

ERARBEITUNGS-/ REFLEXIONSPHASE

Projekt: Data-Mart-Erstellung in SQL (DLBDSPBDM01_D)

Von: Tobias Bönker (IU14099140)

Implementierungsverfahren

- Datenbank und danach Schema mit gewünschten Namen im SQL-Editor der Wahl erstellen
 - *CREATE DATABASE [Wunschname];*
 - *CREATE SCHEMA [Wunschname];*
- Datei „Boenker-Tobias_IU14099140_DLBDSPBDM01_D_Erarbeitungs-/Reflexionsphase_2_SQL.sql“ (leere Datenbank) oder „Boenker-Tobias_IU14099140_DLBDSPBDM01_D_Erarbeitungs-/Reflexionsphase_1_SQL.sql“ (mit Testdaten) im SQL-Editor öffnen
- In Schritt 1. erstellte Datenbank auswählen
- Alle Befehle in der gewählten Datei ausführen (auf einmal, oder von oben nach unten)
- Datei „Boenker-Tobias_IU14099140_DLBDSPBDM01_D_Erarbeitungs-/Reflexionsphase_3_SQL.sql“ öffnen und ausführen

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt I

- BookID ist als Primärschlüssel festgelegt
- BookTitle, Author & Publisher sind auf 50 Zeichen begrenzt
- BookID ist Unique (einzigartig)

```
CREATE TABLE Books
(
    BookID          INT Unique NOT NULL PRIMARY KEY,
    BookUserID      INT NOT NULL,
    ISBN            BIGINT NOT NULL,
    BookTitle       VARCHAR(50),
    Author          VARCHAR(50),
    Publisher       VARCHAR(50),
    GenreID         INT,
    Year            Date,
    LanguageID      INT,
    UserID           INT,
    TimeslotID      INT,
    StateID          INT,
    Availability     BOOLEAN
);
```

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt II

- Fremdschlüssele werden wie folgt festgelegt:
- GenreID → Genre(GenreID)
- LanguageID → Language(LanguageID)
- UserID → User(UserID)
- TimeslotID → Timeslot(TimeslotID)
- StateID → State(StateID)
- BookUserID → User(UserID)

```
ALTER TABLE Books
ADD CONSTRAINT GenreID
FOREIGN KEY (GenreID)
REFERENCES Genre(GenreID),
ADD CONSTRAINT LanguageID
FOREIGN KEY (LanguageID)
REFERENCES Language(LanguageID),
ADD CONSTRAINT UserID
FOREIGN KEY (UserID)
REFERENCES User(UserID),
ADD CONSTRAINT TimeslotID
FOREIGN KEY (TimeslotID)
REFERENCES Timeslot(TimeslotID),
ADD CONSTRAINT StateID
FOREIGN KEY (StateID)
REFERENCES State(StateID),
ADD CONSTRAINT BookUserID
FOREIGN KEY (BookUserID)
REFERENCES User(UserID);
```

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt III

```
-- Dummy-Daten für Tabelle "Books"
INSERT INTO Books (BookID, BookUserID, ISBN, BookTitle, Author, Publisher, GenreID, Year, LanguageID, UserID, TimeslotID, StateID, Availability)
VALUES
    (201, 1001, 9780451524935, '1984', 'George Orwell', 'Houghton Mifflin Harcourt', 1, '1949-06-08', 1, 1001, 1, 1, true),
    (202, 1002, 9780679783268, 'To Kill a Mockingbird', 'Harper Lee', 'J.B. Lippincott & Co.', 2, '1960-07-11', 2, 1002, 2, 2, true),
    (203, 1003, 9780743273565, 'The Great Gatsby', 'F. Scott Fitzgerald', 'Charles Scribner''s Sons', 3, '1925-04-10', 3, 1003, 3, 3, false),
    (204, 1004, 9780316769488, 'The Catcher in the Rye', 'J.D. Salinger', 'Little, Brown and Company', 4, '1951-07-16', 4, 1004, 4, 4, true),
    (205, 1005, 9780747532743, 'Harry Potter and the Philosopher''s Stone', 'J.K. Rowling', 'Bloomsbury', 5, '1997-06-26', 5, 1005, 5, 5, false),
    (206, 1006, 9780061120084, 'To Kill a Mockingbird', 'Harper Lee', 'Harper Perennial Modern Classics', 6, '2006-05-23', 6, 1006, 6, 6, true),
    (207, 1007, 9780307277671, 'The Road', 'Cormac McCarthy', 'Alfred A. Knopf', 7, '2006-09-26', 7, 1007, 7, 7, true),
    (208, 1008, 9780439139595, 'Harry Potter and the Goblet of Fire', 'J.K. Rowling', 'Scholastic', 8, '2000-07-08', 8, 1008, 8, 8, false),
    (209, 1009, 9780316037924, 'Twilight', 'Stephenie Meyer', 'Little, Brown and Company', 9, '2005-10-05', 9, 1009, 9, 9, true),
    (210, 1010, 9780060254926, 'Where the Wild Things Are', 'Maurice Sendak', 'HarperCollins', 10, '1963-04-09', 10, 1010, 10, 10, true),
    (211, 1011, 9780140283334, 'Animal Farm', 'George Orwell', 'Penguin Books', 11, '1945-08-17', 11, 1011, 11, 11, false),
    (212, 1012, 9780439554930, 'Harry Potter and the Order of the Phoenix', 'J.K. Rowling', 'Scholastic', 12, '2003-06-21', 12, 1012, 12, 12, true),
    (213, 1013, 9780345339683, 'The Hobbit', 'J.R.R. Tolkien', 'George Allen & Unwin', 13, '1937-09-21', 13, 1013, 13, 13, false),
    (214, 1014, 9780143125427, 'Pride and Prejudice', 'Jane Austen', 'T. Egerton', 14, '1813-01-28', 14, 1014, 14, 14, true),
    (215, 1015, 9780439139601, 'Harry Potter and the Prisoner of Azkaban', 'J.K. Rowling', 'Scholastic', 15, '1999-07-08', 15, 1015, 15, 15, true);
```

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt IV

1 • SELECT * FROM BookTrading_Test.Books;

Result Grid Filter Rows: Search Edit: Export/Import:

BookID	BookUserID	ISBN	BookTitle	Author	Publisher	GenreID	Year	LanguageID	UserID	TimeslotID	StateID	Availability
201	1001	9780451524935	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1001	1	1	1
202	1002	9780679783268	To Kill a Mockingbird	Harper Lee	J.B. Lippincott & Co.	2	1960-07-11	2	1002	2	2	1
203	1003	9780743273565	The Great Gatsby	F. Scott Fitzgerald	Charles Scribner's Sons	3	1925-04-10	3	1003	3	3	0
204	1004	9780316769488	The Catcher in the Rye	J.D. Salinger	Little, Brown and Company	4	1951-07-16	4	1004	4	4	1
205	1005	9780747532743	Harry Potter and the Philosopher's...	J.K. Rowling	Bloomsbury	5	1997-06-26	5	1005	5	5	0
206	1006	9780061120084	To Kill a Mockingbird	Harper Lee	Harper Perennial Modern Classics	6	2006-05-23	6	1006	6	6	1
207	1007	9780307277671	The Road	Cormac McCarthy	Alfred A. Knopf	7	2006-09-26	7	1007	7	7	1
208	1008	9780439139595	Harry Potter and the Goblet of Fire	J.K. Rowling	Scholastic	8	2000-07-08	8	1008	8	8	0
209	1009	9780316037924	Twilight	Stephenie Meyer	Little, Brown and Company	9	2005-10-05	9	1009	9	9	1
210	1010	9780060254926	Where the Wild Things Are	Maurice Sendak	HarperCollins	10	1963-04-09	10	1010	10	10	1
211	1011	9780140283334	Animal Farm	George Orwell	Penguin Books	11	1945-08-17	11	1011	11	11	0
212	1012	9780439554930	Harry Potter and the Order of the...	J.K. Rowling	Scholastic	12	2003-06-21	12	1012	12	12	1
213	1013	9780345339683	The Hobbit	J.R.R. Tolkien	George Allen & Unwin	13	1937-09-21	13	1013	13	13	0
214	1014	9780143125427	Pride and Prejudice	Jane Austen	T. Egerton	14	1813-01-28	14	1014	14	14	1
215	1015	9780439139601	Harry Potter and the Prisoner of A...	J.K. Rowling	Scholastic	15	1999-07-08	15	1015	15	15	1
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Von: Tobias Bönker (IU14099140)

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt V

- Testcases ausführen → Datei: Boenker-Tobias_IU14099140_DLBDSPBDM01_D_Erarbeitungs-/Reflexionsphase_3_SQL.sql
 - *Buch hinzufügen*
 - *Verfügbarkeit ändern*

```
-- Buch hinzufügen
START TRANSACTION;
INSERT INTO Books (BookID, BookUserID, ISBN, BookTitle, Author, Publisher, GenreID, Year, LanguageID, UserID, TimeslotID, StateID, Availability)
VALUES
    (299, 1001, 9780451522344, '1984', 'George Orwell', 'Houghton Mifflin Harcourt', 1, '1949-06-08', 1, 1002, 1, 1, false);
COMMIT;

-- Verfügbarkeit eines Buches ändern (BookID muss existieren)
UPDATE Books
SET Availability = true
WHERE BookID = 299;
```

