Final Project (FP3)

CREATE TABLE books (

book\_guid VARCHAR2(40) NOT NULL,

book\_title VARCHAR2(255) NOT NULL,

author\_name VARCHAR2(255) NOT NULL,

book\_publisher VARCHAR2(100) NOT NULL,

publication\_date DATE NOT NULL,

publication\_year NUMBER(4) NOT NULL,

page\_count NUMBER(4) NOT NULL,

language VARCHAR2(50) NOT NULL,

number\_of\_copies NUMBER(4) DEFAULT 1,

call\_number VARCHAR2(50) NOT NULL,

doi VARCHAR2(255) NOT NULL,

book\_isbn VARCHAR2(14) NOT NULL,

CONSTRAINT books\_pk PRIMARY KEY (book\_guid)

);

ALTER TABLE books DROP COLUMN book\_publisher VARCHAR2(100);

ALTER TABLE books DROP COLUMN author\_name VARCHAR2(255);

INSERT INTO books (book\_guid, book\_title, author\_name, publication\_date, publication\_year, page\_count, language, number\_of\_copies, call\_number, doi, book\_isbn)

VALUES ('1', 'To Kill a Mockingbird', 'Harper Lee', '11-JUL-1960', 1960, 281, 'English', 3, '813.54 L477t 1999', '10.1086/646890', '978-006112004');

INSERT INTO books (book\_guid, book\_title, author\_name, publication\_date, publication\_year, page\_count, language, number\_of\_copies, call\_number, doi, book\_isbn)

VALUES ('2', 'The Catcher in the Rye', 'J.D. Salinger', '16-JUL-1951', 1951, 277, 'English', 2, '813.54 S163c 1991', '10.2307/3191897', '978-031676948');

INSERT INTO books (book\_guid, book\_title, author\_name, publication\_date, publication\_year, page\_count, language, number\_of\_copies, call\_number, doi, book\_isbn)

VALUES ('3', '1984', 'George Orwell', '8-JUN-1949', 1949, 328, 'English', 5, '823.912 O79n 2003', '10.2307/1779215', '978-045152495');

CREATE TABLE book\_authors (

book\_guid VARCHAR2(40) NOT NULL,

author\_guid VARCHAR2(36) NOT NULL,

CONSTRAINT fk\_book\_authors\_guid FOREIGN KEY (book\_guid) REFERENCES books (book\_guid),

CONSTRAINT fk\_author\_guid FOREIGN KEY (author\_guid) REFERENCES authors (author\_guid)

);

INSERT INTO book\_authors (book\_guid, author\_guid)

VALUES ('1', '1');

INSERT INTO book\_authors (book\_guid, author\_guid)

VALUES ('2', '2');

INSERT INTO book\_authors (book\_guid, author\_guid)

VALUES ('3', '3');

CREATE TABLE authors (

author\_guid VARCHAR2(36) NOT NULL PRIMARY KEY,

author\_name VARCHAR2(100) NOT NULL,

birth\_date DATE,

death\_date DATE,

birth\_country VARCHAR2(100)

CONSTRAINT authors\_pk PRIMARY KEY (author\_guid)

);

INSERT INTO authors (author\_guid, author\_name, birth\_date, death\_date, birth\_country)

VALUES ('1', 'Harper Lee', '28-APR-1926', '19-FEB-2016', 'United States');

INSERT INTO authors (author\_guid, author\_name, birth\_date, death\_date, birth\_country)

VALUES('2', 'J.D. Salinger', '01-JAN-1919', '27-JAN-2010', 'United States');

INSERT INTO authors (author\_guid, author\_name, birth\_date, death\_date, birth\_country)

VALUES('3', 'George Orwell', '25-JUN-1903', '21-JAN-1950', 'India');

CREATE TABLE book\_publishers (

publisher\_guid VARCHAR2(36) NOT NULL PRIMARY KEY,

book\_guid VARCHAR2(40) NOT NULL,

publisher\_name VARCHAR2(100) NOT NULL,

CONSTRAINT fk\_book\_guid

FOREIGN KEY (book\_guid)

REFERENCES books (book\_guid)

);

INSERT INTO book\_publishers (publisher\_guid, book\_guid, publisher\_name)

VALUES('1', '1', 'J. B. Lippincott');

INSERT INTO book\_publishers (publisher\_guid, book\_guid, publisher\_name)

VALUES('2', '2', 'Little, Brown and Company');

