



BOOKarge



CMPE341- Database Design and
Management Project

GROUP MEMBERS:

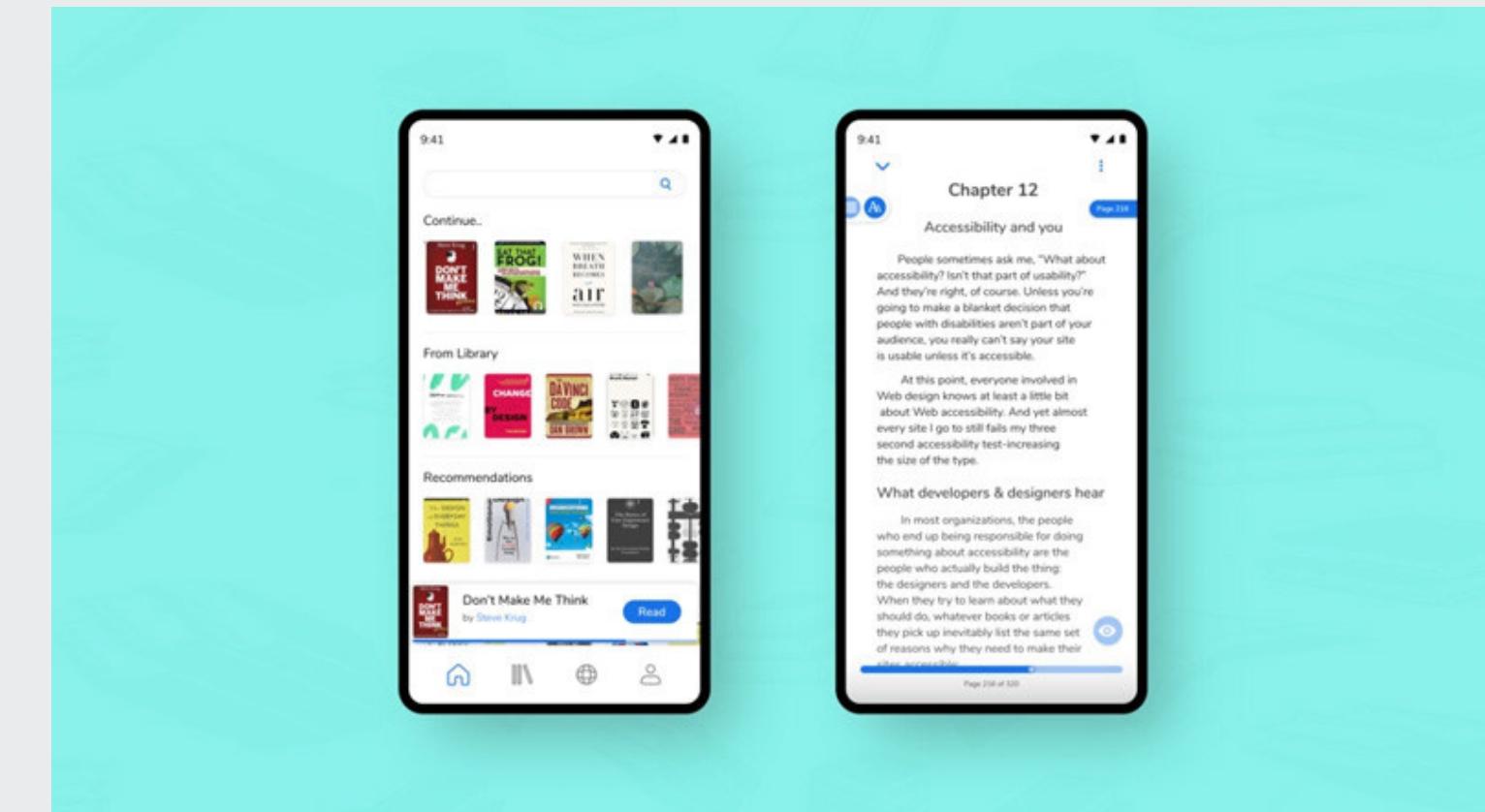
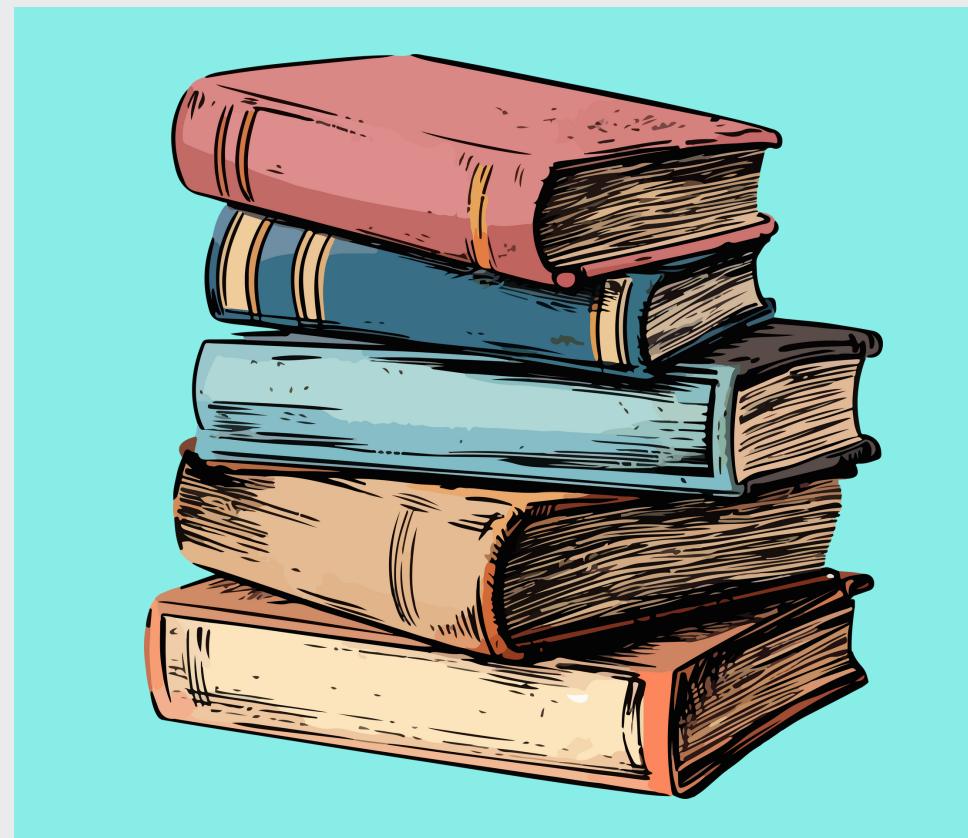
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Introduction.