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt VI

1 • SELECT * FROM BookTrading_Test.Books;

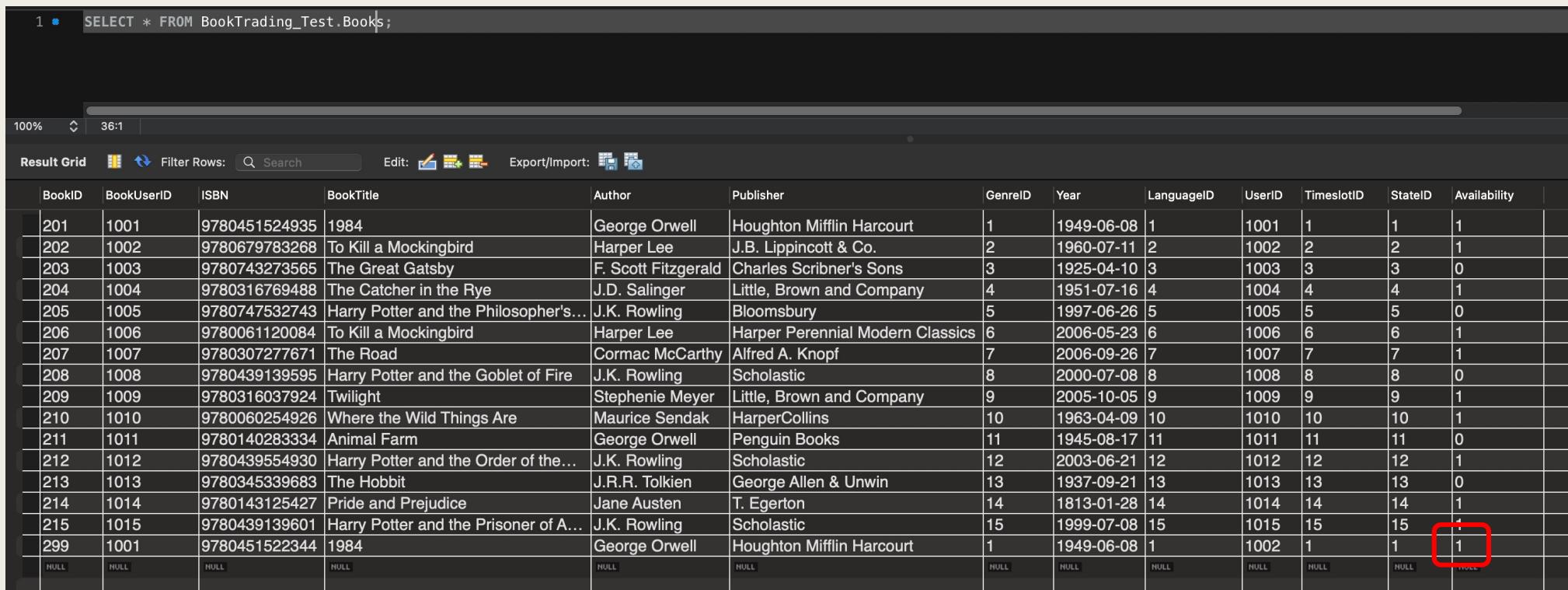
Result Grid Filter Rows: Search Edit: Export/Import:

	BookID	BookUserID	ISBN	BookTitle	Author	Publisher	GenreID	Year	LanguageID	UserID	TimeslotID	StateID	Availability
	201	1001	9780451524935	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1001	1	1	1
	202	1002	9780679783268	To Kill a Mockingbird	Harper Lee	J.B. Lippincott & Co.	2	1960-07-11	2	1002	2	2	1
	203	1003	9780743273565	The Great Gatsby	F. Scott Fitzgerald	Charles Scribner's Sons	3	1925-04-10	3	1003	3	3	0
	204	1004	9780316769488	The Catcher in the Rye	J.D. Salinger	Little, Brown and Company	4	1951-07-16	4	1004	4	4	1
	205	1005	9780747532743	Harry Potter and the Philosopher's...	J.K. Rowling	Bloomsbury	5	1997-06-26	5	1005	5	5	0
	206	1006	9780061120084	To Kill a Mockingbird	Harper Lee	Harper Perennial Modern Classics	6	2006-05-23	6	1006	6	6	1
	207	1007	9780307277671	The Road	Cormac McCarthy	Alfred A. Knopf	7	2006-09-26	7	1007	7	7	1
	208	1008	9780439139595	Harry Potter and the Goblet of Fire	J.K. Rowling	Scholastic	8	2000-07-08	8	1008	8	8	0
	209	1009	9780316037924	Twilight	Stephenie Meyer	Little, Brown and Company	9	2005-10-05	9	1009	9	9	1
	210	1010	9780060254926	Where the Wild Things Are	Maurice Sendak	HarperCollins	10	1963-04-09	10	1010	10	10	1
	211	1011	9780140283334	Animal Farm	George Orwell	Penguin Books	11	1945-08-17	11	1011	11	11	0
	212	1012	9780439554930	Harry Potter and the Order of the...	J.K. Rowling	Scholastic	12	2003-06-21	12	1012	12	12	1
	213	1013	9780345339683	The Hobbit	J.R.R. Tolkien	George Allen & Unwin	13	1937-09-21	13	1013	13	13	0
	214	1014	9780143125427	Pride and Prejudice	Jane Austen	T. Egerton	14	1813-01-28	14	1014	14	14	1
	215	1015	9780439139601	Harry Potter and the Prisoner of A...	J.K. Rowling	Scholastic	15	1990-07-09	15	1015	15	15	1
	299	1001	9780451522344	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1002	1	1	0
	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

→ Testcase „Einfügen“ hat funktioniert

Von: Tobias Bönker (IU14099140)

Exemplarische Beschreibung der Erstellung an der Tabelle „Books“ – Schritt VII



The screenshot shows a database query results grid for the 'Books' table. The query is:

```
1 • SELECT * FROM BookTrading_Test.Books;
```

The results grid has 15 columns and 29 rows. The columns are:

- BookID
- BookUserID
- ISBN
- BookTitle
- Author
- Publisher
- GenreID
- Year
- LanguageID
- UserID
- TimeslotID
- StateID
- Availability

The data includes various books like '1984', 'To Kill a Mockingbird', 'The Great Gatsby', etc., with their respective details such as author, publisher, and availability status (e.g., 1 or 0). A red box highlights the last row (BookID 299) where Availability is marked as 1.

	BookID	BookUserID	ISBN	BookTitle	Author	Publisher	GenreID	Year	LanguageID	UserID	TimeslotID	StateID	Availability
	201	1001	9780451524935	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1001	1	1	1
	202	1002	9780679783268	To Kill a Mockingbird	Harper Lee	J.B. Lippincott & Co.	2	1960-07-11	2	1002	2	2	1
	203	1003	9780743273565	The Great Gatsby	F. Scott Fitzgerald	Charles Scribner's Sons	3	1925-04-10	3	1003	3	3	0
	204	1004	9780316769488	The Catcher in the Rye	J.D. Salinger	Little, Brown and Company	4	1951-07-16	4	1004	4	4	1
	205	1005	9780747532743	Harry Potter and the Philosopher's...	J.K. Rowling	Bloomsbury	5	1997-06-26	5	1005	5	5	0
	206	1006	9780061120084	To Kill a Mockingbird	Harper Lee	Harper Perennial Modern Classics	6	2006-05-23	6	1006	6	6	1
	207	1007	9780307277671	The Road	Cormac McCarthy	Alfred A. Knopf	7	2006-09-26	7	1007	7	7	1
	208	1008	9780439139595	Harry Potter and the Goblet of Fire	J.K. Rowling	Scholastic	8	2000-07-08	8	1008	8	8	0
	209	1009	9780316037924	Twilight	Stephenie Meyer	Little, Brown and Company	9	2005-10-05	9	1009	9	9	1
	210	1010	9780060254926	Where the Wild Things Are	Maurice Sendak	HarperCollins	10	1963-04-09	10	1010	10	10	1
	211	1011	9780140283334	Animal Farm	George Orwell	Penguin Books	11	1945-08-17	11	1011	11	11	0
	212	1012	9780439554930	Harry Potter and the Order of the...	J.K. Rowling	Scholastic	12	2003-06-21	12	1012	12	12	1
	213	1013	9780345339683	The Hobbit	J.R.R. Tolkien	George Allen & Unwin	13	1937-09-21	13	1013	13	13	0
	214	1014	9780143125427	Pride and Prejudice	Jane Austen	T. Egerton	14	1813-01-28	14	1014	14	14	1
	215	1015	9780439139601	Harry Potter and the Prisoner of A...	J.K. Rowling	Scholastic	15	1999-07-08	15	1015	15	15	1
	299	1001	9780451522344	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1002	1	1	1
	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

→ Testcase „Verfügbarkeit ändern“ hat funktioniert

Von: Tobias Bönker (IU14099140)

