

## create tables

```
-- Drop tables

drop table books;
drop table authors;
drop table publishers;
drop table countries;
drop table book_author;
drop table book_publisher;
drop table publisher_country;

drop sequence book_seq, author_seq, pub_seq, country_seq;

-- create sequences
create sequence book_seq start with 1;
create sequence author_seq start with 1;
create sequence pub_seq start with 1;
create sequence country_seq start with 1;

-- create tables
create table books (
    book_id int primary key,
    title varchar2(100),
    isbn varchar2(30),
    year_pub int
);

create table authors (
    author_id int primary key,
    authorName varchar2(100)
);

create table books_author (
    book_id int,
    author_id int,
    foreign key (book_id) references book(book_id),
    foreign key (author_id) references authors(author_id)
);

create table publishers (
    pub_id int primary key,
    pubName varchar2(100)
);

create table countries (
    country_id int primary key,
    country_name varchar2(100)
);

create table book_publisher (
    pub_id int references publishers(pub_id),
    book_id int references books(book_id)
);

create table publisher_country (
    pub_id int references publishers(pub_id),
    country_id int references countries(country_id)
);
```

## insert tables

```
-- Insert values into books
INSERT INTO books (title, isbn, year_pub) VALUES ('Catch-22', '978-1-4516-2665-0', 1961);
INSERT INTO books (title, isbn, year_pub) VALUES ('The Martian', '978-0-553-41802-6', 2011);
INSERT INTO books (title, isbn, year_pub) VALUES ('Grit', '978-1-5011-1110-5', 2016);
INSERT INTO books (title, isbn, year_pub) VALUES ('Jupiters Circle', '978-1-63215-707-2', 2016);

-- Insert values into countries
INSERT INTO countries (country_name) VALUES ('US');
INSERT INTO countries (country_name) VALUES ('CAN');
INSERT INTO countries (country_name) VALUES ('UK');
INSERT INTO countries (country_name) VALUES ('AUS');

-- Insert values into publishers
INSERT INTO publishers (pubName) VALUES ('Schuster');
INSERT INTO publishers (pubName) VALUES ('Broadway Books');
INSERT INTO publishers (pubName) VALUES ('Image Comics');

-- Insert values into authors
INSERT INTO authors (authorName) VALUES ('Andy Weir');
INSERT INTO authors (authorName) VALUES ('Joseph Heller');
INSERT INTO authors (authorName) VALUES ('Mark Millar');
INSERT INTO authors (authorName) VALUES ('Angela Duckworth');

-- Insert values into books_author
INSERT INTO books_author (book_id, author_id) VALUES (1, 2);
INSERT INTO books_author (book_id, author_id) VALUES (2, 1);
INSERT INTO books_author (book_id, author_id) VALUES (3, 4);
INSERT INTO books_author (book_id, author_id) VALUES (4, 3);

-- Insert values into book_publisher
INSERT INTO book_publisher (book_id, pub_id) VALUES (1, 1);
INSERT INTO book_publisher (book_id, pub_id) VALUES (2, 2);
INSERT INTO book_publisher (book_id, pub_id) VALUES (3, 1);
INSERT INTO book_publisher (book_id, pub_id) VALUES (4, 3);

-- Insert values into publisher_country
INSERT INTO publisher_country (pub_id, country_id) VALUES (1, 1);
INSERT INTO publisher_country (pub_id, country_id) VALUES (2, 1);
INSERT INTO publisher_country (pub_id, country_id) VALUES (3, 1);

-- Check data in books
SELECT * FROM books;

-- Check data in authors
SELECT * FROM authors;

-- Check data in books_author
SELECT * FROM books_author;

-- Check data in publishers
SELECT * FROM publishers;

-- Check data in book_publisher
SELECT * FROM book_publisher;

-- Check data in countries
SELECT * FROM countries;
```

```
-- Check data in publisher_country
SELECT * FROM publisher_country;
```

**Books Table**

BOOK_ID	TITLE	ISBN	YEAR_PUB
1	Catch-22	978-1-4516-2665-0	1961
2	The Martian	978-0-553-41802-6	2011
3	Grit	978-1-5011-1110-5	2016
4	Jupiters Circle	978-1-63215-707-2	2016

**Authors Table**

AUTHOR_ID	AUTHORNAME
1	Andy Weir
2	Joseph Heller
3	Mark Millar
4	Angela Duckworth

**Books\_Author Table**

BOOK_ID	AUTHOR_ID
1	2
2	1
3	4
4	3

**Publishers Table**

PUB_ID	PUBNAME
1	Schuster
2	Broadway Books
3	Image Comics

**Book\_Publisher Table**

PUB_ID	BOOK_ID
1	1
2	2
1	3
3	4

**Countries Table**

COUNTRY_ID	COUNTRY_NAME
1	US
2	CAN
3	UK
4	AUS

## Publisher\_Country Table

PUB_ID	COUNTRY_ID
1	1
2	1
3	1

## Full schema

```
-- use JOIN to create produce table ou-- use JOIN to create produce table outputs
select bk.title, auth.authorName, bk.isbn, bk.year_pub, pub.pubName --origin.country_name
from books bk
join books_author bkA on bk.book_id = bkA.book_id
join authors auth on bkA.author_id = auth.author_id
join book_publisher bpub on bk.book_id = bpub.book_id
join publishers pub on bpub.pub_id = pub.pub_id
```