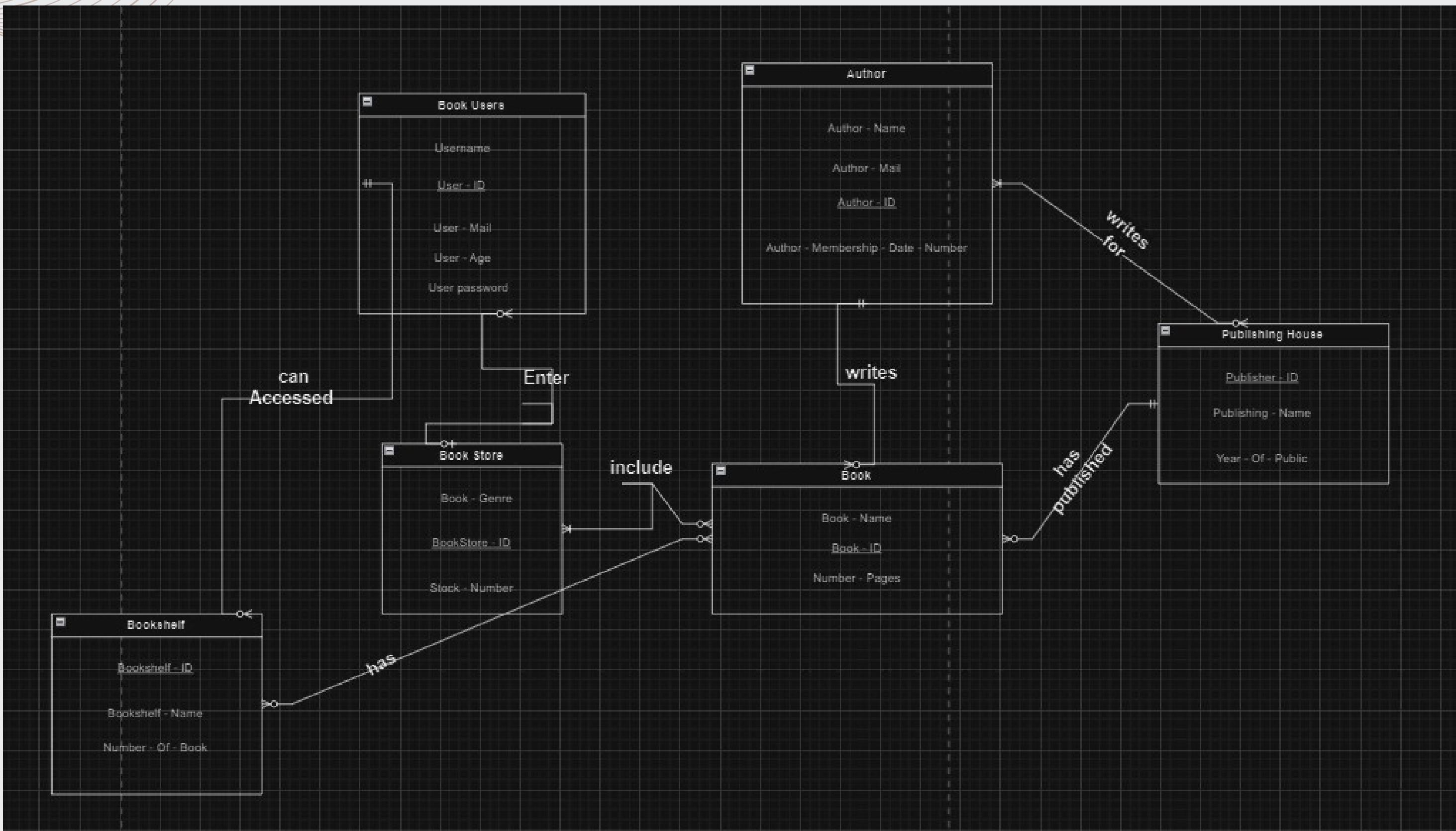
Users register and log in.

Book_Users(User_ID,User_Name,User_Password,User_Age,User_Mail) Every user can buy books from Bookstore(Book_genre,stock_number,BookStore_ID,User_ID) Users can added these book on the bookshelf.

Bookshelf(Bookshelf_name,number_of_book,Bookshelf_Id,User_ID) users can buy books from bookstore. Book(Book_ID, Book_Name,Number_Of_Pages,Autor_Id,User_Id).Only one.author.has.to.write.book..Author(Author_Name,Author_Mail,Author_ID,Author_Membership_Date).The author can make an agreement with the publishing house and put her book in the bookstore, thus advertising the publishing house.PUBLISHING_house(Publisher_ID,Publishing_name, Year_Of_Publication)



Conceptual Design



LOGICAL DESIGN

BOOK_USERS(User_ID,User_Name,User_Password,User_Age,User_Mail)

BOOKSTORE(Book_Genre,Stock_Number,BookStore_ID,User_ID(FK refers to BOOK_USERS))

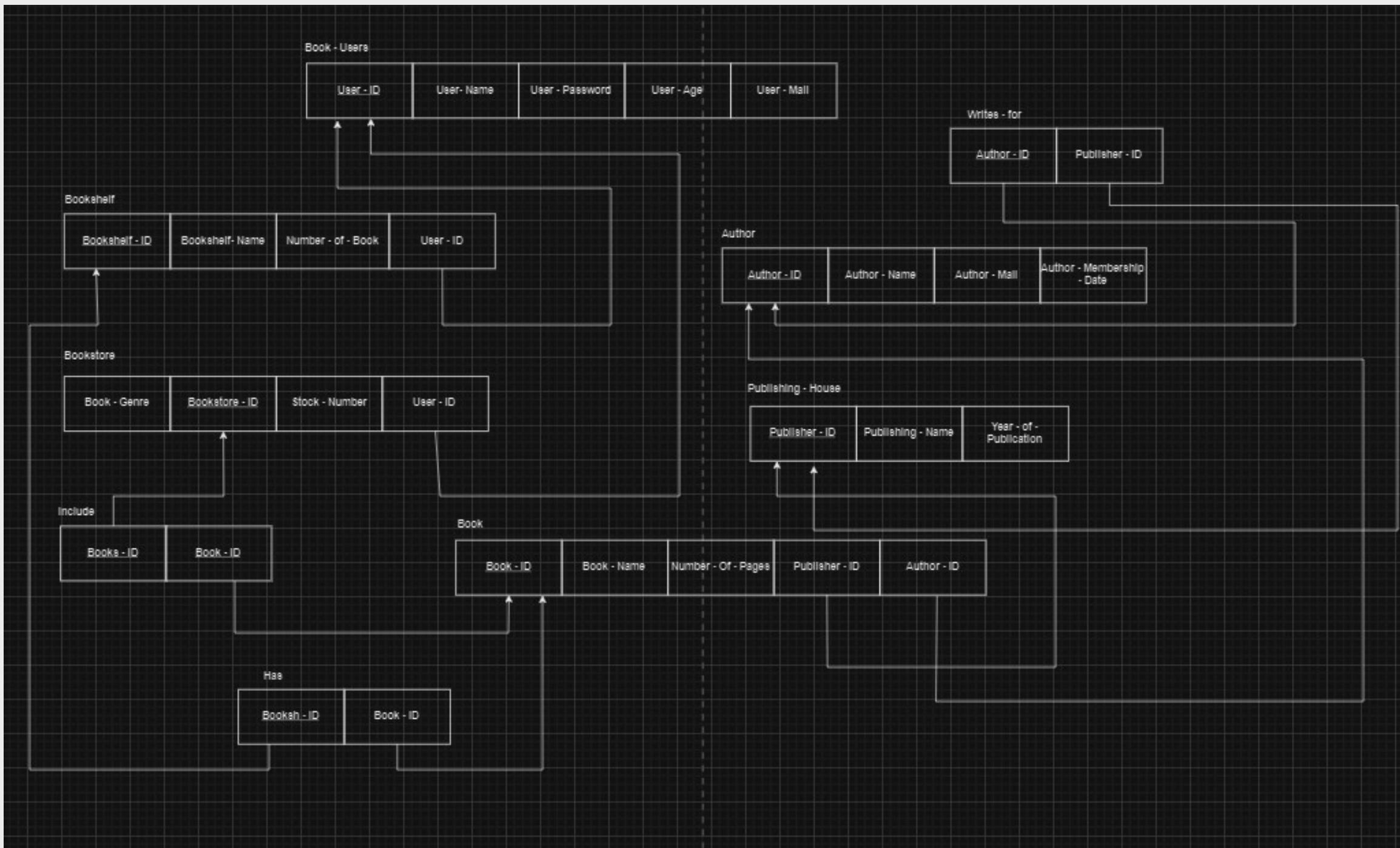
BOOKSHELF(Bookshelf_Name,Number_Of_Book,Bookshelf_ID,User_ID(FK refers to BOOK_USERS))