Hinzufügen von Daten - Vorlage

- Transaction ist optional, bietet aber die Möglichkeit Änderungen mit „ROLLBACK;“ Rückgängig zu machen bis „COMMIT;“ ausgeführt wird
- „SET FOREIGN_KEY_CHECKS = 0;“ deaktiviert die Überprüfung der Fremdschlüsselreferenzen → nötig wegen gegenseitiger Referenzen zwischen Tabellen
- **WICHTIG!:** „SET FOREIGN_KEY_CHECKS = 1;“ aktiviert die Überprüfung wieder

```
START TRANSACTION;

SET FOREIGN_KEY_CHECKS = 0;

-- INSERT INTO [...] ;

SET FOREIGN_KEY_CHECKS = 1;

COMMIT;
```

Restliche Funktionalitäten Testen

1

```
-- Vergangene Prozesse nach Datum sortiert ausgeben (mit Filter nach Borrower und Lender) --> alle Bücher die eine Person von einer anderen Person ausgeliehen hat
SELECT Lender, Borrower, ProcessDate, BookTitle, BookID, Process.Borrower as BorrowerUserID
FROM Process
JOIN Lender ON Process.Lender = Lender.LenderUserID
JOIN Borrower ON Process.Borrower = Borrower.BorrowerUserID
JOIN Books ON Process.ProcessBookID = Books.BookID
WHERE Lender = 1 AND Borrower = 2
ORDER BY Process.ProcessDate;
```

2

```
-- Meldung für Admin hinzufügen (in AdminMessages)
START TRANSACTION;
SET FOREIGN_KEY_CHECKS = 0;
INSERT INTO AdminMessages (MessageID, MessageUserID, Message, MessageCategory)
VALUES
    (99, 1, 'Test Message 123', 'Category1');
SET FOREIGN_KEY_CHECKS = 1;
COMMIT;
```

3

```
-- Alle verfügbaren Bücher suchen
SELECT *
FROM Books
WHERE Availability = true;
```

4

```
-- Buch bewerten 1 --> ohne Benutzer-Check
START TRANSACTION;
INSERT INTO Rating (RatingID, RatingBookID, RatingUserID, Rating, Stars)
VALUES
    (98, 201, 1001, 'Good, not perfect', 4);
COMMIT;
```

5

```
-- Buch bewerten 2 --> mit Bedingung, dass Benutzer bewertetes Buch ausgeliehen hat, falls Benutzer Buch nicht hat/hatte wird die Bewertung nicht eingetragen (Der Befehl läuft trotzdem ohne Error durch)
START TRANSACTION;
INSERT INTO Rating (RatingID, RatingBookID, RatingUserID, Rating, Stars)
SELECT 98, 201, 1001, 'Good, not perfect', 4
FROM Process
WHERE Process.ProcessBookID = 201 AND Process.Borrower = 1001 OR Process.Lender = 1001;
COMMIT;
```

Testcase 1

- Alle Vorgänge zwischen zwei konkreten Benutzenden sollen ausgegeben werden
- Einige Informationen aus verschiedenen Tabellen sollen mittels „JOIN“ abgerufen werden
 - Fremdschlüssel funktionieren ordnungsgemäß
 - Daten werden korrekt ausgegeben

```
14 •  SELECT Lender, Borrower, ProcessDate, BookTitle, BookID, Process.Borrower as BorrowerUserID
15  FROM Process
16  JOIN Lender ON Process.Lender = Lender.LenderUserID
17  JOIN Borrower ON Process.Borrower = Borrower.BorrowerUserID
18  JOIN Books ON Process.ProcessBookID = Books.BookID
19  WHERE Lender = 1 AND Borrower = 2
20  ORDER BY Process.ProcessDate;
21
```

Result Grid Filter Rows: Search Export:

Lender	Borrower	ProcessDate	BookTitle	BookID	BorrowerUserID
1	2	2024-02-09 00:00:00	1984	201	2

Testcase 2

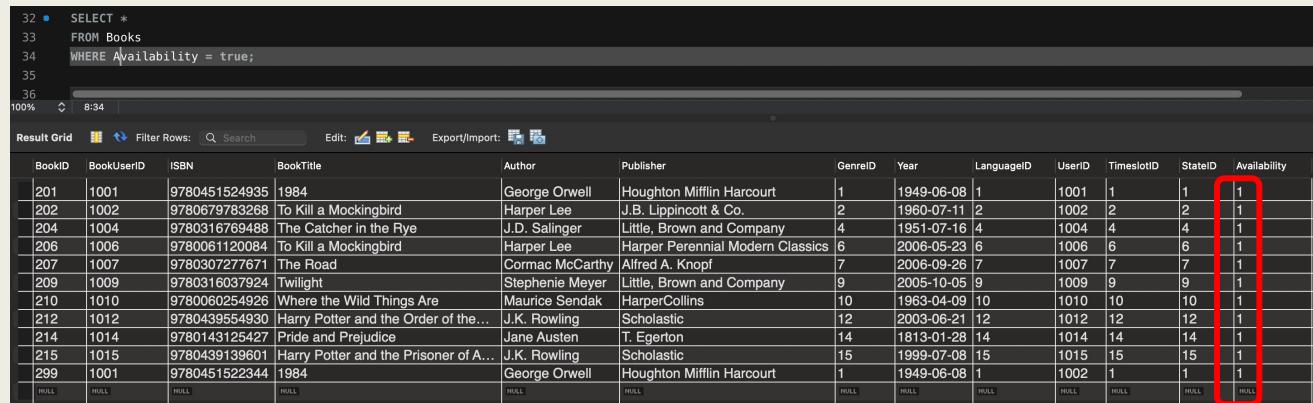
- AdminMessage soll hinzugefügt werden
- Buchstaben-Limit in Spalte „Message“ kann getestet werden
 - Daten wurden wie gewünscht eingefügt
 - Einträge in „MessageCategory“ sind (wie gewünscht) NICHT unique

1 • `SELECT * FROM BookTrading_Test.AdminMessages;`

MessageID	MessageUserID	Message	MessageCategory
1	1	Message 1	Category1
2	2	Message 2	Category2
3	3	Message 3	Category3
4	4	Message 4	Category4
5	5	Message 5	Category5
6	6	Message 6	Category6
7	7	Message 7	Category7
8	8	Message 8	Category8
9	9	Message 9	Category9
10	10	Message 10	Category10
11	11	Message 11	Category11
12	12	Message 12	Category12
13	13	Message 13	Category13
14	14	Message 14	Category14
15	15	Message 15	Category15
99	1	Test Mess...	Category1

Testcase 3

- Alle Bücher mit „Availability = 1“ (also verfügbare) ausgeben
 - Die korrekten Bücher wurden ausgegeben
 - Bisher nach „BookID“ sortiert (wäre leicht anzupassen falls gewünscht)



The screenshot shows a database query results grid. At the top, the SQL query is displayed:

```
32 • SELECT *
33 FROM Books
34 WHERE Availability = true;
35
36
```

The results grid has the following columns: BookID, BookUserID, ISBN, BookTitle, Author, Publisher, GenreID, Year, LanguageID, UserID, TimeslotID, StateID, and Availability. The data is sorted by BookID. The last three rows of the grid are highlighted with red boxes around the StateID and Availability columns.

BookID	BookUserID	ISBN	BookTitle	Author	Publisher	GenreID	Year	LanguageID	UserID	TimeslotID	StateID	Availability
201	1001	9780451524935	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1001	1	1	1
202	1002	9780679783268	To Kill a Mockingbird	Harper Lee	J.B. Lippincott & Co.	2	1960-07-11	2	1002	2	2	1
204	1004	9780316769489	The Catcher in the Rye	J.D. Salinger	Little, Brown and Company	4	1951-07-16	4	1004	4	4	1
206	1006	9780061120084	To Kill a Mockingbird	Harper Lee	Harper Perennial Modern Classics	6	2006-05-23	6	1006	6	6	1
207	1007	9780307277671	The Road	Cormac McCarthy	Alfred A. Knopf	7	2006-09-26	7	1007	7	7	1
209	1009	9780316037924	Twilight	Stephenie Meyer	Little, Brown and Company	9	2005-10-05	9	1009	9	9	1
210	1010	9780060254926	Where the Wild Things Are	Maurice Sendak	HarperCollins	10	1963-04-09	10	1010	10	10	1
212	1012	9780439554930	Harry Potter and the Order of the...	J.K. Rowling	Scholastic	12	2003-06-21	12	1012	12	12	1
214	1014	9780143125427	Pride and Prejudice	Jane Austen	T. Egerton	14	1813-01-28	14	1014	14	14	1
215	1015	9780439139601	Harry Potter and the Prisoner of A...	J.K. Rowling	Scholastic	15	1999-07-08	15	1015	15	15	1
299	1001	9780451522344	1984	George Orwell	Houghton Mifflin Harcourt	1	1949-06-08	1	1002	1	1	1
HULL	HULL	HULL	HULL		HULL		HULL	HULL	HULL	HULL	HULL	HULL

Testcase 4

- Eine Buchbewertung soll eingefügt werden
 - Bewertung wurde wie gewünscht eingefügt
 - Limit der Spalte „Stars“ ist hier testbar (INT 0-5)
 - Limit der Spalte „Rating“ ebenfalls testbar (max. 300 Zeichen)

1 • SELECT * FROM BookTrading_Test.Rating;

