## 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 |

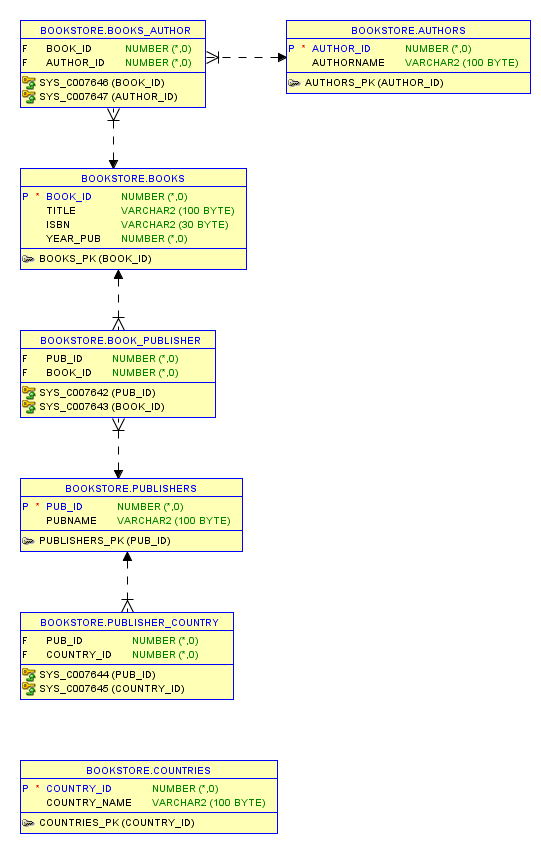
## Full schema

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

## ER Diagram



Books Relationship Diagram