INSERT INTO book\_publishers (publisher\_guid, book\_guid, publisher\_name)

VALUES('3', '3', 'Secker');

CREATE TABLE library\_member (

member\_guid VARCHAR2(36) NOT NULL,

first\_name VARCHAR2(50) NOT NULL,

last\_name VARCHAR2(50) NOT NULL,

sign\_up\_date DATE NOT NULL,

last\_visit DATE,

email VARCHAR2(100),

address VARCHAR2(200),

phone\_number VARCHAR2(20),

CONSTRAINT library\_member\_pk PRIMARY KEY (member\_guid)

);

INSERT INTO library\_member (member\_guid, first\_name, last\_name, sign\_up\_date, last\_visit, email, address, phone\_number)

VALUES ('1', 'John', 'Smith', '01-JAN-2022', '28-MAR-2023', 'john.smith@example.com', '123 Main St, Anytown USA', '+1 (555) 555-1212');

INSERT INTO library\_member (member\_guid, first\_name, last\_name, sign\_up\_date, last\_visit, email, address, phone\_number)

VALUES ('2', 'Jane', 'Doe', '15-FEB-2022', '29-MAR-2023', 'jane.doe@example.com', '456 Elm St, Anytown USA', '+1 (555) 555-2323');

INSERT INTO library\_member (member\_guid, first\_name, last\_name, sign\_up\_date, last\_visit, email, address, phone\_number)

VALUES ('3', 'Bob', 'Johnson', '01-MAR-2022', '27-MAR-2023', 'bob.johnson@example.com', '789 Oak St, Anytown USA', '+1 (555) 555-3434');

CREATE TABLE member\_books (

book\_guid VARCHAR2(40) NOT NULL,

member\_guid VARCHAR2(36) NOT NULL,

checked\_in DATE,

checked\_out DATE NOT NULL,

due\_date DATE NOT NULL,

fine NUMBER(5,2),

CONSTRAINT member\_books\_pk PRIMARY KEY (book\_guid, member\_guid),

CONSTRAINT member\_books\_book\_fk FOREIGN KEY (book\_guid) REFERENCES books (book\_guid),

CONSTRAINT member\_books\_member\_fk FOREIGN KEY (member\_guid) REFERENCES library\_member (member\_guid)

);

INSERT INTO member\_books (book\_guid, member\_guid, checked\_out, due\_date)

VALUES ('1', '1', '25-JAN-2023', '22-FEB-2023');

INSERT INTO member\_books (book\_guid, member\_guid, checked\_out, due\_date)

VALUES ('2', '2', '12-FEB-2023', '05-MAR-2023');

INSERT INTO member\_books (book\_guid, member\_guid, checked\_out, due\_date)

VALUES ('3', '3', '10-MAR-2023', '07-APR-2023');

CREATE TABLE book\_keywords (

keyword\_guid NUMBER(10) PRIMARY KEY,

book\_guid VARCHAR2(36)

REFERENCES books(book\_guid)

);

INSERT INTO book\_keywords (keyword\_guid, book\_guid)

VALUES ('1', '1');

INSERT INTO book\_keywords (keyword\_guid, book\_guid)

VALUES ('2', '2');

INSERT INTO book\_keywords (keyword\_guid, book\_guid)

VALUES ('3', '3');

CREATE TABLE keywords (

keyword\_guid NUMBER(10) PRIMARY KEY,

keyword VARCHAR2(50)

CONSTRAINT keywords\_pk PRIMARY KEY (keyword\_guid)

);

INSERT INTO keywords (keyword\_guid, keyword)

VALUES (1, 'racism');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES (1, 'justice');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES (1, 'southern gothic');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES(2, 'alienation');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES(2, 'identity');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES(2, 'adolescence');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES(3, 'totalitarianism');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES(3, 'dystopia');

INSERT INTO keywords (keyword\_guid, keyword)

VALUES(3, 'surveillance');

CREATE TABLE book\_details (

book\_guid NUMBER(40) PRIMARY KEY,

description VARCHAR2(500),

plot VARCHAR2(1000),

summary VARCHAR2(500)

CONSTRAINT fk\_book\_guid

FOREIGN KEY (book\_guid)

REFERENCES books (book\_guid)

);

INSERT INTO book\_details (book\_guid, description, plot, summary)

