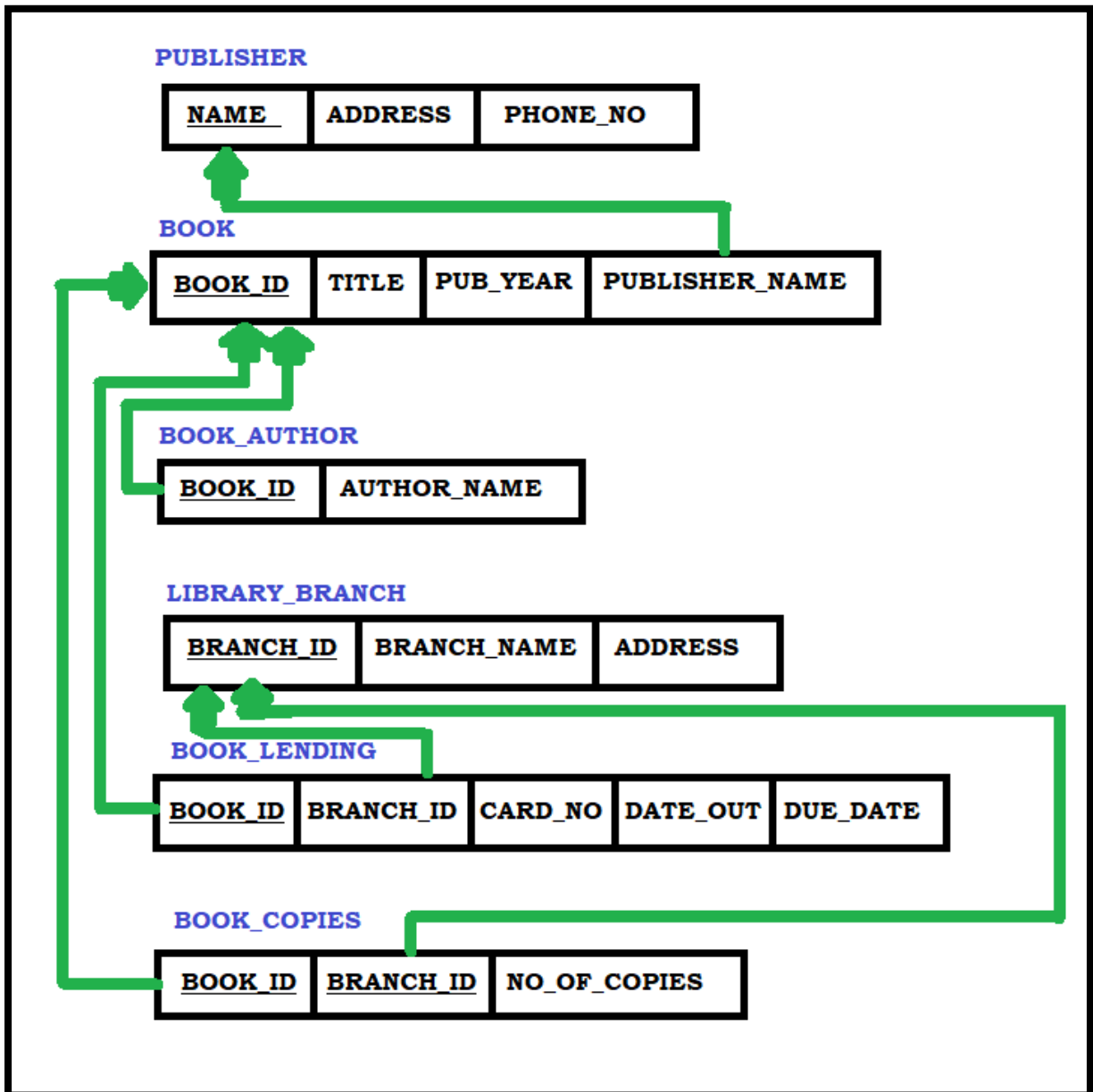


Program - 1



SQL Commands

127.0.0.1:8080/apex/f?p=4...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
CREATE TABLE PUBLISHER
(NAME VARCHAR(20) PRIMARY KEY,
ADDRESS VARCHAR(50) NOT NULL,
PHONE INTEGER);
```

Results Explain Describe Saved SQL History

Table created.

0.75 seconds

Application Express 2.1.0.00.39

SQL Commands

127.0.0.1:8080/apex/f?p...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
CREATE TABLE BOOK
(BOOK_ID INTEGER PRIMARY KEY,
TITLE VARCHAR(20) NOT NULL,
PUBLISHER_NAME VARCHAR(20)
REFERENCES PUBLISHER(NAME) ON DELETE CASCADE,
PUB_YEAR VARCHAR(5) );
```

Results Explain Describe Saved SQL History

Table created.