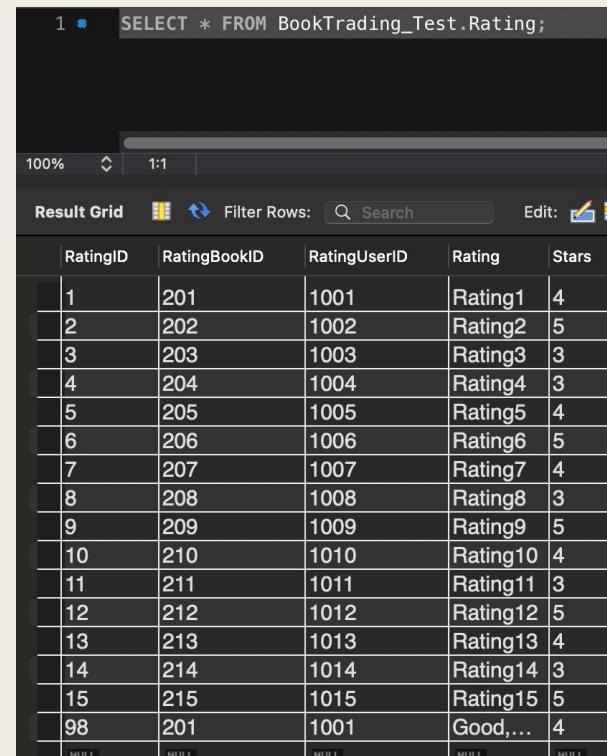
100% 1:1

Result Grid Filter Rows: Search Edit:

RatingID	RatingBookID	RatingUserID	Rating	Stars
1	201	1001	Rating1	4
2	202	1002	Rating2	5
3	203	1003	Rating3	3
4	204	1004	Rating4	3
5	205	1005	Rating5	4
6	206	1006	Rating6	5
7	207	1007	Rating7	4
8	208	1008	Rating8	3
9	209	1009	Rating9	5
10	210	1010	Rating10	4
11	211	1011	Rating11	3
12	212	1012	Rating12	5
13	213	1013	Rating13	4
14	214	1014	Rating14	3
15	215	1015	Rating15	5
98	201	1001	Good,...	4

Testcase 5

- Eine Buchbewertung soll eingefügt werden
- Voraussetzung ist, dass der Referenzierte User entweder schonmal Borrower oder Lender war
 - Voraussetzung ist hier nicht erfüllt, daher passiert wie gewünscht nichts
 - Kein Error, sondern Befehl läuft durch
 - Funktionalität mit erfüllter Voraussetzung ist hier auch testbar



A screenshot of a database query results grid. The query is:

```
1 • SELECT * FROM BookTrading_Test.Rating;
```

The results grid shows the following data:

RatingID	RatingBookID	RatingUserID	Rating	Stars
1	201	1001	Rating1	4
2	202	1002	Rating2	5
3	203	1003	Rating3	3
4	204	1004	Rating4	3
5	205	1005	Rating5	4
6	206	1006	Rating6	5
7	207	1007	Rating7	4
8	208	1008	Rating8	3
9	209	1009	Rating9	5
10	210	1010	Rating10	4
11	211	1011	Rating11	3
12	212	1012	Rating12	5
13	213	1013	Rating13	4
14	214	1014	Rating14	3
15	215	1015	Rating15	5
98	201	1001	Good,...	4
NULL	NULL	NULL	NULL	NULL

Zusammenfassung

- Sofern die Testcases alle wie beschrieben funktionieren empfehle ich jede Tabelle einmal mit den eingefügten Dummydaten abzugleichen und willkürliche Abfragen durchzuführen.
- Wenn auch dies problemlos funktioniert ist die Datenbank einsatzbereit und kann für die App verwendet werden.
- Die Tabellen können dann, bevor reale Daten eingefügt werden, entweder manuell aufgeräumt werden oder einfach durch das ausführen der ersten beiden Schritte aus der Implementierungsanleitung neu initialisiert werden.

Befehle zur Erstellung

```

1 • START TRANSACTION;
2
3 -- Erstellung der Tabelle "Admin"
4 • CREATE TABLE Admin
5 (
6     AdminID          INT NOT NULL UNIQUE PRIMARY KEY,
7     AdminProcessID   INT NOT NULL,
8     Name              Varchar (50) NOT NULL,
9     Surname           Varchar (50) NOT NULL,
10    Mail              Varchar (50) NOT NULL,
11    Phone             BIGINT,
12    Salutation        Varchar (15) NOT NULL,
13    Title             Varchar (15) NOT NULL
14 );
15
16 -- Erstellung der Tabelle "Process"
17 • CREATE TABLE Process
18 (
19     ProcessID         INT NOT NULL UNIQUE PRIMARY KEY,
20     ProcessDate       TIMESTAMP NOT NULL,
21     Borrower          INT NOT NULL,
22     Lender            INT NOT NULL,
23     ProcessBookID     INT,
24     Location           INT,
25     TimeOfLoan        DATETIME,
26     TimeOfReturn       DATETIME,
27     Status             VARCHAR (50),
28     ShippingID        INT
29 );
30
31 -- Erstellung der Tabelle "Shipping"
32 • CREATE TABLE Shipping
33 (
34     ShippingID        INT NOT NULL PRIMARY KEY,
35     ShipProcessID     INT NOT NULL,
36     Shippingcosts      INT,
37     ShipmentNumber     INT,
38     ParcelService      varchar(50)
39 );

```



```

41     -- Erstellung der Tabelle "Borrower"
42 • CREATE TABLE Borrower
43 (
44     BorrowerUserID     INT NOT NULL PRIMARY KEY,
45     BorrowerProcessID  INT NOT NULL,
46     BorrowerID          INT
47 );
48
49     -- Erstellung der Tabelle "Lender"
50 • CREATE TABLE Lender
51 (
52     LenderUserID       INT NOT NULL PRIMARY KEY,
53     LenderProcessID    INT NOT NULL,
54     LenderID            INT
55 );
56
57     -- Erstellung der Tabelle "User"
58 • CREATE TABLE User
59 (
60     UserID             INT NOT NULL UNIQUE PRIMARY KEY,
61     Name               Varchar (50) NOT NULL,
62     Surname            Varchar (50) NOT NULL,
63     Mail                Varchar (50) NOT NULL,
64     Phone              BIGINT,
65     Salutation          Varchar (15) NOT NULL,
66     Title               Varchar (15)
67 );

```



```

69     -- Erstellung der Tabelle "Address"
70 • CREATE TABLE Address
71 (
72     AddressID          INT NOT NULL PRIMARY KEY,
73     Line1               VARCHAR(100),
74     Line2               VARCHAR(100),
75     Number              INT,
76     Postcode            INT,
77     City                 VARCHAR(50),
78     Country              VARCHAR(50)
79 );
80
81     -- Erstellung der Tabelle "User_Address"
82 • CREATE TABLE User_Address
83 (
84     UserAddressID       INT NOT NULL PRIMARY KEY,
85     AddressID           INT NOT NULL,
86     AddressUserID        INT NOT NULL
87 );
88
89     -- Erstellung der Tabelle "AdminMessages"
90 • CREATE TABLE AdminMessages
91 (
92     MessageID          INT NOT NULL PRIMARY KEY,
93     MessageUserID       INT NOT NULL,
94     Message              VARCHAR(300),
95     MessageCategory      VARCHAR(50)
96 );
97
98     -- Erstellung der Tabelle "Category"
99 • CREATE TABLE Category
100 (
101    CategoryID          INT NOT NULL PRIMARY KEY,
102    CategoryName         VARCHAR(50),
103    CategoryDescription  VARCHAR(50)
104 );

```



```

108    -- Erstellung der Tabelle "Books"
109 • CREATE TABLE Books
110 (
111     BookID             INT Unique NOT NULL PRIMARY KEY,
112     BookUserID          INT NOT NULL,
113     ISBN                BIGINT NOT NULL,
114     BookTitle            VARCHAR(50),
115     Author               VARCHAR(50),
116     Publisher            VARCHAR(50),
117     GenreID              INT,
118     Year                  Date,
119     LanguageID          INT,
120     UserID                INT,
121     TimeslotID           INT,
122     StateID              INT,
123     Availability          BOOLEAN
124 );
125
126     -- Erstellung der Tabelle "Genre"
127 • CREATE TABLE Genre
128 (
129     GenreID             INT NOT NULL PRIMARY KEY,
130     Genre                VARCHAR(50),
131     GenreDescription      VARCHAR(200)
132 );
133
134     -- Erstellung der Tabelle "Language"
135 • CREATE TABLE Language
136 (
137     LanguageID          INT NOT NULL PRIMARY KEY,
138     Language              VARCHAR(50)
139 );

