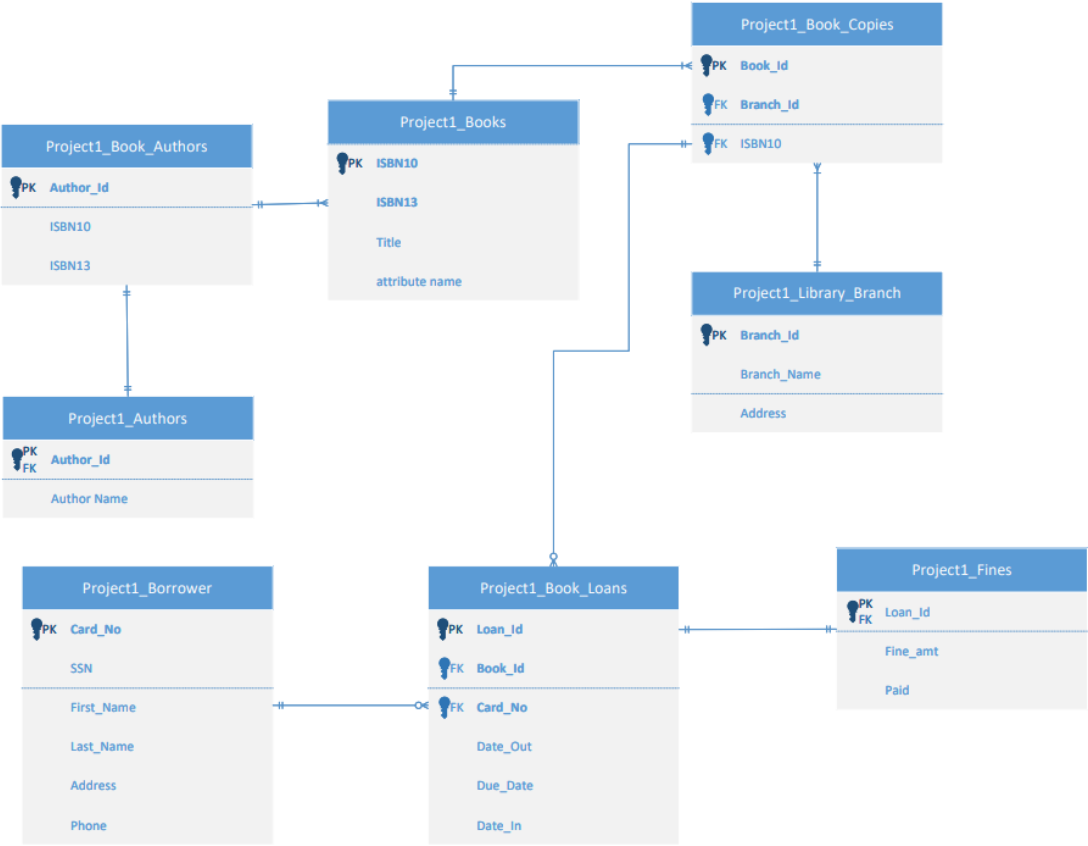


PROJECT 1 (Amritha Rajarajan)

ER Diagram:



Creating PROJECT1_BOOKS table and inserting values:

```
CREATE TABLE project1_books(  
ISBN10 VARCHAR2(26) primary key not null ,  
ISBN13 NUMBER(38,0) not null,  
TITLE VARCHAR2(256)  
);  
Insert into project1_books  
select isbn10, isbn13, title from project1_books_load;
```

The screenshot shows a SQL IDE interface with a toolbar at the top containing icons for file operations, execution, and formatting. The main editor area displays the following SQL script:

```
1  --project1_books table  
2  
3  CREATE TABLE project1_books(  
4  ISBN10 VARCHAR2(26) primary key not null ,  
5  ISBN13 NUMBER(38,0) not null,  
6  TITLE VARCHAR2(256)  
7  );  
8  Insert into project1_books  
9  select isbn10, isbn13, title from project1_books_load ;  
10  
11 select * from PROJECT1_BOOKS_LOAD
```

Below the editor, there are tabs for "Query Result", "Script Output", "DBMS Output", "Explain Plan", "Autotrace", and "SQL History". The "Script Output" tab is currently selected and shows the following output:

Elapsed: 00:00:00.041

Table PROJECT1_BOOKS created.
Elapsed: 00:00:00.024

25,000 rows inserted.
Elapsed: 00:00:00.391

Creating PROJECT1_BOOK_AUTHORS and PROJECT1_AUTHORS table and inserting values:

```

CREATE TABLE project1_book_authors(
Author_id number(38,0),
ISBN10 VARCHAR2(26),
ISBN13 NUMBER(38,0));
create sequence Author_id START WITH 1 increment by 1;
INSERT INTO project1_book_authors
SELECT Author_id.nextval, ISBN10, isbn13
FROM PROJECT1_BOOKS_LOAD ;

Create table project1_authors(
    Author_Id number (38,0),
    Name varchar2(4000));
INSERT INTO project1_authors
SELECT A.Author_id, P.Authro
FROM PROJECT1_BOOKS_LOAD P
inner join project1_book_authors A
on A.isbn10 = P.isbn10;

```

Project 1*

```

15
16 DROP TABLE project1_book_authors
17 CREATE TABLE project1_book_authors(
18 AUTHRO VARCHAR2(4000),
19 ISBN10 VARCHAR2(26));
20
21 INSERT INTO project1_book_authors
22 SELECT DISTINCT AUTHRO, ISBN10
23 FROM PROJECT1_BOOKS_LOAD ;
24
25

```

Query Result **Script Output** DBMS Output Explain Plan Autotrace SC

Table PROJECT1_BOOK_AUTHORS created.

Elapsed: 00:00:00.011

25,000 rows inserted.

Elapsed: 00:00:00.081

Creating PROJECT1_LIBRARY_BRANCH table and inserting values:

```
CREATE TABLE project1_library_branch(  
  BRANCH_ID number(38,0),  
  BRANCH_NAME VARCHAR2(4000),  
  ADDRESS VARCHAR2(4000));  
  
INSERT INTO project1_library_branch  
SELECT DISTINCT BRANCH_ID, BRANCH_NAME, ADDRESS  
FROM PROJECT1_LIBRARY_BRANCH_LOAD ;
```

```
24  
25  
26 CREATE TABLE project1_library_branch(  
27   BRANCH_ID number(38,0),  
28   BRANCH_NAME VARCHAR2(4000),  
29   ADDRESS VARCHAR2(4000));  
30  
31 INSERT INTO project1_library_branch  
32 SELECT DISTINCT BRANCH_ID, BRANCH_NAME, ADDRESS  
33 FROM PROJECT1_LIBRARY_BRANCH_LOAD ;
```

Query Result Script Output DBMS Output Explain Plan Autotrace

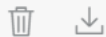


Table PROJECT1_LIBRARY_BRANCH created.

Elapsed: 00:00:00.012

5 rows inserted.

Elapsed: 00:00:00.046

Creating PROJECT1_BOOK_COPIES table and inserting values:

```
Create table project1_book_copies(  
BOOK_ID VARCHAR2(26),  
ISBN10 VARCHAR2(26),  
BRANCH_ID NUMBER(38,0),  
no_of_copies NUMBER(38,0),  
CONSTRAINT PROJECT1_BOOK_COPIES_pk PRIMARY KEY (BOOK_ID)  
);  
  
create sequence BOOK_ID START WITH 1 increment by 1;  
INSERT INTO PROJECT1_BOOK_COPIES  
SELECT BOOK_ID.nextval,BOOK_ID,BRANCH_ID,no_of_copies FROM PROJECT1_BOOK_COPIES_LOAD;  
select * from PROJECT1_BOOK_COPIES
```

Creating PROJECT1_BORROWER table and inserting values

```
CREATE TABLE PROJECT1_BORROWER
(
  CARD_NO VARCHAR2(26) NOT NULL PRIMARY KEY,
  SSN VARCHAR2(26),
  FIRST_NAME VARCHAR2(26),
  LAST_NAME VARCHAR2(26),
  ADDRESS VARCHAR2(128),
  PHONE VARCHAR2(26)
);

create table temp1 (detail VARCHAR2(4000));
insert into temp1
select * from project1_borrowers_load;

SELECT m.detail
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 1) AS Card_No
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 2) AS SSN
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 3) AS F_Name
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 4) AS L_Name
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 6) AS Address
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 9) AS PHONE
FROM temp1 m;

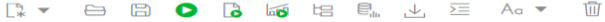
INSERT INTO PROJECT1_BORROWER
SELECT CARD_NO,SSN,F_NAME,L_NAME,ADDRESS,PHONE FROM
(SELECT m.detail
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 1) AS Card_No
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 2) AS SSN
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 3) AS F_Name
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 4) AS L_Name
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 6) AS Address
,REGEXP_SUBSTR (detail, '^[^,]+' , 1, 9) AS PHONE
FROM temp1 m);
```