0.06 seconds

Application Express 2.1.0.00.39

SQL Commands

127.0.0.1:8080/apex/f?p...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
CREATE TABLE BOOK_AUTHOR
(BOOK_ID INTEGER
REFERENCES BOOK(BOOK_ID)
ON DELETE CASCADE,
AUTHOR_NAME VARCHAR(20) NOT NULL,
PRIMARY KEY(BOOK_ID));
```

Results Explain Describe Saved SQL History

Table created.

0.27 seconds

Application Express 2.1.0.00.39

SQL Commands

127.0.0.1:8080/apex/f?p...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
CREATE TABLE LIBRARY_BRANCH
(BRANCH_ID INTEGER PRIMARY KEY,
BRANCH_NAME VARCHAR(20) NOT NULL,
ADDRESS VARCHAR(50) );
```

Results Explain Describe Saved SQL History

Table created.

0.09 seconds

Application Express 2.1.0.00.39

SQL Commands

127.0.0.1:8080/apex/f?p...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
CREATE TABLE BOOK_LENDING
(BOOK_ID INTEGER
REFERENCES BOOK(BOOK_ID) ON DELETE CASCADE,
BRANCH_ID INTEGER REFERENCES
LIBRARY_BRANCH(BRANCH_ID) ON DELETE CASCADE,
CARD_NO INTEGER NOT NULL,
DATE_OUT DATE NOT NULL,
DUE_DATE DATE,
PRIMARY KEY(BOOK_ID,BRANCH_ID));
```

Results Explain Describe Saved SQL History

Table created.

0.19 seconds

Application Express 2.1.0.00.39

SQL Commands

127.0.0.1:8080/apex/f?p...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
CREATE TABLE BOOK_COPIES
(BOOK_ID INTEGER
REFERENCES BOOK(BOOK_ID)
ON DELETE CASCADE,
BRANCH_ID INTEGER
REFERENCES
LIBRARY_BRANCH(BRANCH_ID),
NO_OF_COPIES INTEGER,
PRIMARY KEY(BOOK_ID,BRANCH_ID) );
```

Results Explain Describe Saved SQL History

Table created.

0.03 seconds

Application Express 2.1.0.00.39

Oracle Database Express Edition interface showing the execution of the SQL command `DESC PUBLISHER;`. The results table displays the structure of the PUBLISHER table.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PUBLISHER	NAME	Varchar2	20	-	-	1	-	-	-
	ADDRESS	Varchar2	50	-	-	-	-	-	-
	PHONE	Number	-	-	0	-	✓	-	-

Oracle Database Express Edition interface showing the execution of the SQL command `DESC BOOK;`. The results table displays the structure of the BOOK table.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOK	BOOK_ID	Number	-	-	0	1	-	-	-
	TITLE	Varchar2	20	-	-	-	-	-	-
	PUBLISHER_NAME	Varchar2	20	-	-	-	✓	-	-
	PUB_YEAR	Varchar2	5	-	-	-	✓	-	-

Oracle Database Express Edition interface showing the execution of the SQL command `DESC BOOK_AUTHOR;`. The results table displays the structure of the BOOK_AUTHOR table.

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOK_AUTHOR	BOOK_ID	Number	-	-	0	1	-	-	-
	AUTHOR_NAME	Varchar2	20	-	-	-	-	-	-

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:2762278812896163::NO::

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
DESC LIBRARY_BRANCH;
```

Results Explain Describe Saved SQL History

Object Type TABLE Object LIBRARY_BRANCH

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
LIBRARY_BRANCH	BRANCH_ID	Number	-	-	0	1	-	-	-
	BRANCH_NAME	Varchar2	20	-	-	-	-	-	-
	ADDRESS	Varchar2	50	-	-	-	✓	-	-
									1 - 3

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:2762278812896163::NO::

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
DESC BOOK_LENDING;
```

Results Explain Describe Saved SQL History

Object Type TABLE Object BOOK_LENDING

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOK_LENDING	BOOK_ID	Number	-	-	0	1	-	-	-
	BRANCH_ID	Number	-	-	0	2	-	-	-
	CARD_NO	Number	-	-	0	-	-	-	-
	DATE_OUT	Date	7	-	-	-	-	-	-
	DUE_DATE	Date	7	-	-	-	✓	-	-
									1 - 5