```

Befehle zur Erstellung

```

141 -- Erstellung der Tabelle "Timeslot"
142 • CREATE TABLE Timeslot
143 (
144     TimeslotID      INT NOT NULL PRIMARY KEY,
145     SlotBookID      INT,
146     Availability    BOOLEAN,
147     Period          TIME
148 );
149
150 -- Erstellung der Tabelle "State"
151 • CREATE TABLE State
152 (
153     StateID        INT NOT NULL PRIMARY KEY,
154     StateBookID    INT,
155     State          VARCHAR(50)
156 );
157
158 -- Erstellung der Tabelle "Rating"
159 • CREATE TABLE Rating
160 (
161     RatingID       INT NOT NULL PRIMARY KEY,
162     RatingBookID   INT,
163     RatingUserID   INT,
164     Rating          VARCHAR(300),
165     Stars           INT CHECK (Stars >= 0 AND Stars <= 5)
166 );
167
168 -- Hinzufügen von Fremdschlüssen
169 • ALTER TABLE Admin
170     ADD CONSTRAINT AdminProcessID
171         FOREIGN KEY (AdminProcessID)
172             REFERENCES Process(ProcessID);
173
174 -- Hinzufügen von Fremdschlüssen
175 • ALTER TABLE Process
176     ADD CONSTRAINT Borrower
177         FOREIGN KEY (Borrower)
178             REFERENCES Borrower(BorrowerUserID),
179     ADD CONSTRAINT Lender
180         FOREIGN KEY (Lender)
181             REFERENCES Lender(LenderUserID),
182     ADD CONSTRAINT ProcessBookID
183         FOREIGN KEY (ProcessBookID)
184             REFERENCES Books(BookID),
185     ADD CONSTRAINT Location
186         FOREIGN KEY (Location)
187             REFERENCES Address(AddressID),
188     ADD CONSTRAINT ShippingID
189         FOREIGN KEY (ShippingID)
190             REFERENCES Shipping(ShippingID);
191
192 -- Hinzufügen von Fremdschlüssen
193 • ALTER TABLE Shipping
194     ADD CONSTRAINT ShipProcessID
195         FOREIGN KEY (ShipProcessID)
196             REFERENCES Process(ProcessID);
197
198 -- Hinzufügen von Fremdschlüssen
199 • ALTER TABLE Borrower
200     ADD CONSTRAINT BorrowerProcessID
201         FOREIGN KEY (BorrowerProcessID)
202             REFERENCES Process(ProcessID),
203     ADD CONSTRAINT BorrowerID
204         FOREIGN KEY (BorrowerID)
205             REFERENCES Process(Borrower);

```

Von: Tobias

```

168 -- Hinzufügen von Fremdschlüssen
169 • ALTER TABLE Admin
170     ADD CONSTRAINT AdminProcessID
171         FOREIGN KEY (AdminProcessID)
172             REFERENCES Process(ProcessID);
173
174 -- Hinzufügen von Fremdschlüssen
175 • ALTER TABLE Process
176     ADD CONSTRAINT Borrower
177         FOREIGN KEY (Borrower)
178             REFERENCES Borrower(BorrowerUserID),
179     ADD CONSTRAINT Lender
180         FOREIGN KEY (Lender)
181             REFERENCES Lender(LenderUserID),
182     ADD CONSTRAINT ProcessBookID
183         FOREIGN KEY (ProcessBookID)
184             REFERENCES Books(BookID),
185     ADD CONSTRAINT Location
186         FOREIGN KEY (Location)
187             REFERENCES Address(AddressID),
188     ADD CONSTRAINT ShippingID
189         FOREIGN KEY (ShippingID)
190             REFERENCES Shipping(ShippingID);
191
192 -- Hinzufügen von Fremdschlüssen
193 • ALTER TABLE Shipping
194     ADD CONSTRAINT ShipProcessID
195         FOREIGN KEY (ShipProcessID)
196             REFERENCES Process(ProcessID);
197
198 -- Hinzufügen von Fremdschlüssen
199 • ALTER TABLE Borrower
200     ADD CONSTRAINT BorrowerProcessID
201         FOREIGN KEY (BorrowerProcessID)
202             REFERENCES Process(ProcessID),
203     ADD CONSTRAINT BorrowerID
204         FOREIGN KEY (BorrowerID)
205             REFERENCES Process(Borrower);

```

```

207 -- Hinzufügen von Fremdschlüssen
208 • ALTER TABLE Lender
209     ADD CONSTRAINT LenderProcessID
210         FOREIGN KEY (LenderProcessID)
211             REFERENCES Process(ProcessID),
212     ADD CONSTRAINT LenderID
213         FOREIGN KEY (LenderID)
214             REFERENCES Process(Lender);
215
216 -- Hinzufügen von Fremdschlüssen
217 • ALTER TABLE User_Address
218     ADD CONSTRAINT AddressID
219         FOREIGN KEY (AddressID)
220             REFERENCES Address(AddressID),
221     ADD CONSTRAINT AddressUserID
222         FOREIGN KEY (AddressUserID)
223             REFERENCES User(UserID);
224
225 -- Hinzufügen von Fremdschlüssen
226 • ALTER TABLE AdminMessages
227     ADD CONSTRAINT MessageUserID
228         FOREIGN KEY (MessageUserID)
229             REFERENCES User(UserID);

```

```

231 -- Hinzufügen von Fremdschlüssen
232 • ALTER TABLE Books
233     ADD CONSTRAINT GenreID
234         FOREIGN KEY (GenreID)
235             REFERENCES Genre(GenreID),
236     ADD CONSTRAINT LanguageID
237         FOREIGN KEY (LanguageID)
238             REFERENCES Language(LanguageID),
239     ADD CONSTRAINT UserID
240         FOREIGN KEY (UserID)
241             REFERENCES User(UserID),
242     ADD CONSTRAINT TimeslotID
243         FOREIGN KEY (TimeslotID)
244             REFERENCES Timeslot(TimeslotID),
245     ADD CONSTRAINT StateID
246         FOREIGN KEY (StateID)
247             REFERENCES State(StateID),
248     ADD CONSTRAINT BookUserID
249         FOREIGN KEY (BookUserID)
250             REFERENCES User(UserID);
251
252 -- Hinzufügen von Fremdschlüssen
253 • ALTER TABLE Timeslot
254     ADD CONSTRAINT SlotBookID
255         FOREIGN KEY (SlotBookID)
256             REFERENCES Books(BookID);
257
258 -- Hinzufügen von Fremdschlüssen
259 • ALTER TABLE State
260     ADD CONSTRAINT StateBookID
261         FOREIGN KEY (StateBookID)
262             REFERENCES Books(BookID);

```

Befehle zur Erstellung

```
258      -- Hinzufügen von Fremdschlüsseln
259 • ALTER TABLE State
260     ADD CONSTRAINT StateBookID
261       FOREIGN KEY (StateBookID)
262         REFERENCES Books(BookID);
263
264      -- Hinzufügen von Fremdschlüsseln
265 • ALTER TABLE Rating
266     ADD CONSTRAINT RatingBookID
267       FOREIGN KEY (RatingBookID)
268         REFERENCES Books(BookID),
269     ADD CONSTRAINT RatingUserID
270       FOREIGN KEY (RatingUserID)
271         REFERENCES User(UserID);
```