VALUES (1, 'To Kill a Mockingbird is a novel by Harper Lee published in 1960. Set in the Deep South, the story follows a young girl named Scout Finch as she comes of age during the Great Depression. The novel explores themes of racism, prejudice, and justice.',

'The plot revolves around the trial of Tom Robinson, a black man who is falsely accused of raping a white woman. Scout''s father, Atticus Finch, is appointed to defend Tom in court, and the novel follows the family''s struggles as they face the town''s deeply ingrained racism.',

'To Kill a Mockingbird has become a classic of modern American literature, winning the Pulitzer Prize and being adapted into a successful film in 1962.');

INSERT INTO book\_details (book\_guid, description, plot, summary)

VALUES (2, 'The Catcher in the Rye is a novel by J.D. Salinger, first published in 1951. The story follows Holden Caulfield, a teenage boy who has been expelled from prep school and is wandering the streets of New York City. The novel is known for its portrayal of teenage angst and alienation.',

'The plot revolves around Holden''s experiences during a few days in December, as he navigates encounters with various people and struggles to come to terms with his own feelings of alienation and disillusionment.',

'The Catcher in the Rye has become a classic of modern literature, known for its frank and honest portrayal of teenage life and for its influential style.');

INSERT INTO book\_details (book\_guid, description, plot, summary)

VALUES(3, '1984 is a dystopian novel by George Orwell, first published in 1949. Set in a totalitarian society in the future, the novel follows the story of Winston Smith, a low-ranking member of the ruling Party. The novel explores themes of government surveillance, censorship, and the power of language.',

'The plot revolves around Winston''s attempts to resist the oppressive regime and to find a way to express his own thoughts and feelings in a world where individuality is outlawed.',

'1984 has become a classic of dystopian literature, known for its powerful critique of totalitarianism and for its portrayal of the dangers of government control over individuals.');

CREATE TABLE book\_genres (

book\_guid VARCHAR(50) NOT NULL,

genre\_code VARCHAR(10) NOT NULL,

CONSTRAINT PK\_book\_genres PRIMARY KEY (book\_guid, genre\_code),

CONSTRAINT FK\_book\_genres\_books FOREIGN KEY (book\_guid)

REFERENCES books (book\_guid)

ON DELETE CASCADE

);

INSERT INTO book\_genres (book\_guid, genre\_code)

VALUES ('1', '1');

INSERT INTO book\_genres (book\_guid, genre\_code)

VALUES ('2', '2');

INSERT INTO book\_genres (book\_guid, genre\_code)

VALUES ('3', '3');

CREATE TABLE genres (

genre\_code VARCHAR(10) NOT NULL,

genre\_name VARCHAR(50) NOT NULL,

CONSTRAINT PK\_genres PRIMARY KEY (genre\_code)

);

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('1', 'Novel');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('1', 'Bildungsroman');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('1', 'Legal Story');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('2', 'Coming of Age');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('2', 'First Person');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('2', 'Literay Realism');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('3', 'Dystopian Fiction');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('3', 'Science Fiction');

INSERT INTO genres (genre\_code, genre\_name)

VALUES ('3', 'Political Fiction');

CREATE TABLE book\_jobs (

book\_guid VARCHAR2(36) NOT NULL,

person\_guid NUMBER,

job\_code VARCHAR2(10) NOT NULL,

CONSTRAINT book\_jobs\_pk PRIMARY KEY (book\_guid, person\_guid, job\_code),

CONSTRAINT book\_jobs\_book\_fk FOREIGN KEY (book\_guid) REFERENCES books (book\_guid),

CONSTRAINT book\_jobs\_person\_fk FOREIGN KEY (person\_guid) REFERENCES persons (person\_guid),

CONSTRAINT book\_jobs\_job\_fk FOREIGN KEY (job\_code) REFERENCES jobs (job\_code)

);

INSERT INTO book\_jobs (book\_guid, person\_guid, job\_code)

VALUES ('1', '1', 'EDIT');

INSERT INTO book\_jobs (book\_guid, person\_guid, job\_code)

VALUES ('1', '2', 'TRAN');

INSERT INTO book\_jobs (book\_guid, person\_guid, job\_code)

VALUES ('2', '3', 'EDIT');

INSERT INTO book\_jobs (book\_guid, person\_guid, job\_code)

VALUES ('2', '4', 'TRAN');

INSERT INTO book\_jobs (book\_guid, person\_guid, job\_code)

VALUES ('3', '5', 'EDIT');