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:2762278812896163::NO::

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

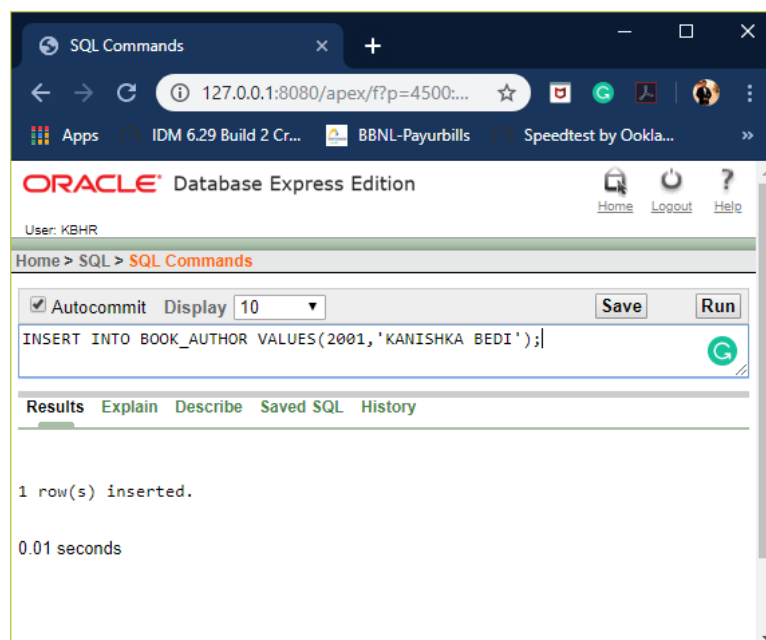
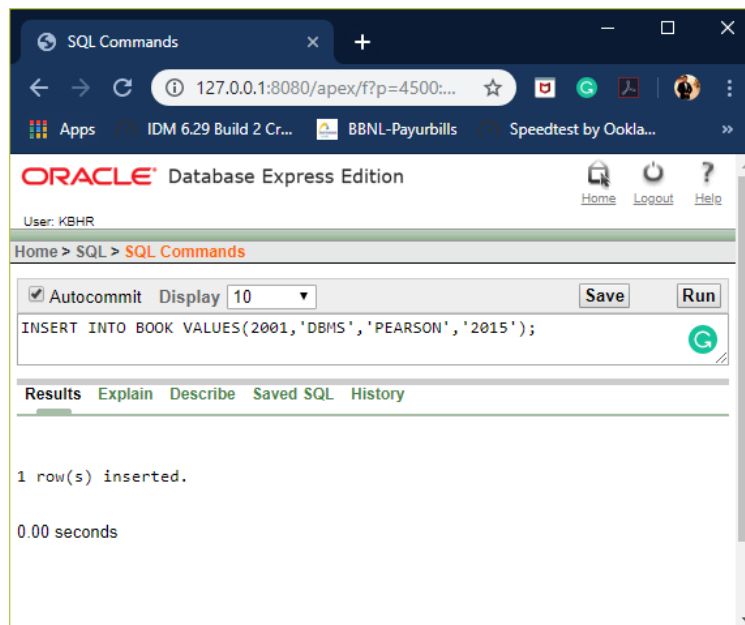
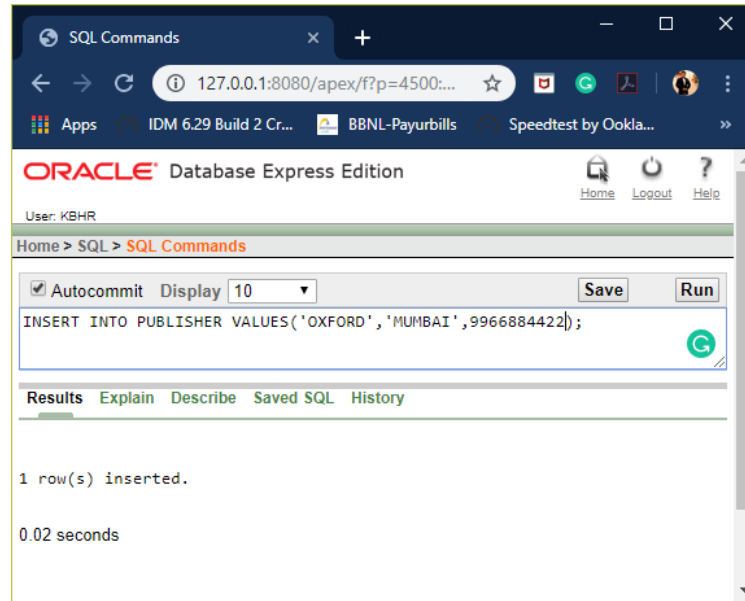
Autocommit Display 10 Save Run