Creating Project1_Book_Loans table using PL/SQL:

```
CREATE TABLE project1_book_loans (LOAN_ID NUMBER GENERATED BY DEFAULT ON NULL AS
IDENTITY,
BOOK_ID VARCHAR2(20),
CARD_NO varchar2(20),
DATE_OUT DATE,
DUE_DATE DATE,
DATE_IN DATE,
CONSTRAINT LoansPk PRIMARY KEY(LOAN_ID));
CREATE TABLE project1_borrowers_tmp ( ID NUMBER GENERATED BY DEFAULT ON NULL AS
IDENTITY, CARD_NO varchar2(4000));
INSERT INTO project1_borrowers_tmp (CARD_NO)
SELECT b.CARD_NO from PROJECT1_BORROWER b;
CREATE TABLE project1_loanstamp( BOOK_ID varchar2(4000));
INSERT INTO project1_loanstamp(BOOK_ID) (SELECT c.BOOK_ID from project1_book_copies
c where rownum<=500);

INSERT INTO project1_book_loans (BOOK_ID) (SELECT BOOK_ID FROM project1_loanstamp
WHERE rownum<=200);
INSERT INTO project1_book_loans (BOOK_ID) (SELECT BOOK_ID FROM project1_book_loans
WHERE rownum<=100);
INSERT INTO project1_book_loans (BOOK_ID) (SELECT BOOK_ID FROM project1_book_loans
WHERE rownum<=100);
INSERT INTO project1_book_loans (BOOK_ID) (SELECT BOOK_ID FROM project1_loanstamp
WHERE rownum<=100);

UPDATE project1_book_loans bl SET bl.CARD_NO = (SELECT CARD_NO FROM
project1_borrowers_tmp bt where bl.LOAN_ID=bt.ID);
UPDATE project1_book_loans bl SET bl.DATE_OUT=sysdate-rownum;
UPDATE project1_book_loans bl SET bl.DUE_DATE= bl.DATE_OUT + 14;
UPDATE project1_book_loans bl SET bl.DATE_IN = bl.DATE_OUT + 15 WHERE LOAN_ID>=0
AND LOAN_ID<200;
UPDATE project1_book_loans bl SET bl.DATE_IN= bl.DATE_OUT + 12 WHERE LOAN_ID>=200
AND LOAN_ID<278;
UPDATE project1_book_loans bl SET bl.DATE_IN= bl.DATE_OUT + 5 WHERE LOAN_ID>=278
AND LOAN_ID<378;
commit;
```

Project 1*  Consumer group

```

110 select * from project1_book_copies
111
112 drop table project1_book_loans
113 CREATE TABLE project1_book_loans(LOAN_ID NUMBER GENERATED BY DEFAULT ON NULL AS
114 IDENTITY,
115 BOOK_ID VARCHAR2(20),
116 CARD_NO NUMBER,
117 DATE_OUT DATE,
118 DUE_DATE DATE,
119 DATE_IN DATE,
120 CONSTRAINT LoansPk PRIMARY KEY(LOAN_ID));
121 select * from
122 CREATE TABLE project1_borrowers_tmp ( ID NUMBER GENERATED BY DEFAULT ON NULL AS

```

Query Result **Script Output** DBMS Output Explain Plan Autotrace SQL History



 

Table PROJECT1_BOOK_LOANS dropped.


Elapsed: 00:00:00.024

ORA-02267: column type incompatible with referenced column type

Error at Line: 7 Column: 0

Table PROJECT1_BOOK_LOANS created.

Elapsed: 00:00:00.078



Project 1* 

```

114 IDENTITY,
115 BOOK_ID VARCHAR2(20),
116 CARD_NO NUMBER,
117 DATE_OUT DATE,
118 DUE_DATE DATE,
119 DATE_IN DATE,
120 CONSTRAINT LoansPk PRIMARY KEY(LOAN_ID));
121 select * from
122 CREATE TABLE project1_borrowers_tmp ( ID NUMBER GENERATED BY DEFAULT ON NULL AS
123 IDENTITY, CARD_NO varchar2(4000));
124 INSERT INTO project1_borrowers_tmp (CARD_NO)
125 SELECT b.CARD_NO from PROJECT1_BORROWER b;
126 CREATE TABLE project1_loanstm ( BOOK_ID varchar2(4000));
127 INSERT INTO project1_loanstm(BOOK_ID) (SELECT c.BOOK_ID from project1_book_copies
128 c where rownum<=500);
129
130
131 INSERT INTO project1_book_loans (BOOK_ID) (SELECT BOOK_ID FROM project1_loanstm
132 WHERE rownum<=200);
133 INSERT INTO project1_book_loans (BOOK_ID) (SELECT BOOK_ID FROM project1_book_loans

```

Query Result **Script Output** DBMS Output Explain Plan Autotrace SQL History

78 rows updated.

