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Project Title

COMP/MIS-302 Database Management Systems

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# The Case And Application Requirements

## 1.1 The Case/Business

For more than a decade, the store named “Cooking Competition” has been one of the top cooking classes in the area. Because of the huge recognition of the show, the manager, Ivan Ivanou, decided to expand the show into a much bigger online database store to save money, space, and time, where the judge can choose the participant.

Creating a database for a culinary competition project. It is necessary to consider the situation from the side of the database to enroll all participants and their data, such as: their first name, last name, experience in culinary competitions before, education in the culinary field.

## 1.2 Application Requirements

Creation of a database with detailed data on all participants in the culinary competition.

Creating the database with tables:

dish(participant\_id, dish\_name, team\_of\_dish\_name, part\_id(FK) ,

participant(participant\_id(PK),participant\_name,participant\_surname, participant\_email,city, address, zip, education, cooking\_competition\_exp, team\_name),

judges(judge\_id, judge\_name, judge\_surname, judge\_email).

# Step 1 – Create Data Model From Application Requirements

## 2.1 Data Model

Diagram

Description automatically generated

## 2.2 Supportive Documentation

Tabels in database:

dish(participant\_id, dish\_name, team\_of\_dish\_name, part\_id(FK) ,

participant(participant\_id(PK),participant\_name,participant\_surname, participant\_email,city, address, zip, education, cooking\_competition\_exp, team\_name),

judges(judge\_id, judge\_name, judge\_surname, judge\_email).

Where:

cooking\_class(database).dish(table).part\_id(column) is a FOREIGN KEY

cooking\_class(database).participant(table).participant\_id(column) is a PRIMARY KEY

# Step 2 – Transform Data Model Into Database Design

## 2.1 Database Design

Timeline

Description automatically generated with low confidence

## 2.2 Normalization

Primary key of participant strictly related to the dish prepared by the participant himself, in order for the judge to know which dish was prepared by which participant, the additional possibility of indicating the team that prepared the dish is also used for this, if not single players, but teams participate in the competition

## 2.3 Data Dictionary

**Table ‘participant’**:

participant\_id INT NOT NULL PRIMARY KEY

participant\_name CHAR(25) NOT NULL

participant\_surname CHAR(25) NOT NULL

participant\_email CHAR(25) NOT NULL

city CHAR(25) NOT NULL

address CHAR(25) NOT NULL

zip CHAR(25) NOT NULL

education CHAR(25) NOT NULL

cooking\_competition\_exp CHAR(25) NOT NULL

team\_name CHAR(25) NOT NULL

**Table ’dish’:**

participant\_id INT NOT NULL PRIMARY KEY

dish\_name CHAR(25) NOT NULL

team\_of\_dish\_name CHAR(25) NOT NULL

part\_id INT NOT NULL references participant(participant\_id)