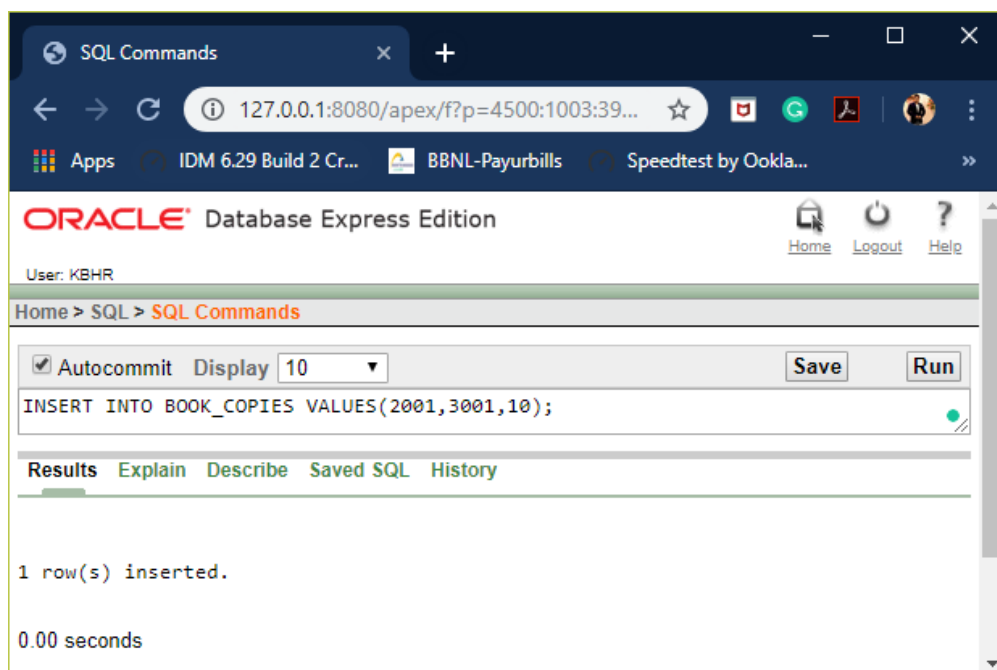
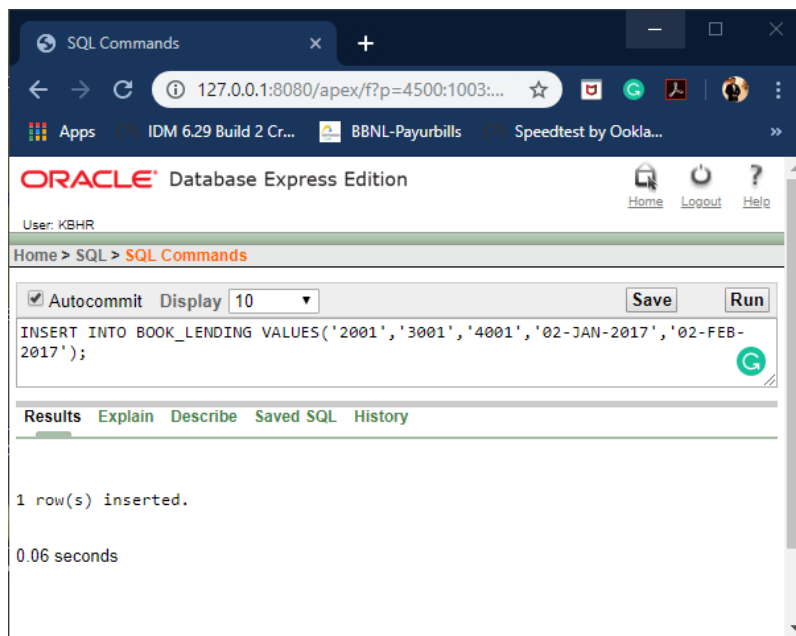
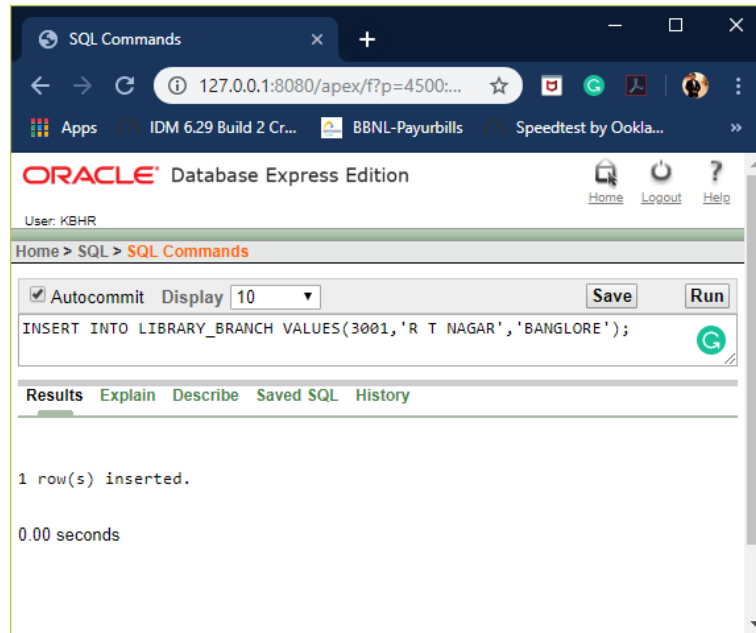
```
DESC BOOK_COPIES;
```

