# SQL

## Anforderungen

* Create table
* Create database
* Select
  + Select\*
  + Select dsitinct
  + Select columns
  + Join
  + Conditions
    - And, Or
    - Value =,<,>,!=,<=,>=
    - In, not in
  + Sort asc, desc, multiple sort
* Create
* Update
* Delete

## Realisierung

### Classes

#### Database

Attributes:

* String name
* Sqlconnection

Methods:

* Void CreateDatabase(string name);
* Void CreateTable(string name, Dictionary<string, typeEnum> columns);
* Bool ExecuteCommand(IDataBaseCommand cmd);
* List<List<String>> ExecuteQuery(Select query);

#### DataBaseQuery

Attributes:

* List<Column> selectedColumns
* Table table
* List<JoinTable> joinTables
* Condition condition
* List<SortColumn> sortedColumns

Methods:

* List<Dictionary<string, string>> Execute();
* string ToString();

#### Column

Attributes:

* string columnName
* Table table

Methods:

* String ToString();

#### Table

Attributes:

* String tableName

Methods:

* String ToString();

#### JoinTable

Attributes:

* Table table
* Column mainColumn
* Column joinColumn

Methods:

* String ToString()

#### Condition

Attributes:

* Column column
* IValue comparison
* LogicJoinEnum logicJoin
* List<Condition> conditions

Methods:

* String ToString()

#### ObjectValue

Attributes:

* OperatorEnum compareOperator
* Object value

Methods:

* String ToString()

#### SubQueryValue

Attributes:

* SubQueryOperatorEnum subQueryOperator
* Select subquery

Methods:

* String ToString()

#### SortColumn

Attributes:

* Column column
* SortEnum sortOrder

Methods:

* String ToString()

#### IDataBaseCommand

#### Create

Attributes:

* String tableName
* Dictionary<string, object> columns

Methods:

* String ToString()

#### Update

Attributes:

* String table;
* String column;
* Object value;
* Condition condition;

Methods:

* String ToString();

#### Delete

Attributes:

* String table;
* Condition condition;

Methods:

* String ToString();