**Table ‘judges’:**

judge\_id INT NOT NULL

judge\_name CHAR(25) NOT NULL

judge\_surname CHAR(25) NOT NULL

judge\_email CHAR(25) NOT NULL

## 2.4 Minimum Cardinality Enforcement

cooking\_class(database).dish(table).part\_id(column) is a FOREIGN KEY

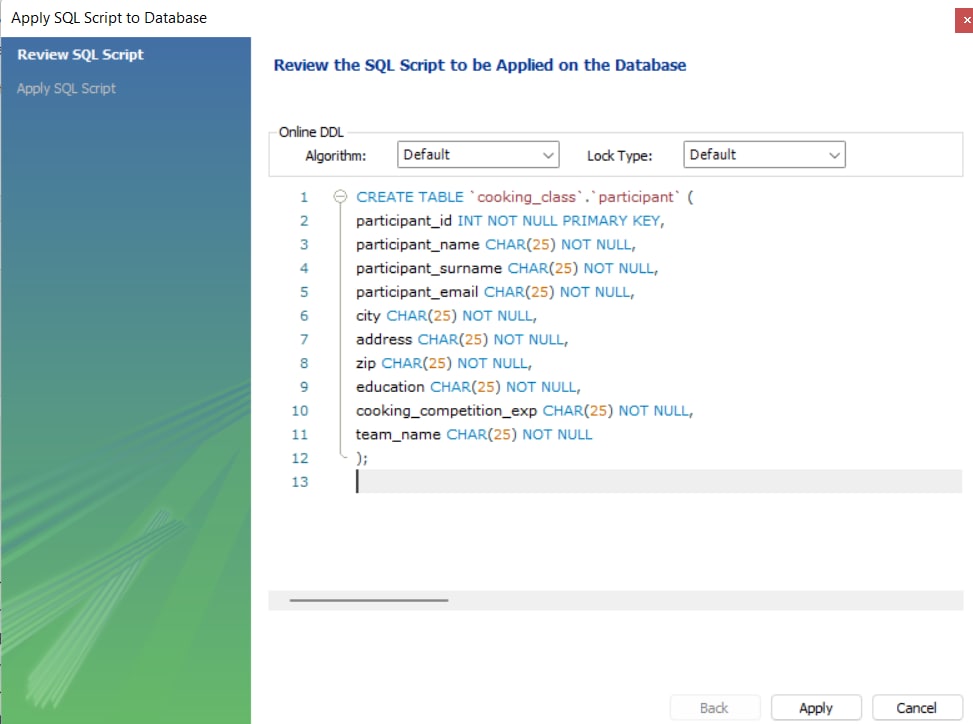
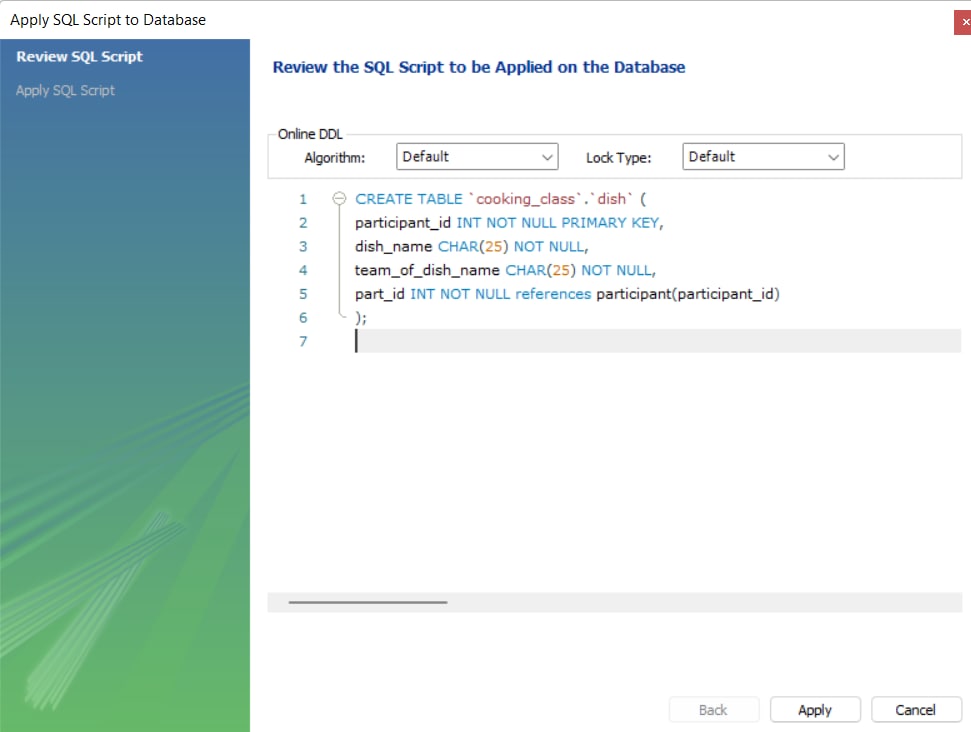
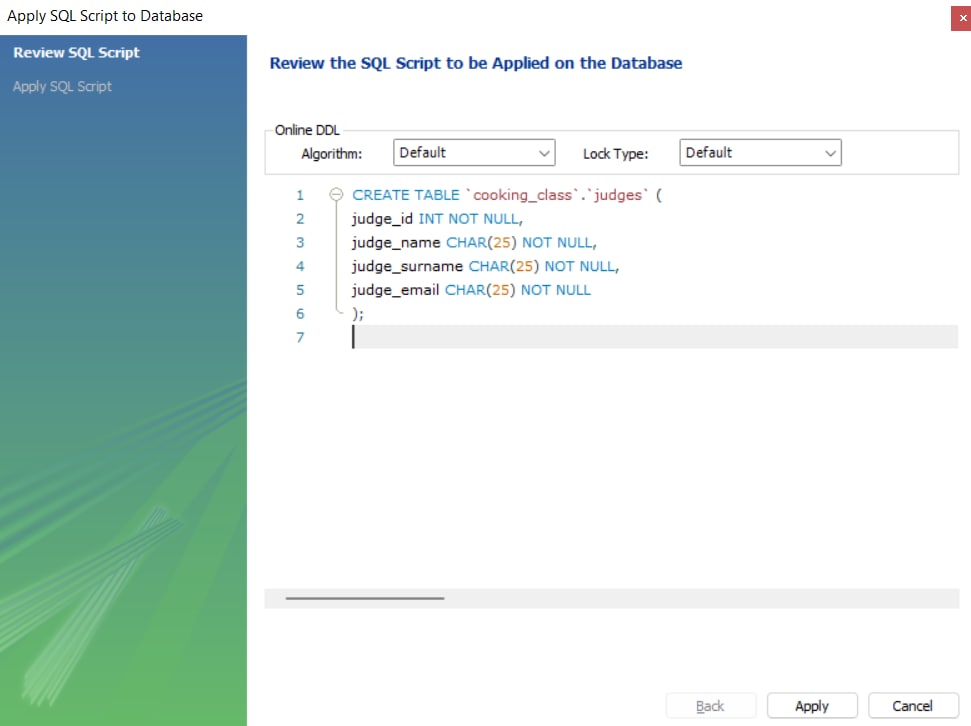
cooking\_class(database).participant(table).participant\_id(column) is a PRIMARY KEY