Results Explain Describe Saved SQL History

Object Type TABLE Object BOOK_COPIES

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
BOOK_COPIES	BOOK_ID	Number	-	-	0	1	-	-	-
	BRANCH_ID	Number	-	-	0	2	-	-	-
	NO OF COPIES	Number	-	-	0	-	✓	-	-
									1 - 3





Oracle Database Express Edition interface showing a SQL query: `SELECT * FROM PUBLISHER;` The results table contains 5 rows of publisher information.

NAME	ADDRESS	PHONE
PEARSON	NEW DELHI	9996621456
OXFORD	MUMBAI	9966884422
MC GRAW HILL	CHENNAI	8866333444
O_REILLY	MANGLORE	9898989898
APRESS & DREAMTECH	MAHARASTRA	9878549876

Oracle Database Express Edition interface showing a SQL query: `SELECT * FROM BOOK;` The results table contains 5 rows of book information.

BOOK_ID	TITLE	PUBLISHER_NAME	PUB_YEAR
2001	DBMS	PEARSON	2015
2002	COMPUTER NETWORKS	OXFORD	2019
2003	JAVA	MC GRAW HILL	2016
2004	C PROGRAMMING	O_REILLY	2014
2005	PHP	APRESS & DREAMTECH	2017

Oracle Database Express Edition interface showing a SQL query: `SELECT * FROM BOOK_AUTHOR;` The results table contains 5 rows of author information.

BOOK_ID	AUTHOR_NAME
2001	KANISHKA BEDI
2002	POORNIMA M
2003	P C TRIPATHI
2004	P N REDDY
2005	VISHWA KIRAN

Oracle Database Express Edition interface showing a SQL query: `SELECT * FROM LIBRARY_BRANCH;` The results table contains 5 rows of library branch information.

BRANCH_ID	BRANCH_NAME	ADDRESS
3001	R T NAGAR	BANGLORE
3002	MALESHWARAM	BANGLORE
3003	SECTOR 21	NODIA
3004	KLS INSTITUTE	BELGAUM
3005	YELAHANKA	BANGLORE

Oracle Database Express Edition interface showing a SQL query: `SELECT * FROM BOOK_LENDING;` The results table contains 5 rows of book lending information.

BOOK_ID	BRANCH_ID	CARD_NO	DATE_OUT	DUE_DATE
2001	3001	4001	02-JAN-17	02-FEB-17
2002	3001	4001	07-JAN-17	07-FEB-17
2003	3001	4001	10-JAN-17	10-FEB-17
2004	3001	4001	20-JAN-17	20-FEB-17
2005	3002	4005	20-JAN-17	20-FEB-17

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:39...