BOOK(Book_ID,Book_Name,Number_Of_Pages,Author_ID(FK refers to AUTOR),Publisher_ID(FK refers to PUBLISHING_HAUSE))

AUTOR(Author_Name,Author_Mail,Author_ID,Author_Membership_Date).

PUBLISHING_HAUSEa(Publisher_ID,Publishing_Name, Year_Of_Publication)

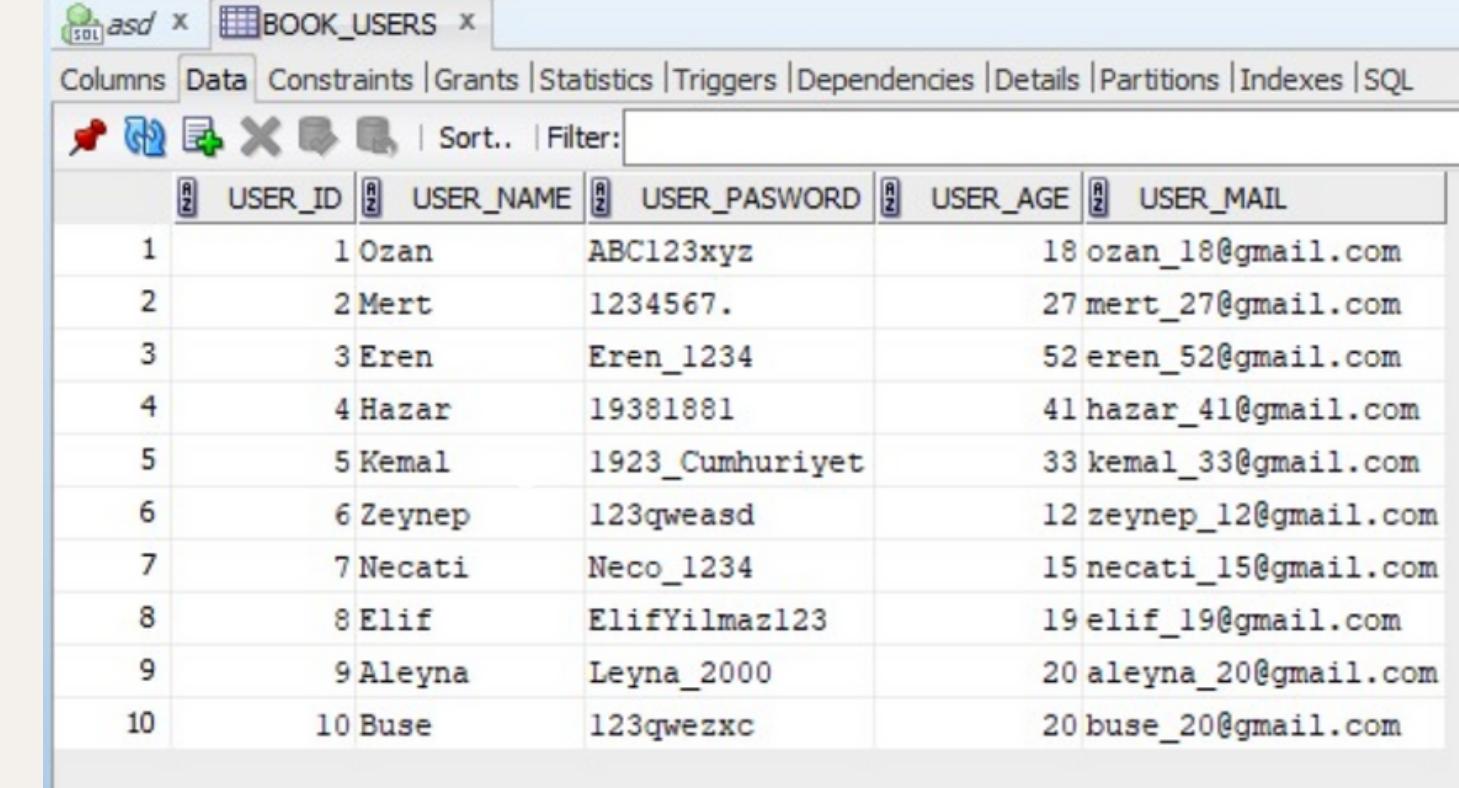
INTO(Books - ID(FK refers to BOOKSTORE), Book - ID)(FK refers to BOOK)



Physical Design-Create Tables & Insert Records (1)

Table 1

```
CREATE TABLE BOOK_USERS(  
    USER_ID NUMBER,  
    USER_NAME VARCHAR(20),  
    USER_PASSWORD VARCHAR(20),  
    USER_AGE NUMBER,  
    USER_MAIL VARCHAR(20),  
    PRIMARY KEY(USER_ID)  
);
```



The screenshot shows the Oracle SQL Developer interface with the 'BOOK_USERS' table selected. The table has five columns: USER_ID, USER_NAME, USER_PASSWORD, USER_AGE, and USER_MAIL. The data consists of 10 rows, each representing a user with a unique ID, name, password, age, and email address.