Befehle zum Einfügen der Testdaten

```
275 -- Fremdschlüsselcheck deaktivieren um die gegenseitigen Referenzen zu ermöglichen
276 • SET FOREIGN_KEY_CHECKS = 0;
277
278 -- Dummy-Daten für Tabelle "Admin"
279 • INSERT INTO Admin (AdminID, AdminProcessID, Name, Surname, Mail, Phone, Salutation, Title)
280 VALUES
281     (1, 101, 'John', 'Doe', 'john.doe@example.com', 1234567890, 'Mr.', 'Dr'),
282     (2, 102, 'Jane', 'Smith', 'jane.smith@example.com', 9876543210, 'Ms.', 'Prof Dr'),
283     (3, 103, 'Michael', 'Johnson', 'michael.johnson@example.com', 5551234567, 'Mr.', ''),
284     (4, 104, 'Emily', 'Brown', 'emily.brown@example.com', 1234567890, 'Ms.', ''),
285     (5, 105, 'Daniel', 'Martinez', 'daniel.martinez@example.com', 9876543210, 'Mr.', ''),
286     (6, 106, 'Sophia', 'Lee', 'sophia.lee@example.com', 5551234567, 'Ms.', 'Dr'),
287     (7, 107, 'Ethan', 'Garcia', 'ethan.garcia@example.com', 1234567890, 'Mr.', 'Prof'),
288     (8, 108, 'Isabella', 'Lopez', 'isabella.lopez@example.com', 9876543210, 'Ms.', ''),
289     (9, 109, 'Alexander', 'Gonzalez', 'alexander.gonzalez@example.com', 5551234567, 'Mr.', ''),
290     (10, 110, 'Mia', 'Harris', 'mia.harris@example.com', 1234567890, 'Ms.', 'Dr'),
291     (11, 111, 'William', 'Clark', 'william.clark@example.com', 9876543210, 'Mr.', 'Dr'),
292     (12, 112, 'Ava', 'Young', 'ava.young@example.com', 5551234567, 'Ms.', ''),
293     (13, 113, 'James', 'Lewis', 'james.lewis@example.com', 1234567890, 'Mr.', ''),
294     (14, 114, 'Charlotte', 'Martin', 'charlotte.martin@example.com', 9876543210, 'Ms.', ''),
295     (15, 115, 'Benjamin', 'Walker', 'benjamin.walker@example.com', 5551234567, 'Mr.', 'Dr');

297 -- Dummy-Daten für Tabelle "Process"
298 • INSERT INTO Process (ProcessID, ProcessDate, Borrower, Lender, ProcessBookID, Location, TimeOfLoan, TimeOfReturn, Status, ShippingID)
299 VALUES
300     (101, '2024-01-01', 1, 2, 201, 1, '2024-01-01 10:00:00', '2024-01-05 15:00:00', 'Completed', 301),
301     (102, '2024-01-02', 3, 1, 202, 2, '2024-01-02 11:00:00', '2024-01-06 16:00:00', 'In Progress', 302),
302     (103, '2024-01-03', 2, 3, 203, 3, '2024-01-03 12:00:00', '2024-01-07 17:00:00', 'Pending', 303),
303     (104, '2024-01-04', 4, 5, 204, 4, '2024-01-04 13:00:00', '2024-01-08 18:00:00', 'Completed', 304),
304     (105, '2024-01-05', 6, 7, 205, 5, '2024-01-05 14:00:00', '2024-01-09 19:00:00', 'In Progress', 305),
305     (106, '2024-01-06', 8, 9, 206, 6, '2024-01-06 15:00:00', '2024-01-10 20:00:00', 'Pending', 306),
306     (107, '2024-01-07', 10, 11, 207, 7, '2024-01-07 16:00:00', '2024-01-11 21:00:00', 'Completed', 307),
307     (108, '2024-01-08', 12, 13, 208, 8, '2024-01-08 17:00:00', '2024-01-12 22:00:00', 'In Progress', 308),
308     (109, '2024-01-09', 14, 15, 209, 9, '2024-01-09 18:00:00', '2024-01-13 23:00:00', 'Pending', 309),
309     (110, '2024-01-10', 16, 17, 210, 10, '2024-01-10 19:00:00', '2024-01-14 08:00:00', 'Completed', 310),
310     (111, '2024-01-11', 18, 19, 211, 11, '2024-01-11 20:00:00', '2024-01-15 09:00:00', 'In Progress', 311),
311     (112, '2024-01-12', 20, 21, 212, 12, '2024-01-12 21:00:00', '2024-01-16 10:00:00', 'Pending', 312),
312     (113, '2024-01-13', 22, 23, 213, 13, '2024-01-13 22:00:00', '2024-01-17 11:00:00', 'Completed', 313),
313     (114, '2024-01-14', 24, 25, 214, 14, '2024-01-14 23:00:00', '2024-01-18 12:00:00', 'In Progress', 314),
314     (115, '2024-01-15', 26, 27, 215, 15, '2024-01-15 08:00:00', '2024-01-19 13:00:00', 'Pending', 315);

316 -- Dummy-Daten für Tabelle "Shipping"
317 • INSERT INTO Shipping (ShippingID, ShipProcessID, Shippingcosts, ShipmentNumber, ParcelService)
318 VALUES
319     (301, 101, 10, 123456, 'UPS'),
320     (302, 102, 8, 987654, 'FedEx'),
321     (303, 103, 12, 456789, 'DHL'),
322     (304, 104, 15, 987654, 'DHL'),
323     (305, 105, 20, 654321, 'UPS'),
324     (306, 106, 25, 456789, 'FedEx'),
325     (307, 107, 30, 123456, 'DHL'),
326     (308, 108, 35, 135792, 'UPS'),
327     (309, 109, 40, 246810, 'FedEx'),
328     (310, 110, 45, 369258, 'DHL'),
329     (311, 111, 50, 987123, 'UPS'),
330     (312, 112, 55, 147258, 'FedEx'),
331     (313, 113, 60, 369147, 'DHL'),
332     (314, 114, 65, 258369, 'UPS'),
333     (315, 115, 70, 123789, 'FedEx');
```

Befehle zum Einfügen der Testdaten

```
335 -- Dummy-Daten für Tabelle "Borrower"
336 • INSERT INTO Borrower (BorrowerUserID, BorrowerProcessID, BorrowerID)
337 VALUES
338     (1, 101, 1001),
339     (2, 102, 1002),
340     (3, 103, 1003),
341     (4, 104, 1004),
342     (5, 105, 1005),
343     (6, 106, 1006),
344     (7, 107, 1007),
345     (8, 108, 1008),
346     (9, 109, 1009),
347     (10, 110, 1010),
348     (11, 111, 1011),
349     (12, 112, 1012),
350     (13, 113, 1013),
351     (14, 114, 1014),
352     (15, 115, 1015);
353
354 -- Dummy-Daten für Tabelle "Lender"
355 • INSERT INTO Lender (LenderUserID, LenderProcessID, LenderID)
356 VALUES
357     (1, 101, 2001),
358     (2, 102, 2002),
359     (3, 103, 2003),
360     (16, 114, 2004),
361     (17, 115, 2005),
362     (18, 116, 2006),
363     (19, 117, 2007),
364     (20, 118, 2008),
365     (21, 119, 2009),
366     (22, 120, 2010),
367     (23, 121, 2011),
368     (24, 122, 2012),
369     (25, 123, 2013),
370     (26, 124, 2014),
371     (27, 125, 2015);
```

```
371     -- Dummy-Daten für Tabelle "User"
372 • INSERT INTO User (UserID, Name, Surname, Mail, Phone, Salutation, Title)
373 VALUES
374     (1001, 'Alice', 'Johnson', 'alice.johnson@example.com', 5559876543, 'Ms.', 'Dr'),
375     (1002, 'Bob', 'Williams', 'bob.williams@example.com', 8885551234, 'Mr.', ''),
376     (1003, 'Carol', 'Brown', 'carol.brown@example.com', 3334445678, 'Ms.', ''),
377     (1004, 'Olivia', 'Taylor', 'olivia.taylor@example.com', 5559876543, 'Ms.', ''),
378     (1005, 'Noah', 'Moore', 'noah.moore@example.com', 8885551234, 'Mr.', 'Prof Dr'),
379     (1006, 'Emma', 'Miller', 'emma.miller@example.com', 3334445678, 'Ms.', ''),
380     (1007, 'Liam', 'Jackson', 'liam.jackson@example.com', 5559876543, 'Mr.', ''),
381     (1008, 'Avery', 'White', 'avery.white@example.com', 8885551234, 'Ms.', 'Dr'),
382     (1009, 'Lucas', 'Hill', 'lucas.hill@example.com', 3334445678, 'Mr.', ''),
383     (1010, 'Evelyn', 'Moore', 'evelyn.moore@example.com', 5559876543, 'Ms.', ''),
384     (1011, 'Mason', 'Allen', 'mason.allen@example.com', 8885551234, 'Mr.', ''),
385     (1012, 'Harper', 'Carter', 'harper.carter@example.com', 3334445678, 'Ms.', ''),
386     (1013, 'Elijah', 'Wood', 'elijah.wood@example.com', 5559876543, 'Mr.', 'Dr'),
387     (1014, 'Amelia', 'Hall', 'amelia.hall@example.com', 8885551234, 'Ms.', ''),
388     (1015, 'Oliver', 'Adams', 'oliver.adams@example.com', 3334445678, 'Mr.', '');
389
390     -- Dummy-Daten für Tabelle "Address"
391 • INSERT INTO Address (AddressID, Line1, Line2, Number, Postcode, City, Country, Latitude, Longitude)
392 VALUES
393     (1, '123 Main St', NULL, 1, 12345, 'City1', 'Country1'),
394     (2, '456 Elm St', NULL, 2, 23456, 'City2', 'Country2'),
395     (3, '789 Oak St', NULL, 3, 34567, 'City3', 'Country3'),
396     (4, '321 Pine St', NULL, 4, 45678, 'City4', 'Country4'),
397     (5, '654 Cedar St', NULL, 5, 56789, 'City5', 'Country5'),
398     (6, '987 Maple St', NULL, 6, 67890, 'City6', 'Country6'),
399     (7, '135 Elm St', NULL, 7, 78901, 'City7', 'Country7'),
400     (8, '246 Oak St', NULL, 8, 89012, 'City8', 'Country8'),
401     (9, '369 Walnut St', NULL, 9, 90123, 'City9', 'Country9'),
402     (10, '147 Birch St', NULL, 10, 01234, 'City10', 'Country10'),
403     (11, '258 Ash St', NULL, 11, 12345, 'City11', 'Country11'),
404     (12, '369 Pine St', NULL, 12, 23456, 'City12', 'Country12'),
405     (13, '456 Cedar St', NULL, 13, 34567, 'City13', 'Country13'),
406     (14, '789 Maple St', NULL, 14, 45678, 'City14', 'Country14'),
407     (15, '321 Elm St', NULL, 15, 56789, 'City15', 'Country15');
```