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
SELECT * FROM BOOK_COPIES;
```

Results Explain Describe Saved SQL History

BOOK_ID	BRANCH_ID	NO_OF_COPIES
2001	3001	10
2002	3001	10
2003	3001	10
2003	3002	10
2002	3002	10
2001	3005	10

6 rows returned in 0.00 seconds [CSV Export](#)

Application Express 2.1.0.00.39

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:3944124914944550::NO::

ORACLE Database Express Edition

User: KBHR

Home > SQL > SQL Commands

Autocommit Display 10 Save Run

```
SELECT B.BOOK_ID, B.TITLE, B.PUBLISHER_NAME, A.AUTHOR_NAME, C.NO_OF_COPIES, C.BRANCH_ID
FROM BOOK B, BOOK_AUTHOR A, BOOK_COPIES C
WHERE B.BOOK_ID=A.BOOK_ID AND B.BOOK_ID=C.BOOK_ID;
```

Results Explain Describe Saved SQL History

BOOK_ID	TITLE	PUBLISHER_NAME	AUTHOR_NAME	NO_OF_COPIES	BRANCH_ID
2001	DBMS	PEARSON	KANISHKA BEDI	10	3001
2002	COMPUTER NETWORKS	OXFORD	POORNIMA M	10	3001
2003	JAVA	MC GRAW HILL	P C TRIPATHI	10	3001
2003	JAVA	MC GRAW HILL	P C TRIPATHI	10	3002
2002	COMPUTER NETWORKS	OXFORD	POORNIMA M	10	3002
2001	DBMS	PEARSON	KANISHKA BEDI	10	3005

6 rows returned in 0.07 seconds [CSV Export](#)

Application Express 2.1.0.00.39

Oracle Database Express Edition interface showing a SQL query execution. The query filters for book lending records from January 1, 2017, to July 1, 2017, grouped by card number, with a HAVING clause for counts greater than 3.

```

SELECT L.CARD_NO
FROM BOOK_LENDING L
WHERE DATE_OUT BETWEEN '01-JAN-2017' AND '01-JUL-2017'
GROUP BY L.CARD_NO
HAVING COUNT (CARD_NO)>3;
    
```

Results: 1 row returned in 0.10 seconds. The result table shows:

CARD_NO
4001

Application Express 2.1.0.00.39

Oracle Database Express Edition interface showing a SQL query execution. The query is a simple SELECT statement to retrieve all records from the BOOK table.

```

SELECT * FROM BOOK;
    
```

Results: 5 rows returned in 0.00 seconds. The result table shows:

BOOK_ID	TITLE	PUBLISHER_NAME	PUB_YEAR
2001	DBMS	PEARSON	2015
2002	COMPUTER NETWORKS	OXFORD	2019
2003	JAVA	MC GRAW HILL	2016
2004	C PROGRAMMING	O_REILLY	2014
2005	PHP	APRESS & DREAMTECH	2017

Application Express 2.1.0.00.39

Oracle Database Express Edition interface showing a SQL query execution. The query is a DELETE statement targeting a specific book record.

```

DELETE FROM BOOK WHERE BOOK_ID=2004;
    
```

Results: 1 row(s) deleted. Execution time: 0.08 seconds.

Application Express 2.1.0.00.39

Oracle Database Express Edition interface showing a SQL query: `SELECT * FROM BOOK;` The results table displays 4 rows of book data.

BOOK_ID	TITLE	PUBLISHER_NAME	PUB_YEAR
2001	DBMS	PEARSON	2015
2002	COMPUTER NETWORKS	OXFORD	2019
2003	JAVA	MC GRAW HILL	2016
2005	PHP	APRESS & DREAMTECH	2017

Oracle Database Express Edition interface showing the execution of a SQL command: `CREATE VIEW VW_PUB_YEAR AS SELECT PUB_YEAR FROM BOOK;` The output indicates the view was created successfully in 0.30 seconds.

Oracle Database Express Edition interface showing the execution of a SQL command: `CREATE VIEW VW_PUB_YEAR AS SELECT PUB_YEAR FROM BOOK;` The output indicates the view was created successfully in 0.30 seconds.

Oracle Database Express Edition interface showing the execution of a SQL command: `CREATE VIEW VW_BK_COPIES AS SELECT B.BOOK_ID, B.TITLE, C.NO_OF_COPIES FROM BOOK B, BOOK_COPIES C WHERE B.BOOK_ID=C.BOOK_ID;` The output indicates the view was created successfully in 0.00 seconds.

Oracle Database Express Edition interface showing a query on the view: `SELECT * FROM VW_BK_COPIES;` The results table displays 6 rows of data.

BOOK_ID	TITLE	NO_OF_COPIES
2001	DBMS	10
2002	COMPUTER NETWORKS	10
2003	JAVA	10
2003	JAVA	10
2002	COMPUTER NETWORKS	10
2001	DBMS	10