	USER_ID	USER_NAME	USER_PASSWORD	USER_AGE	USER_MAIL
1	1 Ozan	ABC123xyz		18	ozan_18@gmail.com
2	2 Mert	1234567.		27	mert_27@gmail.com
3	3 Eren	Eren_1234		52	eren_52@gmail.com
4	4 Hazar	19381881		41	hazar_41@gmail.com
5	5 Kemal	1923_Cumhuriyet		33	kemal_33@gmail.com
6	6 Zeynep	123qweasd		12	zeynep_12@gmail.com
7	7 Necati	Neco_1234		15	necati_15@gmail.com
8	8 Elif	ElifYilmaz123		19	elif_19@gmail.com
9	9 Aleyna	Leyna_2000		20	aleyna_20@gmail.com
10	10 Buse	123qwezxc		20	buse_20@gmail.com

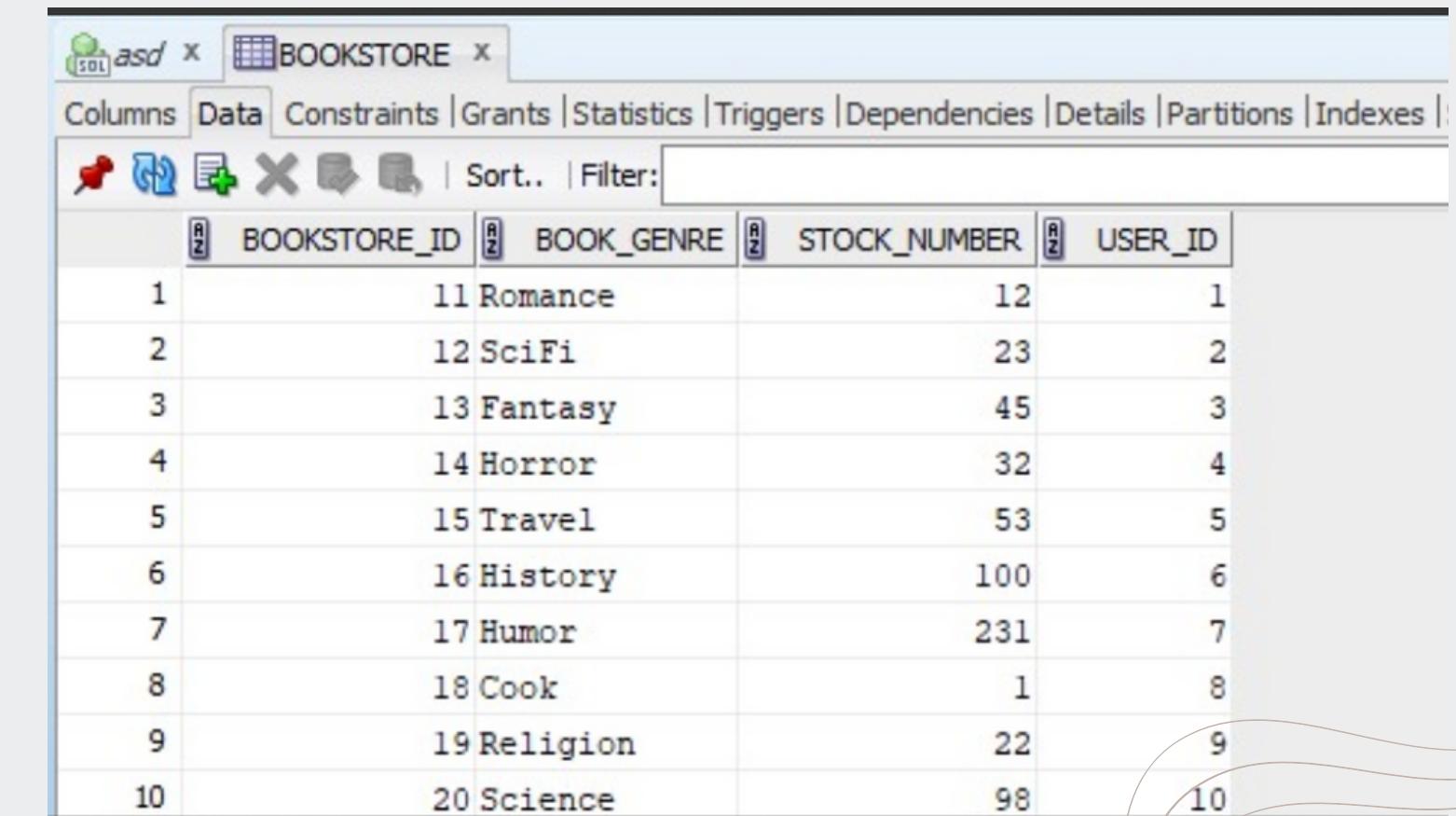
```
INSERT INTO BOOK_USERS VALUES (1, 'Ozan', 'ABC123xyz', 18, 'ozan_18@gmail.com');  
INSERT INTO BOOK_USERS VALUES (2, 'Mert', '1234567.', 27, 'mert_27@gmail.com');  
INSERT INTO BOOK_USERS VALUES (3, 'Eren', 'Eren_1234', 52, 'eren_52@gmail.com');  
INSERT INTO BOOK_USERS VALUES (4, 'Hazar', '19381881', 41, 'hazar_41@gmail.com');  
INSERT INTO BOOK_USERS VALUES (5, 'Kemal', '1923_Cumhuriyet', 33, 'kemal_33@gmail.com');  
INSERT INTO BOOK_USERS VALUES (6, 'Zeynep', '123qweasd', 12, 'zeynep_12@gmail.com');  
INSERT INTO BOOK_USERS VALUES (7, 'Necati', 'Neco_1234', 15, 'necati_15@gmail.com');  
INSERT INTO BOOK_USERS VALUES (8, 'Elif', 'ElifYilmaz123', 19, 'elif_19@gmail.com');  
INSERT INTO BOOK_USERS VALUES (9, 'Aleyna', 'Leyna_2000', 20, 'aleyna_20@gmail.com');  
INSERT INTO BOOK_USERS VALUES (10, 'Buse', '123qwezxc', 20, 'buse_20@gmail.com');
```

Physical Design-Create Tables &Insert Records (2)

TABLE 2

```
CREATE TABLE BOOKSTORE(
    BOOKSTORE_ID NUMBER,
    BOOK_GENRE VARCHAR(30),
    STOCK_NUMBER NUMBER,
    USER_ID NUMBER,
    PRIMARY KEY(BOOKSTORE_ID),
    FOREIGN KEY(USER_ID) REFERENCES BOOK_USERS(USER_ID)
);
```

```
INSERT INTO BOOKSTORE VALUES (11, 'Romance',12,1);
INSERT INTO BOOKSTORE VALUES (12,'SciFi',23,2);
INSERT INTO BOOKSTORE VALUES (13,'Fantasy',45,3);
INSERT INTO BOOKSTORE VALUES (14,'Horror',32,4);
INSERT INTO BOOKSTORE VALUES (15,'Travel',53,5);
INSERT INTO BOOKSTORE VALUES (16,'History',100,6);
INSERT INTO BOOKSTORE VALUES (17,'Humor',231,7);
INSERT INTO BOOKSTORE VALUES (18,'Cook',18);
INSERT INTO BOOKSTORE VALUES (19,'Religion',22,9);
INSERT INTO BOOKSTORE VALUES (20,'Science',98,10);
```



The screenshot shows a database management interface with a toolbar at the top and a table view below. The table is titled 'BOOKSTORE' and has four columns: 'BOOKSTORE_ID', 'BOOK_GENRE', 'STOCK_NUMBER', and 'USER_ID'. The data consists of ten rows, each representing a book entry with its ID, genre, stock number, and user ID.