# Step 3 – Database Implementation

## 3.1 Database Creation

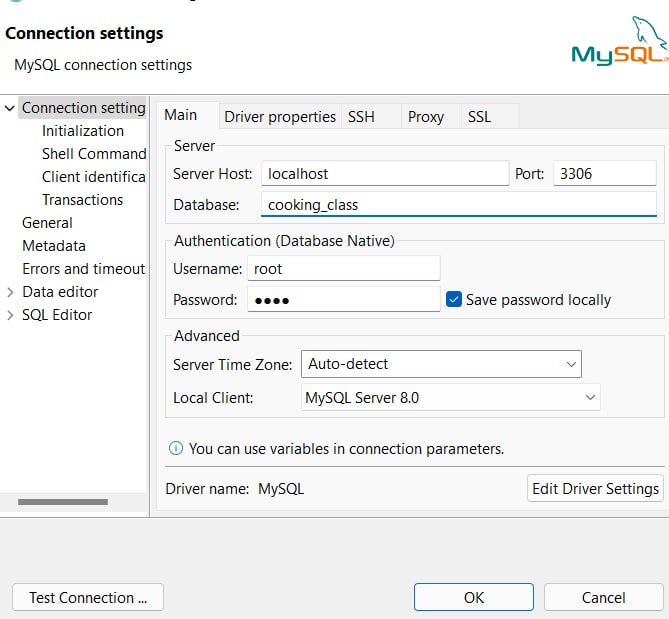
Graphical user interface, application

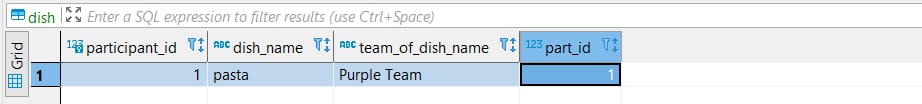
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## 3.2 Insertion of Sample/Test Data

We connect to the database through DBeaver









# Step 4 – Query Processing

## 4.1 Query Implementation