INSERT INTO book\_jobs (book\_guid, person\_guid, job\_code)

VALUES ('3', '6', 'TRAN');

CREATE TABLE jobs (

job\_code VARCHAR2(10) PRIMARY KEY,

job\_title VARCHAR2(100) NOT NULL

CONSTRAINT PK\_jobs PRIMARY KEY (job\_code)

);

INSERT INTO jobs (job\_code, job\_title)

VALUES('AUTH', 'Author');

INSERT INTO jobs (job\_code, job\_title)

VALUES('PUB', 'Publisher');

INSERT INTO jobs (job\_code, job\_title)

VALUES('EDIT', 'Editor');

INSERT INTO jobs (job\_code, job\_title)

VALUES('TRAN', 'Translator');

INSERT INTO jobs (job\_code, job\_title)

VALUES('ILLU', 'Illustrator');

CREATE TABLE persons (

person\_guid NUMBER PRIMARY KEY,

person\_name VARCHAR2(100) NOT NULL,

birth\_date DATE NOT NULL,

death\_date DATE,

birth\_country VARCHAR2(100) NOT NULL

CONSTRAINT PK\_persons PRIMARY KEY (person\_guid)

);

INSERT INTO persons (person\_guid, person\_name, birth\_date, death\_date, birth\_country)

VALUES ('1', 'Tay Hohoff', '27-FEB-1899', '12-AUG-1976', 'United States');

INSERT INTO persons (person\_guid, person\_name, birth\_date, death\_date, birth\_country)

VALUES ('2', 'Maurice Crain', '19-MAY-1905', '02-NOV-1981', 'United States');

INSERT INTO persons (person\_guid, person\_name, birth\_date, death\_date, birth\_country)

VALUES ('3', 'J.D. Salinger', '01-JAN-1919', '27-JAN-2010', 'United States');

INSERT INTO persons (person\_guid, person\_name, birth\_date, death\_date, birth\_country)

VALUES ('4', 'Maurice Crain', '19-MAY-1905', '02-NOV-1981', 'United States');

INSERT INTO persons (person\_guid, person\_name, birth\_date, death\_date, birth\_country)

VALUES ('5', 'George Orwell', '25-JUN-1903', '21-JAN-1950', 'United Kingdom');

INSERT INTO persons (person\_guid, person\_name, birth\_date, death\_date, birth\_country)

VALUES ('6', 'Lydia Davis', '15-JUl-1947', NULL, 'United States');

CREATE TABLE book\_location (

availability\_status VARCHAR2(50),

library\_section VARCHAR2(50),

library\_row VARCHAR2(50)

CONSTRAINT PK\_availability\_status PRIMARY KEY (availability\_status)

);

INSERT INTO book\_location (availability\_status, library\_section, library\_row)

VALUES ('Available', 'Fiction', 'A');

INSERT INTO book\_location (availability\_status, library\_section, library\_row)

VALUES ('Checked Out', NULL, NULL);

INSERT INTO book\_location (availability\_status, library\_section, library\_row)

VALUES ('Missing', NULL, NULL);

CREATE TABLE book\_availability (

book\_guid VARCHAR2 (40),

availability\_status VARCHAR2(50),

number\_of\_holds NUMBER,

holds\_per\_copy NUMBER

CONSTRAINT PK\_book\_availability PRIMARY KEY (book\_guid)

);

INSERT INTO book\_availability (book\_guid, availability\_status, number\_of\_holds, holds\_per\_copy)

VALUES ('1', 'Available', 0, 3);

INSERT INTO book\_availability (book\_guid, availability\_status, number\_of\_holds, holds\_per\_copy)

VALUES ('2', 'Checked Out', 2, 3);

INSERT INTO book\_availability (book\_guid, availability\_status, number\_of\_holds, holds\_per\_copy)

VALUES ('3', 'Missing', 0, 3);

CREATE TABLE ratings (

book\_guid VARCHAR(36),

average\_rating FLOAT(5),

ratings\_count INT,

CONSTRAINT fk\_ratings\_books

FOREIGN KEY (book\_guid)

REFERENCES books (book\_guid)

ON DELETE CASCADE

);

INSERT INTO ratings (book\_guid, average\_rating, ratings\_count)

VALUES ('1', 4.27, 10524);

INSERT INTO ratings (book\_guid, average\_rating, ratings\_count)

VALUES ('2', 3.8, 277);