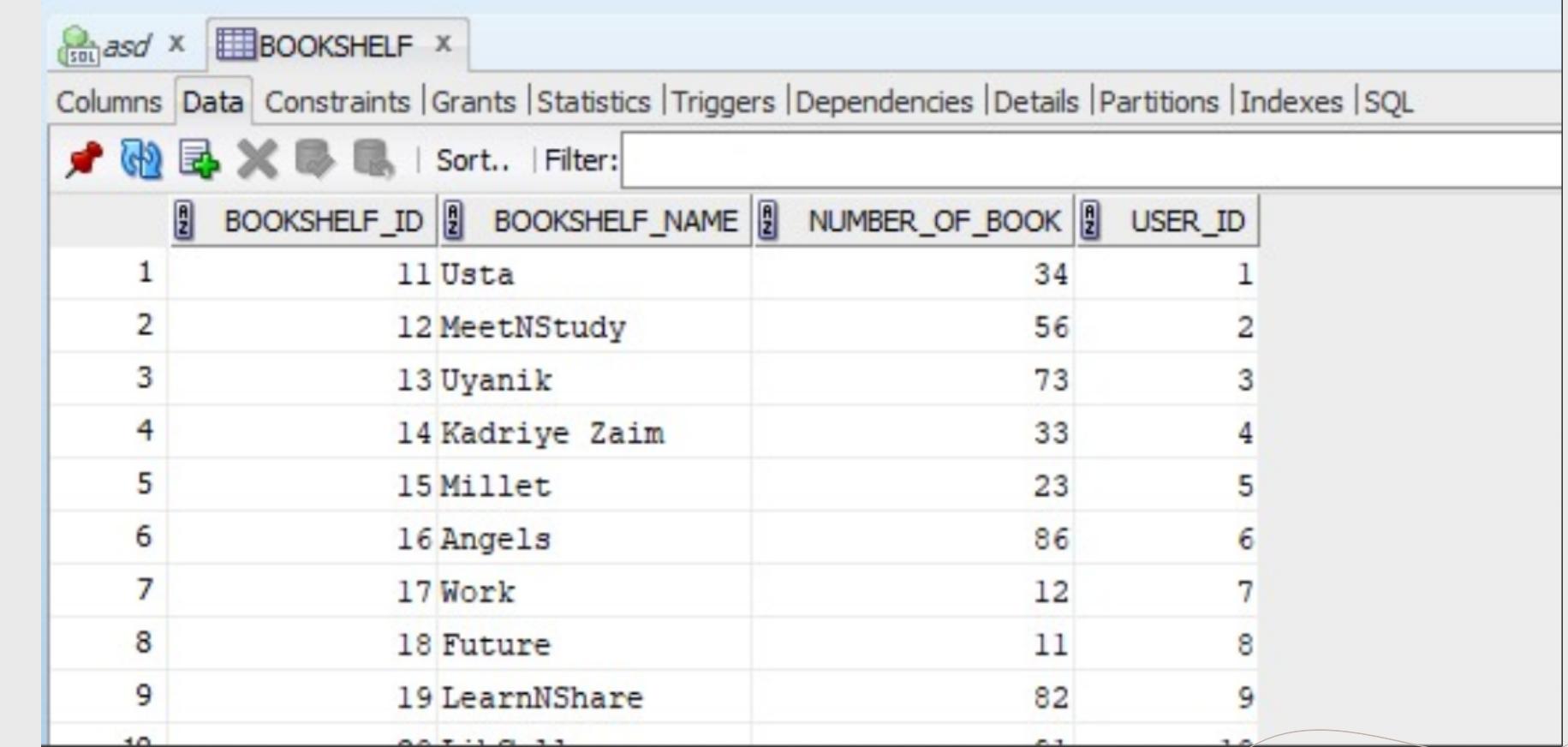
BOOKSTORE_ID	BOOK_GENRE	STOCK_NUMBER	USER_ID
1	11 Romance	12	1
2	12 SciFi	23	2
3	13 Fantasy	45	3
4	14 Horror	32	4
5	15 Travel	53	5
6	16 History	100	6
7	17 Humor	231	7
8	18 Cook	1	8
9	19 Religion	22	9
10	20 Science	98	10

Physical Design-Create Tables & Insert Records (3)

TABLE 3

```
CREATE TABLE BOOKSHELF(
    BOOKSHELF_ID NUMBER,
    BOOKSHELF_NAME VARCHAR(20),
    NUMBER_OF_BOOK NUMBER,
    USER_ID NUMBER,
    PRIMARY KEY (BOOKSHELF_ID),
    FOREIGN KEY(USER_ID ) REFERENCES BOOK_USERS(USER_ID)
);
```

```
INSERT INTO BOOKSHELF VALUES(11,'USTA',34,1);
INSERT INTO BOOKSHELF VALUES(12,'MeetNStudy',56,2);
INSERT INTO BOOKSHELF VALUES(13,'Uyanık',73,3);
INSERT INTO BOOKSHELF VALUES(14,'Kadriye Zaim',33,4);
INSERT INTO BOOKSHELF VALUES(15,'Millet',23,5);
INSERT INTO BOOKSHELF VALUES(16,'Angels',86,6);
INSERT INTO BOOKSHELF VALUES(17,'Work',12,7);
INSERT INTO BOOKSHELF VALUES(18, 'Future',11,8);
INSERT INTO BOOKSHELF VALUES(19, 'LearnNShare',82,9);
INSERT INTO BOOKSHELF VALUES(20,'LibCall',91,10);
```