Befehle zum Einfügen der Testdaten

```
411 -- Dummy-Daten für Tabelle "UserAddressID"
412 • INSERT INTO User_Address (UserAddressID, AddressID, AddressUserID)
413 VALUES
414     (1, 1, 1001),
415     (2, 2, 1002),
416     (3, 3, 1003),
417     (4, 4, 1004),
418     (5, 5, 1005),
419     (6, 6, 1006),
420     (7, 7, 1007),
421     (8, 8, 1008),
422     (9, 9, 1009),
423     (10, 10, 1010),
424     (11, 11, 1011),
425     (12, 12, 1012),
426     (13, 13, 1013),
427     (14, 14, 1014),
428     (15, 15, 1015);
429
430 -- Dummy-Daten für Tabelle "AdminMessages"
431 • INSERT INTO AdminMessages (MessageID, MessageUserID, Message, MessageCategory)
432 VALUES
433     (1, 1, 'Message 1', 'Category1'),
434     (2, 2, 'Message 2', 'Category2'),
435     (3, 3, 'Message 3', 'Category3'),
436     (4, 4, 'Message 4', 'Category4'),
437     (5, 5, 'Message 5', 'Category5'),
438     (6, 6, 'Message 6', 'Category6'),
439     (7, 7, 'Message 7', 'Category7'),
440     (8, 8, 'Message 8', 'Category8'),
441     (9, 9, 'Message 9', 'Category9'),
442     (10, 10, 'Message 10', 'Category10'),
443     (11, 11, 'Message 11', 'Category11'),
444     (12, 12, 'Message 12', 'Category12'),
445     (13, 13, 'Message 13', 'Category13'),
446     (14, 14, 'Message 14', 'Category14'),
447     (15, 15, 'Message 15', 'Category15');
448
449 -- Dummy-Daten für Tabelle "Category"
450 • INSERT INTO Category (CategoryID, CategoryName, CategoryDescription)
451 VALUES
452     (1, 'CategoryName1', 'Description1'),
453     (2, 'CategoryName2', 'Description2'),
454     (3, 'CategoryName3', 'Description3'),
455     (4, 'CategoryName4', 'Description4'),
456     (5, 'CategoryName5', 'Description5'),
457     (6, 'CategoryName6', 'Description6'),
458     (7, 'CategoryName7', 'Description7'),
459     (8, 'CategoryName8', 'Description8'),
460     (9, 'CategoryName9', 'Description9'),
461     (10, 'CategoryName10', 'Description10'),
462     (11, 'CategoryName11', 'Description11'),
463     (12, 'CategoryName12', 'Description12'),
464     (13, 'CategoryName13', 'Description13'),
465     (14, 'CategoryName14', 'Description14'),
466     (15, 'CategoryName15', 'Description15');
467
468 -- Dummy-Daten für Tabelle "Books"
469 • INSERT INTO Books (BookID, BookUserID, ISBN, BookTitle, Author, Publisher, GenreID, Year, LanguageID, UserID, TimeslotID, StateID, Availability)
470 VALUES
471     (201, 1001, 9780451524935, '1984', 'George Orwell', 'Houghton Mifflin Harcourt', 1, '1949-06-08', 1, 1001, 1, 1, true),
472     (202, 1002, 9780679783268, 'To Kill a Mockingbird', 'Harper Lee', 'J.B. Lippincott & Co.', 2, '1960-07-11', 2, 1002, 2, 2, true),
473     (203, 1003, 9780743273565, 'The Great Gatsby', 'F. Scott Fitzgerald', 'Charles Scribner''s Sons', 3, '1925-04-10', 3, 1003, 3, 3, false),
474     (204, 1004, 9780316769488, 'The Catcher in the Rye', 'J.D. Salinger', 'Little, Brown and Company', 4, '1951-07-16', 4, 1004, 4, 4, true),
475     (205, 1005, 9780747532743, 'Harry Potter and the Philosopher''s Stone', 'J.K. Rowling', 'Bloomsbury', 5, '1997-06-26', 5, 1005, 5, 5, false),
476     (206, 1006, 9780061120084, 'To Kill a Mockingbird', 'Harper Lee', 'Harper Perennial Modern Classics', 6, '2006-05-23', 6, 1006, 6, 6, true),
477     (207, 1007, 9780307277671, 'The Road', 'Cormac McCarthy', 'Alfred A. Knopf', 7, '2006-09-26', 7, 1007, 7, 7, true),
478     (208, 1008, 9780439139595, 'Harry Potter and the Goblet of Fire', 'J.K. Rowling', 'Scholastic', 8, '2000-07-08', 8, 1008, 8, 8, false),
479     (209, 1009, 9780316037924, 'Twilight', 'Stephenie Meyer', 'Little, Brown and Company', 9, '2005-10-05', 9, 1009, 9, 9, true),
480     (210, 1010, 9780060254926, 'Where the Wild Things Are', 'Maurice Sendak', 'HarperCollins', 10, '1963-04-09', 10, 1010, 10, 10, true),
481     (211, 1011, 9780140283334, 'Animal Farm', 'George Orwell', 'Penguin Books', 11, '1945-08-17', 11, 1011, 11, 11, false),
482     (212, 1012, 9780439554930, 'Harry Potter and the Order of the Phoenix', 'J.K. Rowling', 'Scholastic', 12, '2003-06-21', 12, 1012, 12, 12, true),
483     (213, 1013, 9780345339683, 'The Hobbit', 'J.R.R. Tolkien', 'George Allen & Unwin', 13, '1937-09-21', 13, 1013, 13, 13, false),
484     (214, 1014, 9780143125427, 'Pride and Prejudice', 'Jane Austen', 'T. Egerton', 14, '1813-01-28', 14, 1014, 14, 14, true),
485     (215, 1015, 9780439139601, 'Harry Potter and the Prisoner of Azkaban', 'J.K. Rowling', 'Scholastic', 15, '1999-07-08', 15, 1015, 15, 15, true);
```

Befehle zum Einfügen der Testdaten

```
487 -- Dummy-Daten für Tabelle "Genre"
488 • INSERT INTO Genre (GenreID, Genre, GenreDescription)
489 VALUES
490 (1, 'Fiction', 'Narrative literary works whose content is produced by the imagination and is not necessarily based on fact.'),
491 (2, 'Non-Fiction', 'Prose writing that is informative or factual rather than fictional.'),
492 (3, 'Science Fiction', 'Genre of speculative fiction that typically deals with imaginative and futuristic concepts.'),
493 (4, 'Fantasy', 'Genre of speculative fiction set in a fictional universe, often inspired by real world myth and folklore.'),
494 (5, 'Mystery', 'Genre of fiction that deals with the solution of a crime or the unraveling of secrets.'),
495 (6, 'Biography', 'Detailed description of a person\'s life.'),
496 (7, 'History', 'Study of past events, particularly in human affairs.'),
497 (8, 'Romance', 'Genre of fiction that involves a central love story and an emotionally satisfying and optimistic ending.'),
498 (9, 'Horror', 'Genre of fiction which is intended to, or has the capacity to frighten, scare, or disgust.'),
499 (10, 'Self-Help', 'Genre of books written with the intention to instruct its readers on solving personal problems.'),
500 (11, 'Health', 'Books related to health, wellness, and medical topics.'),
501 (12, 'Travel', 'Books about travel, including travel guides, travelogues, and narratives.'),
502 (13, 'Cookbooks', 'Books containing recipes and other information about the preparation and cooking of food.'),
503 (14, 'Children\'s', 'Books written for children, typically featuring themes and language appropriate for young readers.'),
504 (15, 'Poetry', 'Genre of literature that uses aesthetic and rhythmic qualities of language to evoke meanings.'),
505 (16, 'Graphic Novels', 'Book-length works that convey a story through comic strip format.'),
506 (17, 'Education', 'Books related to teaching, learning, and educational topics.'),
507 (18, 'Science', 'Books that explore topics related to various scientific fields and concepts.'),
508 (19, 'Philosophy', 'Books that explore fundamental questions about existence, knowledge, values, and reason.'),
509 (20, 'Religion', 'Books that explore religious beliefs, practices, and history.'),
510 (21, 'Art', 'Books related to visual and performing arts.'),
511 (22, 'Business', 'Books that cover topics related to business, economics, and management.'),
512 (23, 'Technology', 'Books that cover topics related to technological innovations and advancements.'),
513 (24, 'Politics', 'Books that explore political theories, practices, and history.'),
514 (25, 'Law', 'Books related to legal principles, systems, and cases.'),
515 (26, 'Adventure', 'Books that involve exciting journeys and experiences.'),
516 (27, 'Drama', 'Books that focus on realistic characters and emotional themes.'),
517 (28, 'Humor', 'Books intended to be humorous and entertaining.'),
518 (29, 'Thriller', 'Genre of fiction characterized by excitement, suspense, and high stakes.'),
519 (30, 'Classics', 'Books that have stood the test of time and are considered to be of high literary quality.');
```

```
521 -- Dummy-Daten für Tabelle "Language"
522 • INSERT INTO Language (LanguageID, Language)
523 VALUES
524 (1, 'English'),
525 (2, 'German'),
526 (3, 'Spanish'),
527 (4, 'French'),
528 (5, 'Italian'),
529 (6, 'Chinese'),
530 (7, 'Japanese'),
531 (8, 'Russian'),
532 (9, 'Portuguese'),
533 (10, 'Arabic'),
534 (11, 'Korean'),
535 (12, 'Dutch'),
536 (13, 'Swedish'),
537 (14, 'Danish'),
538 (15, 'Finnish');
539
540 -- Dummy-Daten für Tabelle "Timeslot"
541 • INSERT INTO Timeslot (TimeslotID, SlotBookID, Availability, Period)
542 VALUES
543 (1, 201, TRUE, '08:00:00'),
544 (2, 202, FALSE, '12:00:00'),
545 (3, 203, TRUE, '16:00:00'),
546 (4, 204, TRUE, '08:00:00'),
547 (5, 205, FALSE, '12:00:00'),
548 (6, 206, TRUE, '16:00:00'),
549 (7, 207, FALSE, '08:00:00'),
550 (8, 208, TRUE, '12:00:00'),
551 (9, 209, FALSE, '16:00:00'),
552 (10, 210, TRUE, '08:00:00'),
553 (11, 211, FALSE, '12:00:00'),
554 (12, 212, TRUE, '16:00:00'),
555 (13, 213, FALSE, '08:00:00'),
556 (14, 214, TRUE, '12:00:00'),
557 (15, 215, FALSE, '16:00:00');
```