## Join output

BOOK_TITLE	BOOK_ISBN	BOOK_YEAR_PUB	AUTHOR_NAME	PUBLISHER_NAME	PUBLISHER_COUNTRY
Grit	978-1-5011-1110-5	2016	Angela Duckworth	Schuster	US
Catch-22	978-1-4516-2665-0	1961	Joseph Heller	Schuster	US
The Martian	978-0-553-41802-6	2011	Andy Weir	Broadway Books	US
Jupiters Circle	978-1-63215-707-2	2016	Mark Millar	Image Comics	US

## ER Diagram

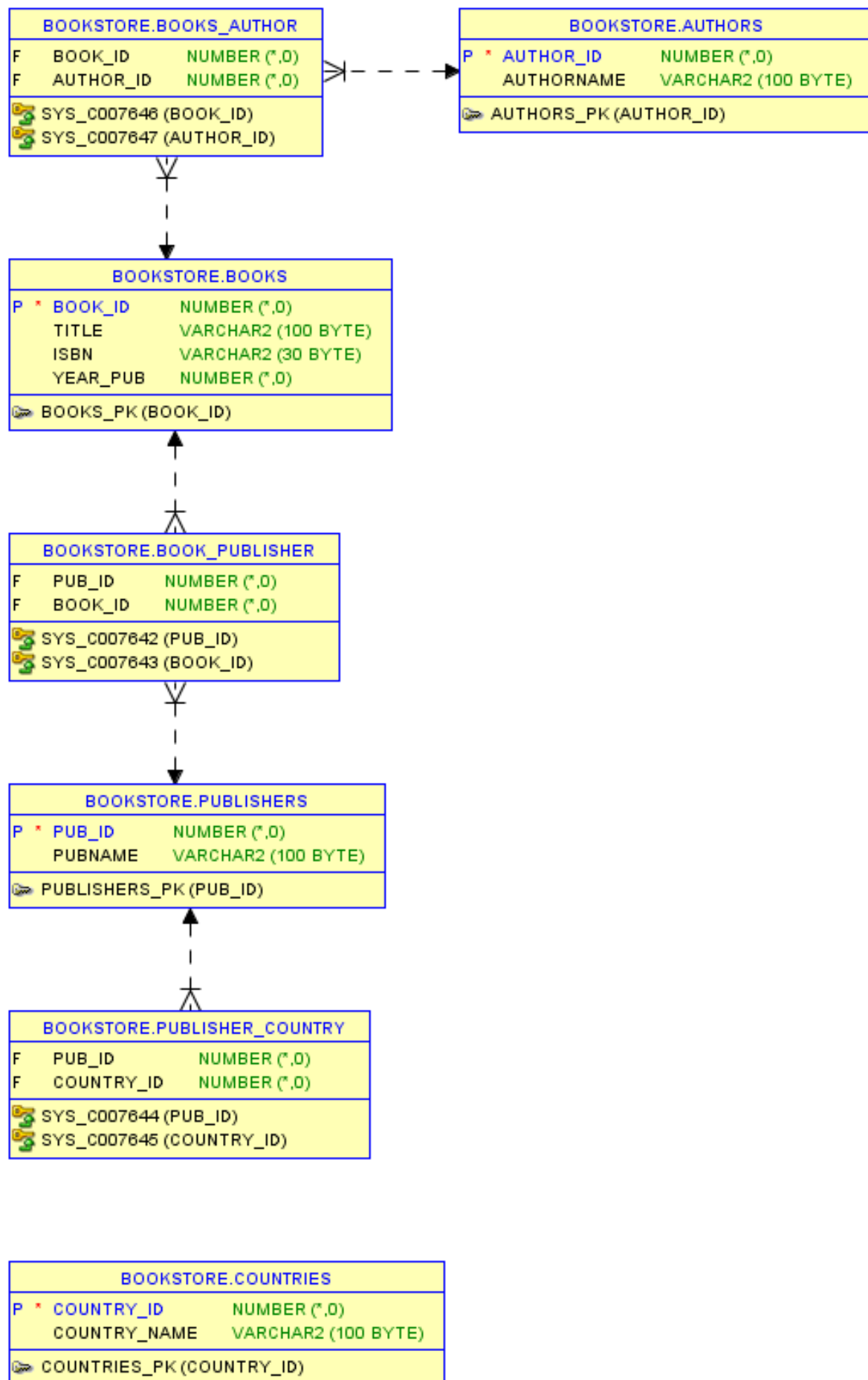


Figure 1: Books Relationship Diagram