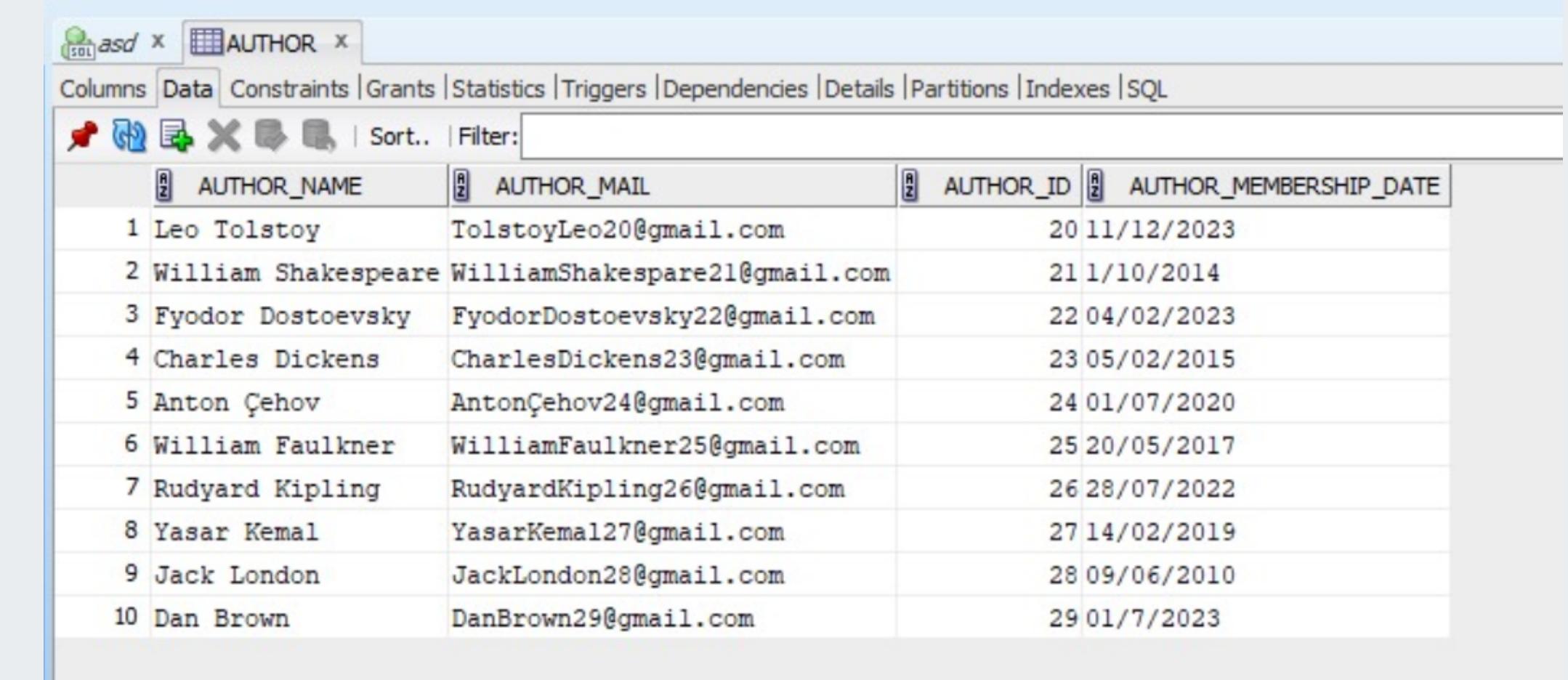
The screenshot shows the Oracle SQL Developer interface with the 'BOOKSHELF' table selected. The table has four columns: BOOKSHELF_ID, BOOKSHELF_NAME, NUMBER_OF_BOOK, and USER_ID. The data is as follows:

	BOOKSHELF_ID	BOOKSHELF_NAME	NUMBER_OF_BOOK	USER_ID
1	11 Usta		34	1
2	12 MeetNStudy		56	2
3	13 Uyanık		73	3
4	14 Kadriye Zaim		33	4
5	15 Millet		23	5
6	16 Angels		86	6
7	17 Work		12	7
8	18 Future		11	8
9	19 LearnNShare		82	9
10	20 LibCall		91	10

Physical Design-Create Tables & Insert Records (4)

TABLE 4

```
CREATE TABLE AUTHOR(  
    AUTHOR_NAME VARCHAR(30),  
    AUTHOR_MAIL VARCHAR(60),  
    AUTHOR_ID NUMBER,  
    AUTHOR_MEMBERSHIP_DATE VARCHAR(40),  
    PRIMARY KEY (AUTHOR_ID)  
);
```



The screenshot shows a database management interface with a toolbar at the top and a table view below. The table has four columns: AUTHOR_NAME, AUTHOR_MAIL, AUTHOR_ID, and AUTHOR_MEMBERSHIP_DATE. The data is as follows:

	AUTHOR_NAME	AUTHOR_MAIL	AUTHOR_ID	AUTHOR_MEMBERSHIP_DATE
1	Leo Tolstoy	TolstoyLeo20@gmail.com	20	11/12/2023
2	William Shakespeare	WilliamShakespeare21@gmail.com	21	1/10/2014
3	Fyodor Dostoevsky	FyodorDostoevsky22@gmail.com	22	04/02/2023
4	Charles Dickens	CharlesDickens23@gmail.com	23	05/02/2015
5	Anton Çehov	AntonÇehov24@gmail.com	24	01/07/2020
6	William Faulkner	WilliamFaulkner25@gmail.com	25	20/05/2017
7	Rudyard Kipling	RudyardKipling26@gmail.com	26	28/07/2022
8	Yasar Kemal	YasarKemal27@gmail.com	27	14/02/2019
9	Jack London	JackLondon28@gmail.com	28	09/06/2010
10	Dan Brown	DanBrown29@gmail.com	29	01/7/2023

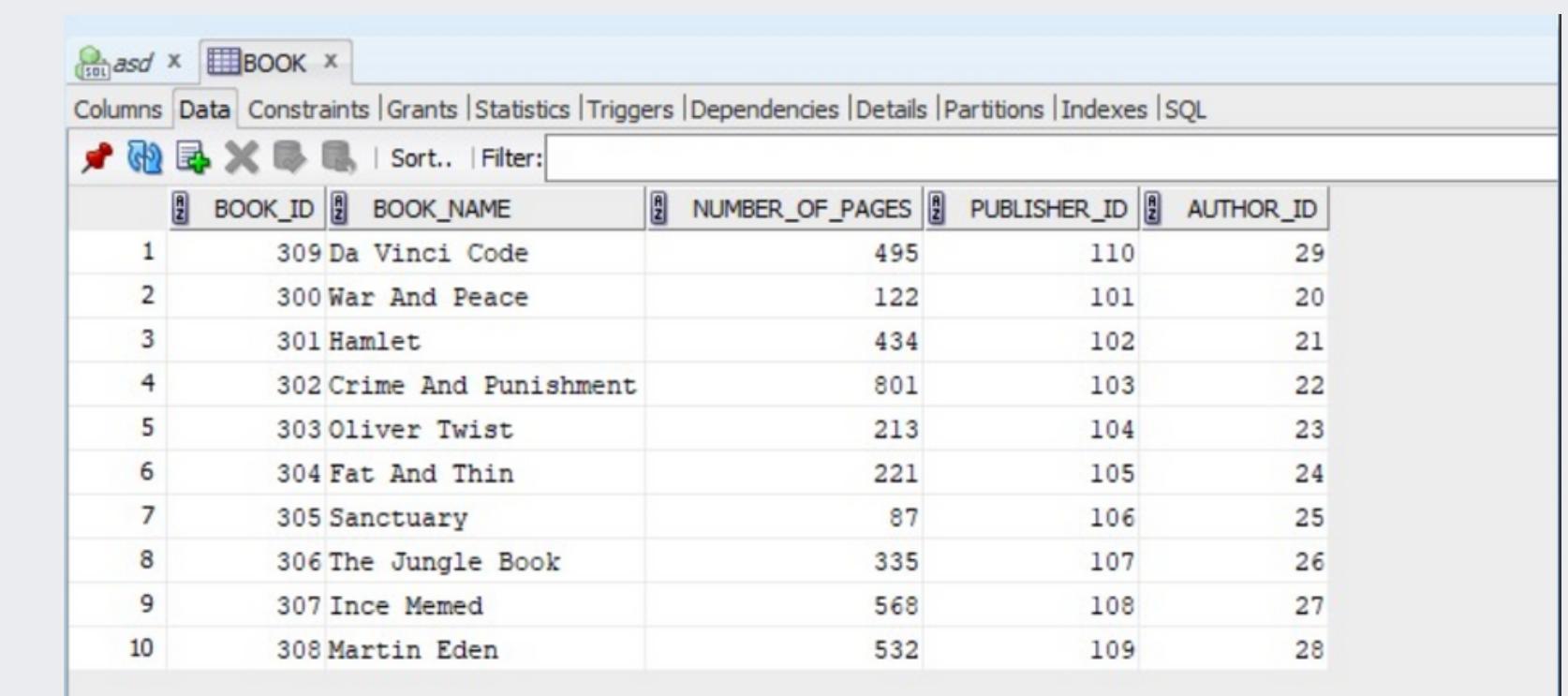
```
INSERT INTO AUTHOR VALUES('Leo Tolstoy','TolstoyLeo20@gmail.com',20,'11/12/2023');  
INSERT INTO AUTHOR VALUES('William Shakespeare','WilliamShakespeare21@gmail.com',21,'1/10/2014');  
INSERT INTO AUTHOR VALUES('Fyodor Dostoevsky', 'FyodorDostoevsky22@gmail.com',22,'04/02/2023');  
INSERT INTO AUTHOR VALUES('Charles Dickens','CharlesDickens23@gmail.com',23,'05/02/2015');  
INSERT INTO AUTHOR VALUES('Anton Çehov','AntonÇehov24@gmail.com',24,'01/07/2020');  
INSERT INTO AUTHOR VALUES('William Faulkner','WilliamFaulkner25@gmail.com',25,'20/05/2017');  
INSERT INTO AUTHOR VALUES('Rudyard Kipling','RudyardKipling26@gmail.com',26,'28/07/2022');  
INSERT INTO AUTHOR VALUES('Yaşar Kemal','YaşarKemal27@gmail.com',27,'14/02/2019');  
INSERT INTO AUTHOR VALUES('Jack London','JackLondon28@gmail.com',28,'09/06/2010');  
INSERT INTO AUTHOR VALUES('Dan Brown','DanBrown29@gmail.com',29,'01/7/2023');
```