Befehle zum Einfügen der Testdaten

```
559    -- Dummy-Daten für Tabelle "State"
560 • INSERT INTO State (StateID, StateBookID, State)
561     VALUES
562        (1, 201, 'State1'),
563        (2, 202, 'State2'),
564        (3, 203, 'State3'),
565        (4, 204, 'State4'),
566        (5, 205, 'State5'),
567        (6, 206, 'State6'),
568        (7, 207, 'State7'),
569        (8, 208, 'State8'),
570        (9, 209, 'State9'),
571        (10, 210, 'State10'),
572        (11, 211, 'State11'),
573        (12, 212, 'State12'),
574        (13, 213, 'State13'),
575        (14, 214, 'State14'),
576        (15, 215, 'State15');
577
578    -- Dummy-Daten für Tabelle "Rating"
579 • INSERT INTO Rating (RatingID, RatingBookID, RatingUserID, Rating, Stars)
580     VALUES
581        (1, 201, 1001, 'Rating1', 4),
582        (2, 202, 1002, 'Rating2', 5),
583        (3, 203, 1003, 'Rating3', 3),
584        (4, 204, 1004, 'Rating4', 3),
585        (5, 205, 1005, 'Rating5', 4),
586        (6, 206, 1006, 'Rating6', 5),
587        (7, 207, 1007, 'Rating7', 4),
588        (8, 208, 1008, 'Rating8', 3),
589        (9, 209, 1009, 'Rating9', 5),
590        (10, 210, 1010, 'Rating10', 4),
591        (11, 211, 1011, 'Rating11', 3),
592        (12, 212, 1012, 'Rating12', 5),
593        (13, 213, 1013, 'Rating13', 4),
594        (14, 214, 1014, 'Rating14', 3),
595        (15, 215, 1015, 'Rating15', 5);
```

Von: Tobias Bönker (IU14099140)

```
597    -- Weitere Dummy-Daten für Tabelle "Process"
598 • INSERT INTO Process (ProcessID, ProcessDate, Borrower, Lender, ProcessBookID, Location, TimeOfLoan, TimeOfReturn, Status, ShippingID)
599     VALUES
600        (116, '2024-01-20', 1, 2, 201, 6, '2024-01-20 10:00:00', '2024-01-25 15:00:00', 'Completed', 301),
601        (117, '2024-01-21', 3, 4, 202, 7, '2024-01-21 11:00:00', '2024-01-26 16:00:00', 'In Progress', 302),
602        (118, '2024-01-22', 5, 6, 203, 8, '2024-01-22 12:00:00', '2024-01-27 17:00:00', 'Pending', 303),
603        (119, '2024-01-23', 7, 8, 204, 9, '2024-01-23 13:00:00', '2024-01-28 18:00:00', 'Completed', 304),
604        (120, '2024-01-24', 9, 10, 205, 10, '2024-01-24 14:00:00', '2024-01-29 19:00:00', 'In Progress', 305),
605        (121, '2024-01-25', 11, 12, 206, 11, '2024-01-25 15:00:00', '2024-01-30 20:00:00', 'Pending', 306),
606        (122, '2024-01-26', 13, 14, 207, 12, '2024-01-26 16:00:00', '2024-01-31 21:00:00', 'Completed', 307),
607        (123, '2024-01-27', 15, 16, 208, 13, '2024-01-27 17:00:00', '2024-02-01 22:00:00', 'In Progress', 308),
608        (124, '2024-01-28', 17, 18, 209, 14, '2024-01-28 18:00:00', '2024-02-02 23:00:00', 'Pending', 309),
609        (125, '2024-01-29', 19, 20, 210, 15, '2024-01-29 19:00:00', '2024-02-03 08:00:00', 'Completed', 310),
610        (126, '2024-01-30', 1, 2, 201, 6, '2024-01-30 10:00:00', '2024-02-04 15:00:00', 'Completed', 301),
611        (127, '2024-01-31', 3, 4, 202, 7, '2024-01-31 11:00:00', '2024-02-05 16:00:00', 'In Progress', 302),
612        (128, '2024-02-01', 5, 6, 203, 8, '2024-02-01 12:00:00', '2024-02-06 17:00:00', 'Pending', 303),
613        (129, '2024-02-02', 7, 8, 204, 9, '2024-02-02 13:00:00', '2024-02-07 18:00:00', 'Completed', 304),
614        (130, '2024-02-03', 9, 10, 205, 10, '2024-02-03 14:00:00', '2024-02-08 19:00:00', 'In Progress', 305),
615        (131, '2024-02-04', 11, 12, 206, 11, '2024-02-04 15:00:00', '2024-02-09 20:00:00', 'Pending', 306),
616        (132, '2024-02-05', 13, 14, 207, 12, '2024-02-05 16:00:00', '2024-02-10 21:00:00', 'Completed', 307),
617        (133, '2024-02-06', 15, 16, 208, 13, '2024-02-06 17:00:00', '2024-02-11 22:00:00', 'In Progress', 308),
618        (134, '2024-02-07', 17, 18, 209, 14, '2024-02-07 18:00:00', '2024-02-12 23:00:00', 'Pending', 309),
619        (135, '2024-02-08', 19, 20, 210, 15, '2024-02-08 19:00:00', '2024-02-13 08:00:00', 'Completed', 310),
620        (136, '2024-02-09', 2, 1, 201, 16, '2024-02-09 10:00:00', '2024-02-14 15:00:00', 'Completed', 311),
621        (137, '2024-02-10', 4, 3, 202, 17, '2024-02-10 11:00:00', '2024-02-15 16:00:00', 'In Progress', 312),
622        (138, '2024-02-11', 6, 5, 203, 18, '2024-02-11 12:00:00', '2024-02-16 17:00:00', 'Pending', 313),
623        (139, '2024-02-12', 8, 7, 204, 19, '2024-02-12 13:00:00', '2024-02-17 18:00:00', 'Completed', 314),
624        (140, '2024-02-13', 10, 9, 205, 20, '2024-02-13 14:00:00', '2024-02-18 19:00:00', 'In Progress', 315),
625        (141, '2024-02-14', 12, 11, 206, 21, '2024-02-14 15:00:00', '2024-02-19 20:00:00', 'Pending', 315),
626        (142, '2024-02-15', 14, 13, 207, 22, '2024-02-15 16:00:00', '2024-02-20 21:00:00', 'Completed', 315),
627        (143, '2024-02-16', 16, 15, 208, 23, '2024-02-16 17:00:00', '2024-02-21 22:00:00', 'In Progress', 315),
628        (144, '2024-02-17', 18, 17, 209, 24, '2024-02-17 18:00:00', '2024-02-22 23:00:00', 'Pending', 313),
629        (145, '2024-02-18', 20, 19, 210, 25, '2024-02-18 19:00:00', '2024-02-23 08:00:00', 'Completed', 312),
630        (146, '2024-02-19', 1, 3, 201, 26, '2024-02-19 10:00:00', '2024-02-24 15:00:00', 'Completed', 311),
631        (147, '2024-02-20', 2, 4, 202, 27, '2024-02-20 11:00:00', '2024-02-25 16:00:00', 'In Progress', 303),
632        (148, '2024-02-21', 3, 5, 203, 28, '2024-02-21 12:00:00', '2024-02-26 17:00:00', 'Pending', 313),
633        (149, '2024-02-22', 4, 6, 204, 29, '2024-02-22 13:00:00', '2024-02-27 18:00:00', 'Completed', 304),
634        (150, '2024-02-23', 5, 7, 205, 30, '2024-02-23 14:00:00', '2024-02-28 19:00:00', 'In Progress', 305),
635        (151, '2024-02-24', 6, 8, 206, 31, '2024-02-24 15:00:00', '2024-02-29 20:00:00', 'Pending', 306),
636        (152, '2024-02-25', 7, 9, 207, 32, '2024-02-25 16:00:00', '2024-03-01 21:00:00', 'Completed', 307),
637        (153, '2024-02-26', 8, 10, 208, 33, '2024-02-26 17:00:00', '2024-03-02 22:00:00', 'In Progress', 308),
638        (154, '2024-02-27', 9, 11, 209, 34, '2024-02-27 18:00:00', '2024-03-03 23:00:00', 'Pending', 309),
639        (155, '2024-02-28', 10, 12, 210, 35, '2024-02-28 19:00:00', '2024-03-04 08:00:00', 'Completed', 301);
```

Befehle zum Einfügen der Testdaten

```
641      -- Fremdschlüsselcheck aktivieren um gegebenenfalls Fehler zu erkennen
642 •   SET FOREIGN_KEY_CHECKS = 1;
643
644      -- Ende Hinzufügen der Dummy-Daten
645
646 •   COMMIT;
```