INSERT INTO ratings (book\_guid, average\_rating, ratings\_count)

VALUES ('3', 4.18, 1322);

A picture containing text

Description automatically generated

CREATE INDEX books\_book\_guid\_idx ON books(book\_guid);

CREATE INDEX member\_books\_member\_guid\_idx ON member\_books(member\_guid);

CREATE INDEX library\_member\_member\_guid\_idx ON library\_member(member\_guid);

CREATE INDEX idx\_books\_title ON books(book\_title);

CREATE INDEX idx\_books\_authors ON books(author\_name);

CREATE INDEX idx\_books\_isbn ON books(book\_isbn);

CREATE INDEX idx\_books\_language ON books(language);

CREATE INDEX idx\_books\_publication\_date ON books(publication\_date);

CREATE INDEX idx\_books\_publisher ON books(book\_publisher);

CREATE INDEX idx\_library\_members\_first\_name ON library\_member(first\_name);

CREATE INDEX idx\_library\_members\_last\_name ON library\_member(last\_name);

CREATE INDEX idx\_library\_members\_email ON library\_member(email);

CREATE INDEX idx\_member\_books\_member\_id ON member\_books(member\_guid);

CREATE INDEX idx\_member\_books\_book\_id ON member\_books(book\_guid);

CREATE INDEX idx\_book\_guid ON taglines(book\_guid);

CREATE INDEX idx\_book\_guid ON book\_keywords(book\_guid);

CREATE INDEX idx\_keyword\_guid ON book\_keywords(keyword\_guid);

CREATE INDEX idx\_book\_guid ON book\_details(book\_guid);

CREATE INDEX idx\_book\_guid ON book\_genres(book\_guid);

CREATE INDEX idx\_genre\_code ON book\_genres(genre\_code);

CREATE INDEX idx\_job\_code ON book\_jobs(job\_code);

CREATE INDEX idx\_person\_guid ON book\_jobs(person\_guid);

CREATE INDEX idx\_person\_guid ON persons(person\_guid);

CREATE INDEX idx\_book\_guid ON book\_location(book\_guid);

CREATE INDEX idx\_book\_availability\_status ON book\_availability(availability\_status);

A picture containing table

Description automatically generated

CREATE SEQUENCE books\_seq START WITH 4 INCREMENT BY 1;

CREATE SEQUENCE member\_books\_seq START WITH 4 INCREMENT BY 1;

CREATE SEQUENCE library\_member\_seq START WITH 4 INCREMENT BY 1;

Text

Description automatically generated

SELECT \*

FROM books

WHERE book\_title = 'To Kill a Mockingbird';



SELECT

book\_title,

author\_name

FROM books;



SELECT

book\_title,

checked\_out,

due\_date,

first\_name,

last\_name

FROM library\_member

JOIN member\_books ON library\_member.member\_guid = member\_books.member\_guid

JOIN books ON member\_books.book\_guid = books.book\_guid

WHERE book\_title = '1984';



SELECT

book\_title,

description

from books

JOIN book\_details ON books.book\_guid = book\_details.book\_guid

WHERE book\_title = '1984';



SELECT book\_title,

library\_section,

library\_row

FROM books

JOIN book\_location ON books.book\_guid = book\_location.book\_guid

WHERE book\_title = 'The Catcher in the Rye';



SELECT book\_availability\_status.availability\_status,

number\_of\_holds,

holds\_per\_copy

FROM book\_availability\_status;

A picture containing table

Description automatically generated

SELECT book\_title,

average\_rating,

ratings\_count

FROM books

INNER JOIN ratings

USING (book\_guid)

WHERE average\_rating > 4;

Table

Description automatically generated

SELECT book\_title,

job\_code,

job\_title

FROM books

INNER JOIN book\_jobs

USING (book\_guid)

INNER JOIN jobs

USING (job\_code)

WHERE job\_title = 'Editor';

Graphical user interface, text, application

Description automatically generated

SELECT book\_title,

genre\_name

FROM books

INNER JOIN book\_genres

USING (book\_guid)

INNER JOIN genres

USING (genre\_code)

WHERE book\_title = '1984';

Table

Description automatically generated

SELECT book\_title,

availability\_status,

library\_row,

library\_section

FROM books

INNER JOIN book\_availability

USING (book\_guid)

INNER JOIN book\_location

USING (availability\_status)

WHERE availability\_status = 'Available';