Physical Design-Create Tables &Insert Records (5)

TABLE 5 BOOK

```
CREATE TABLE BOOK(  
BOOK_ID NUMBER,  
BOOK_NAME VARCHAR(50),  
NUMBER_PAGES NUMBER,  
PUBLISHER_ID NUMBER,  
AUTHOR_ID NUMBER,  
PRIMARY KEY(BOOK_ID),  
FOREIGN KEY(AUTHOR_ID ) REFERENCES AUTHOR(AUTHOR_ID ),  
FOREIGN KEY(PUBLISHER_ID) REFERENCES PUBLISHING_HOUSE (PUBLISHER_ID)  
);
```

```
INSERT INTO BOOK VALUES(300, 'WAR AND PEACE',122,101,20);  
INSERT INTO BOOK VALUES(301,'Hamlet',434,102,21);  
INSERT INTO BOOK VALUES(302, 'Crime And Punishment',801,103,22);  
INSERT INTO BOOK VALUES(303,'Oliver Twist',213,104,23);  
INSERT INTO BOOK VALUES(304,'Fat And Thin',221,105,24);  
INSERT INTO BOOK VALUES(305,'Sanctuary',87,106,25);  
INSERT INTO BOOK VALUES(306,'The Jungle Book',335,107,26);  
INSERT INTO BOOK VALUES(307, 'Ince Memed',568,108,27);  
INSERT INTO BOOK VALUES(308,'Martin Eden',532,109,28);  
INSERT INTO BOOK VALUES(309,'Da Vinci Code',495,110,29);
```



The screenshot shows a database management interface with a toolbar at the top and a table view below. The table is titled 'BOOK' and has columns: BOOK_ID, BOOK_NAME, NUMBER_OF_PAGES, PUBLISHER_ID, and AUTHOR_ID. The data consists of 10 rows, each representing a book with its ID, name, page count, publisher ID, and author ID.

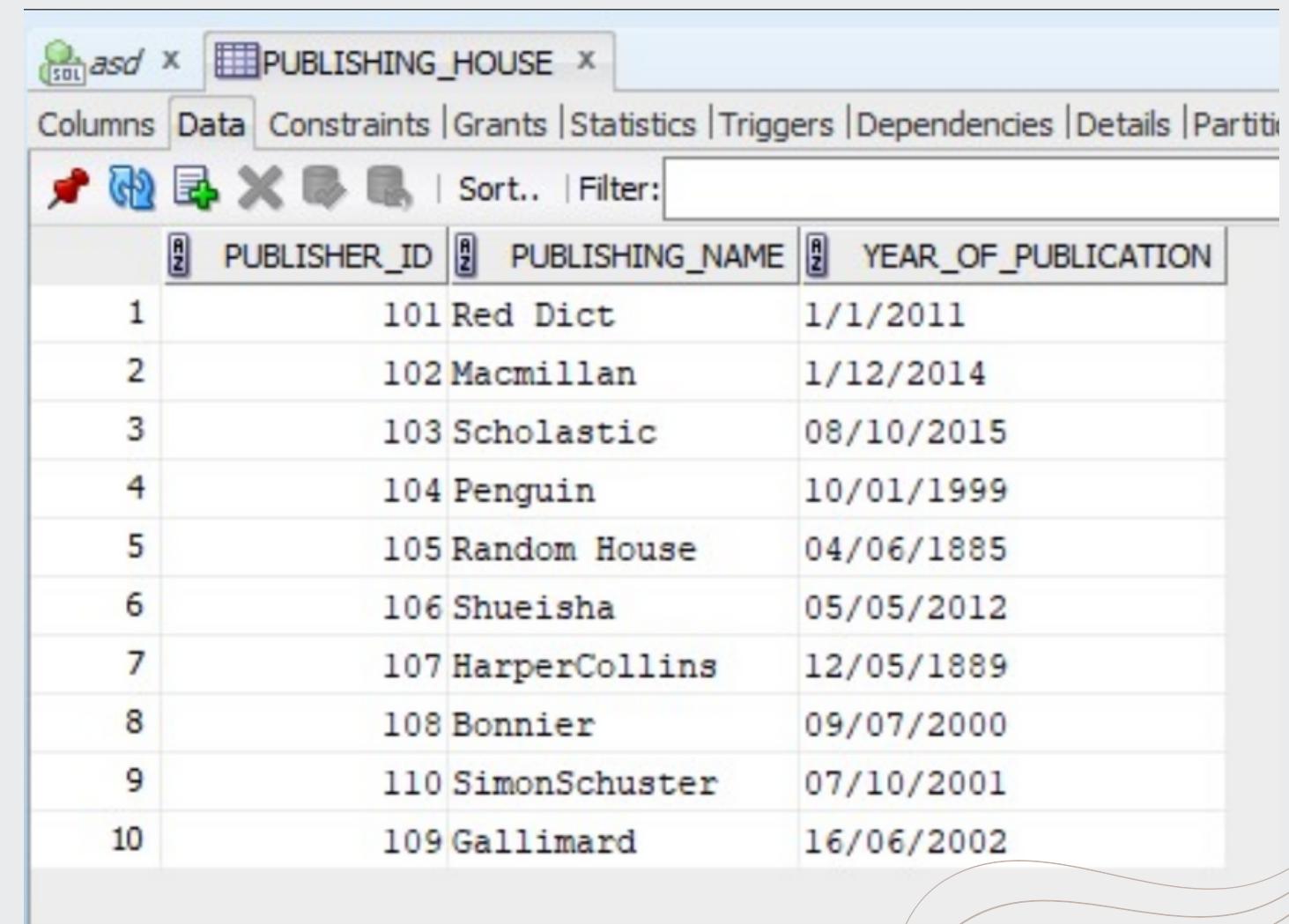
	BOOK_ID	BOOK_NAME	NUMBER_OF_PAGES	PUBLISHER_ID	AUTHOR_ID
1	309	Da Vinci Code	495	110	29
2	300	War And Peace	122	101	20
3	301	Hamlet	434	102	21
4	302	Crime And Punishment	801	103	22
5	303	Oliver Twist	213	104	23
6	304	Fat And Thin	221	105	24
7	305	Sanctuary	87	106	25
8	306	The Jungle Book	335	107	26
9	307	Ince Memed	568	108	27
10	308	Martin Eden	532	109	28

