**ERD AND RELATIONSHIPS**

The project’s ERD was designed with the online tool Miro and verified through sqldbm.com

Besides the 4 main tables that contain the Students, Trainers, Assignments and Courses, I constructed 2 more tables to underline the many-to-many relationships between the Trainers and Courses and between the Students and Courses.

The Course-Assignment relationship is a one-to-many relationship as one course can have many assignments. On the contrary, one assignment can only belong to one course. Therefore, I did not deem it necessary to create an extra table between the Courses and the Assignments.

Every entity can be assigned to one or multiple courses during input. An assignment can only be matched with one course. Entity matching only takes place during user input, not afterwards.

**INSERTIONS**

Also the three final insertions required (students per course, trainers per course, assignments per student per course) take place indirectly.

In the first two cases, matching a trainer or a student to a course automatically fills the corresponding intermediate tables (CourseTrainers and CourseStudents) accordingly. **Matching a trainer or a student to a course is not obligatory.**

Finally, matching an assignment to a course indirectly matches it with the students that attend this course. **Matching an assignment to a course is obligatory**. Therefore, an intermediate “assignments per student per course” table was not needed and therefore not implemented. Inserting assignments per student per course can easily be achieved without the extra table.

e.g. , if student “John Doe” starts attending a new course “CB11”, the assignments that are matched with the course “CB11” will be also matched with the student “John Doe”

**PLEASE NOTE**

Check that the connection string in the **app.config** file of the **BootcampApp** project points to the correct database. The app was tested on 2 computers and works as intended.

**FILES IN FOLDERS**

**Folder: Docs**

* Database ERD(in .pdf form and .jpg form)
* Project Explanation(this file)

**Folder: SQL**

* Bootcamp-createdatabase(constructs the database)
* Bootcamp-schema(constructs all the necessary tables and associates them)
* Bootcamp-data(contains the data that will populate the database
* Bootcamp-sql-queries(contains all the sql queries needed for the assignment)

The solution has 3 projects:

* Services library, with all the important functions for the database
* Bootcamp app, that initializes the program
* Entity Data Model