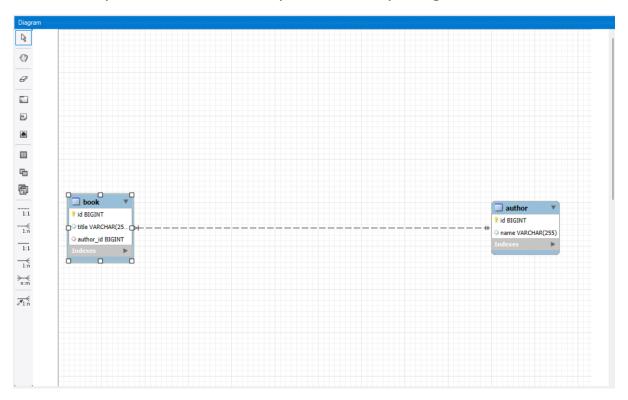
## 1. Many To One Mapping

i. MySQL Database Entity Relationship Diagram

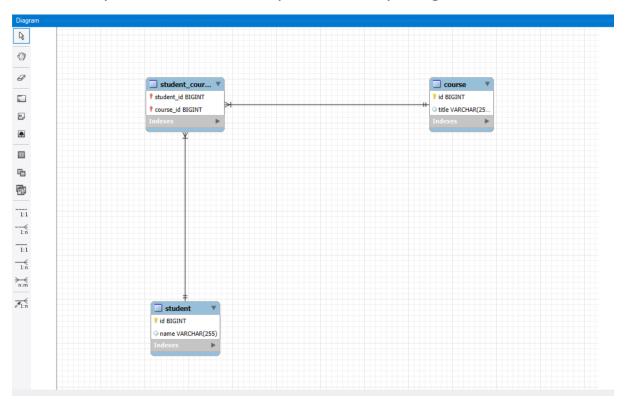


## ii. Console:

```
--- [Many_to_One_Mapping] [ restartedMain] org.hibernate.orm.connections.pooling : HHH10001005: Database info:
         Database JDBC URL [Connecting through datasource 'HikariDataSource (HikariPool-1)']
         Database driver: undefined/unknown
         Database version: 8.0.42
         Autocommit mode: undefined/unknown
         Isolation level: undefined/unknown
        Minimum pool size: undefined/unknown
        Maximum pool size: undefined/unknown
2025-08-10T14:07:16.628+05:30 INFO 1476
                                            --- [Many_to_One_Mapping] [ restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator
                                                                                                                                          : HHH000489: No JTA platform available (set 'hib
    create table author (
         id bigint not null auto_increment,
        name varchar(255),
        primary key (id)
   ) engine=InnoDB
Hibernate:
    create table book (
        id bigint not null auto_increment,
        title varchar(255),
        author_id bigint,
        primary key (id)
   ) engine=InnoDB
Hibernate:
    alter table book
       add constraint FKklnrv3weler2ftkweewlky958
       foreign key (author_id)
       references author (id)
                                             --- [Many_to_One_Mapping] [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory for pers
2025-08-10T14:07:16.836+05:30
                                                                             restartedMain] JpaBaseConfiguration$JpaNebConfiguration: spring.jpa.open-in-view is enabled by default.
restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port 35729
restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8080 (http) with contex
2025-08-10T14:07:16.901+05:30 WARN
                                             --- [Many_to_One_Mapping] [
2025-08-10T14:07:17.632+05:30
                                             --- [Many_to_One_Mapping] [
2025-08-10T14:07:17.711+05:30
                                             --- [Many_to_One_Mapping]
2025-08-10T14:07:17.725+05:30
                                             --- [Many_to_One_Mapping] [
                                                                             restartedMain] c.k.mapping.ManyToOneMappingApplication : Started ManyToOneMappingApplication in 6.404
```

## 2. Many To Many Mapping

i. MySQL Database Entity Relationship Diagram



## ii. Console:

```
INFO 9760 --- [Many_to_Many_Mapping] [ restartedMain] o.h.e.t.j.p.i.JtaPlatformInitiator
                                                                                                                                     : HHH000489: No JTA platform available
   create table course (
       id bigint not null auto_increment,
       title varchar(255),
       primary key (id)
   ) engine=InnoDB
Hibernate:
   create table student (
       id bigint not null auto_increment,
       name varchar(255),
       primary key (id)
   ) engine=InnoDB
Hibernate:
   create table student_course (
       student_id bigint not null,
       course_id bigint not null,
       primary key (student_id, course_id)
   ) engine=InnoDB
Hibernate:
   alter table student_course
       add constraint FKejrkh4gv8iqgmspsanaji90ws
       foreign key (course_id)
       references course (id)
   alter table student_course
       add constraint FKq7yw2wg9wlt2cnj480hcdn6dq
       foreign key (student_id)
       references student (id)
2025-08-10T14:25:40.613+05:30
                                           --- [Many_to_Many_Mapping] [ restartedMain] j.LocalContainerEntityManagerFactoryBean : Initialized JPA EntityManagerFactory
                                                                          restartedMain] JpaBaseConfiguration$JpaWebConfiguration : spring.jpa.open-in-view is enabled by restartedMain] o.s.b.d.a.OptionalLiveReloadServer : LiveReload server is running on port
2025-08-10T14:25:40.682+05:30 WARN
                                           --- [Many_to_Many_Mapping]
2025-08-10T14:25:41.423+05:30
                                           --- [Many_to_Many_Mapping] [
                                           --- [Many_to_Many_Mapping]
2025-08-10T14:25:41.490+05:30
                                                                          restartedMain] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port 8080 (http) wi
2025-08-10T14:25:41.502+05:30
                                           --- [Many_to_Many_Mapping] [
                                                                          restartedMain] c.k.m.ManyToManyMappingApplication
                                                                                                                                     : Started ManyToManyMappingApplication
```