Physical Design-Create Tables & Insert Records (6)

TABLE 6

```
CREATE TABLE PUBLISHING_HOUSE(
    PUBLISHER_ID NUMBER,
    PUBLISHING_NAME VARCHAR(40),
    YEAR_OF_PUBLICATION VARCHAR(50),
    PRIMARY KEY (PUBLISHER_ID)
);
```

```
INSERT INTO PUBLISHING_HOUSE VALUES(101,'Red Dict','1/1/2011');
INSERT INTO PUBLISHING_HOUSE VALUES(102,'Macmillan','1/12/2014');
INSERT INTO PUBLISHING_HOUSE VALUES(103,'Scholastic','08/10/2015');
INSERT INTO PUBLISHING_HOUSE VALUES(104,'Penguin','10/01/1999');
INSERT INTO PUBLISHING_HOUSE VALUES(105,'Random House','04/06/1885');
INSERT INTO PUBLISHING_HOUSE VALUES(106,'Shueisha','05/05/2012');
INSERT INTO PUBLISHING_HOUSE VALUES(107,'HarperCollins','12/05/1889');
INSERT INTO PUBLISHING_HOUSE VALUES(108,'Bonnier','09/07/2000');
INSERT INTO PUBLISHING_HOUSE VALUES(109,'Gallimard','16/06/2002');
INSERT INTO PUBLISHING_HOUSE VALUES(110,'SimonSchuster','07/10/2001');
```



The screenshot shows a database interface with a tab bar at the top containing 'asd' (SQL), 'PUBLISHING_HOUSE' (Data), and other tabs like 'Columns', 'Constraints', etc. Below the tabs is a toolbar with icons for delete, insert, update, and search. The main area displays a table with three columns: PUBLISHER_ID, PUBLISHING_NAME, and YEAR_OF_PUBLICATION. The table has 10 rows, each representing a publisher with its name and publication year.

PUBLISHER_ID	PUBLISHING_NAME	YEAR_OF_PUBLICATION
1	101 Red Dict	1/1/2011
2	102 Macmillan	1/12/2014
3	103 Scholastic	08/10/2015
4	104 Penguin	10/01/1999
5	105 Random House	04/06/1885
6	106 Shueisha	05/05/2012
7	107 HarperCollins	12/05/1889
8	108 Bonnier	09/07/2000
9	110 SimonSchuster	07/10/2001
10	109 Gallimard	16/06/2002

PHYSICAL DESIGN QUERIES(1)

1. Display data from multiple tables (join)

```
SELECT  
    Book.Book_ID,  
    Book.Book_Name,  
    Book.Number_of_Pages,  
    Author.Author_Name,  
    Publishing_house.Publishing_name,  
    Publishing_house.year_of_publication  
FROM  
    Book  
    INNER JOIN Author ON Book.Author_ID = Author.Author_ID  
    INNER JOIN Publishing_house ON Book.Publisher_ID = Publishing_house.Publisher_ID;
```

BOOK_ID	BOOK_NAME	NUMBER_OF_PAGES	AUTHOR_NAME	PUBLISHING_NAME	YEAR_OF_PUBLICATION
1	300 War And Peace	122	Leo Tolstoy	Red Dict	1/1/2011
2	301 Hamlet	434	William Shakespeare	Macmillan	1/12/2014
3	302 Crime And Punishment	801	Fyodor Dostoevsky	Scholastic	08/10/2015
4	303 Oliver Twist	213	Charles Dickens	Penguin	10/01/1999
5	304 Fat And Thin	221	Anton Çehov	Random House	04/06/1885
6	305 Sanctuary	87	William Faulkner	Shueisha	05/05/2012

PHYSICAL DESIGN QUERIES(2)

2. Group by / order by statement

```
SELECT Publishing_name,
       MIN(Year_of_Publication) AS Oldest_Publishing_Year,
       MAX(Year_of_Publication) AS Newest_Publishing_Year
  FROM PUBLISHING_HOUSE
 GROUP BY Publishing_name
 ORDER BY Oldest_Publishing_Year;
```

PUBLISHING_NAME	OLDEST_PUBLISHING_YEAR	NEWEST_PUBLISHING_YEAR
1 Random House	04/06/1885	04/06/1885
2 Shueisha	05/05/2012	05/05/2012
3 SimonSchuster	07/10/2001	07/10/2001
4 Scholastic	08/10/2015	08/10/2015
5 Bonnier	09/07/2000	09/07/2000
6 Penguin	10/01/1999	10/01/1999

PHYSICAL DESIGN QUERIES 3

3. Subquery

```
SELECT
    Author.Author_ID,
    Author.Author_Name,
    Author.Author_Mail
FROM
    Author
WHERE
    Author.Author_ID IN (
        SELECT
            Book.Author_ID
        FROM
            Book
        WHERE
            Book.Number_of_Pages > (
                SELECT
                    AVG(Number_of_Pages)
                FROM
                    Book
            )
    );

```

Script Output | Query... | All Rows Fetched: 5 in 0,004 seconds

AUTHOR_ID	AUTHOR_NAME	AUTHOR_MAIL
1	22 Fyodor Dostoevsky	FyodorDostoevsky22@gmail.com
2	29 Dan Brown	DanBrown29@gmail.com
3	28 Jack London	JackLondon28@gmail.com
4	21 William Shakespeare	WilliamShakespeare21@gmail.com
5	27 Yagor Koma	YagorKoma127@gmail.com

THANK YOU