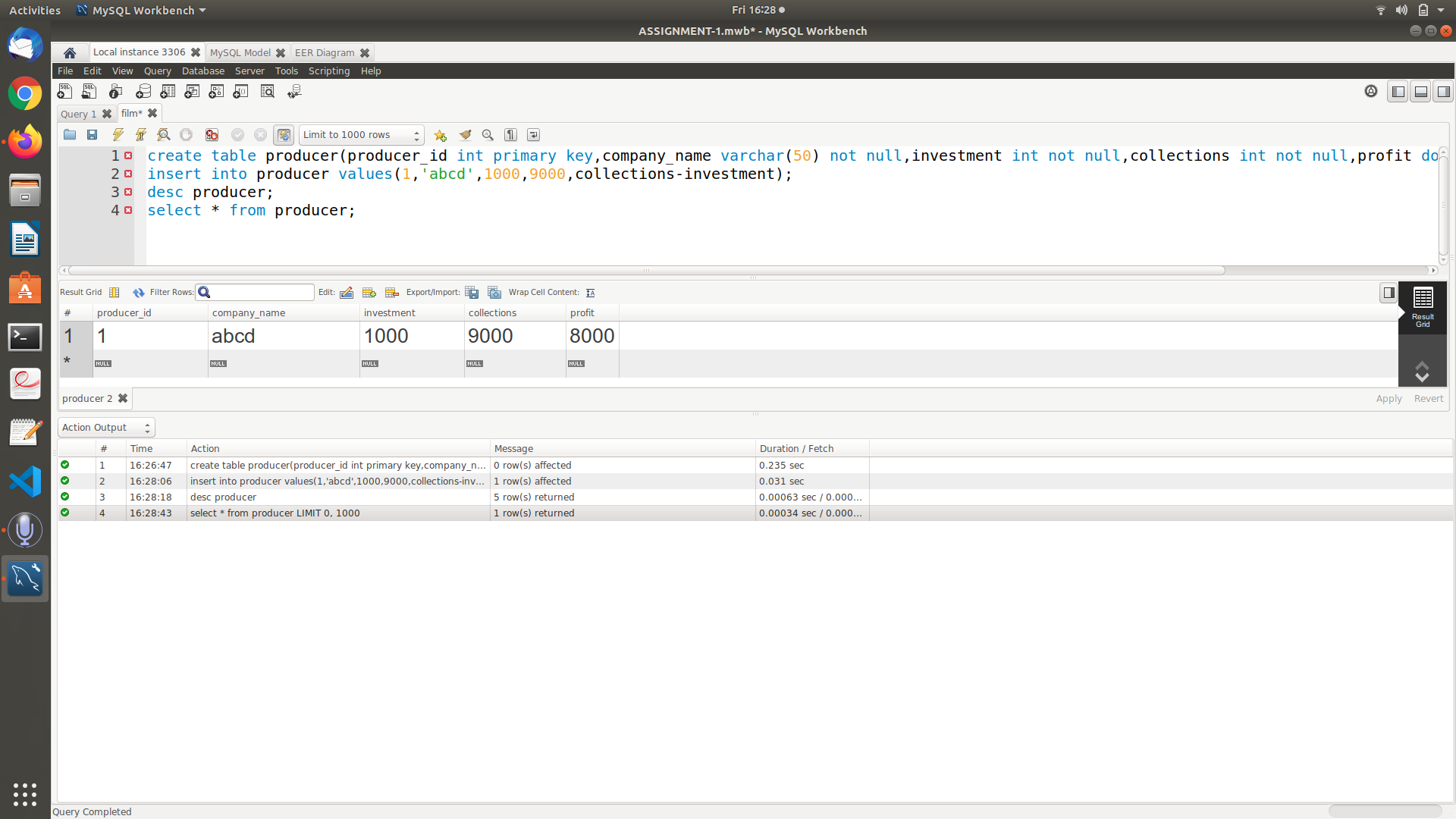
**iv) default key constraints**

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.