Elapsed: 00:00:00.007

100 rows updated.

Elapsed: 00:00:00.007

Commit complete.

Elapsed: 00:00:00.003

Creating PROJECT1_Loans table and inserting values

```
CREATE TABLE project1_fines(LOAN_ID NUMBER(38,0) ,
FINE_AMT NUMBER(38,0),
PAID VARCHAR2(28) ,
BOOK_ID varchar2(20)NOT NULL,
DUE_DATE DATE NOT NULL,
DATE_IN DATE,
CONSTRAINT FinesPk PRIMARY KEY(LOAN_ID),
CONSTRAINT FinesFk FOREIGN KEY(LOAN_ID) REFERENCES project1_book_loans);
INSERT INTO project1_fines(LOAN_ID,DUE_DATE,DATE_IN,BOOK_ID)
SELECT LOAN_ID ,DUE_DATE,DATE_IN,BOOK_ID FROM project1_book_loans bl
WHERE bl.DATE_IN IS NULL OR bl.DATE_IN>bl.DUE_DATE;
UPDATE project1_fines f SET FINE_AMT=(
SELECT 10*(DATE_IN-DUE_DATE) FROM project1_book_loans bl
WHERE f.LOAN_ID= bl.LOAN_ID
AND DATE_IN>DUE_DATE
AND DATE_IN IS NOT NULL);
UPDATE project1_fines f SET PAID=
CASE WHEN FINE_AMT IS NULL
THEN 'NO'
ELSE 'YES'
END;
commit;
```

Project 1*

```
151
152 CREATE TABLE project1_fines(LOAN_ID NUMBER(38,0) ,
153 FINE_AMT NUMBER(38,0),
154 PAID VARCHAR2(28) ,
155 BOOK_ID varchar2(20)NOT NULL,
156 DUE_DATE DATE NOT NULL,
157 DATE_IN DATE,
158 CONSTRAINT FinesPk PRIMARY KEY(LOAN_ID),
159 CONSTRAINT FinesFk FOREIGN KEY(LOAN_ID) REFERENCES project1_book_loans);
160 INSERT INTO project1_fines(LOAN_ID,DUE_DATE,DATE_IN,BOOK_ID)
161 SELECT LOAN_ID ,DUE_DATE,DATE_IN,BOOK_ID FROM project1_book_loans bl
162 WHERE bl.DATE_IN IS NULL OR bl.DATE_IN>bl.DUE_DATE;
163 UPDATE project1_fines f SET FINE_AMT=(
164 SELECT 10*(DATE_IN-DUE_DATE) FROM project1_book_loans bl
165 WHERE f.LOAN_ID= bl.LOAN_ID
166 AND DATE_IN>DUE_DATE
167 AND DATE_IN IS NOT NULL);
168 UPDATE project1_fines f SET PAID=
169 CASE WHEN FINE_AMT IS NULL
170 THEN 'NO'
171 ELSE 'YES'
172 END;
173 commit;
```

Query Result Script Output DBMS Output Explain Plan Autotrace SQL History

322 rows updated.

Elapsed: 00:00:00.016

322 rows updated.

Elapsed: 00:00:00.009

Commit complete.

Elapsed: 00:00:00.004

Book Search and Availability

```
SELECT DISTINCT bk.ISBN10,bk.ISBN13, bk.TITLE, a.NAME,bc.NO_OF_COPIES,bc.BRANCH_ID
FROM project1_books bk
LEFT JOIN project1_book_authors ba ON cast(bk.ISBN13 as varchar2(26))=ba.ISBN10
LEFT JOIN project1_authors a ON ba.AUTHOR_ID=a.AUTHOR_ID
LEFT JOIN project1_book_copies bc ON bk.ISBN10=bc.ISBN10
WHERE bk.TITLE LIKE '&&param24%' OR
bk.TITLE LIKE '&&param24' OR
bk.TITLE LIKE '&&param24%' OR
bk.ISBN13 LIKE '&&param24%' OR
bk.ISBN13 LIKE '&&param24%'OR
bk.ISBN13 LIKE '&&param24' OR
a.NAME LIKE '&&param24%' OR
a.NAME LIKE '&&param24%' OR
a.NAME LIKE '&&param24';
```

Project 1*
Download
Data Load
Consumer group: LOW

```

205 SELECT DISTINCT bk.ISBN10,bk.ISBN13, bk.TITLE, a.NAME,bc.NO_OF_COPIES,bc.BRANCH_ID
206 FROM project1_books bk
207 LEFT JOIN project1_book_authors ba ON cast(bk.ISBN13 as varchar2(26))=ba.ISBN10
208 LEFT JOIN project1_authors a ON ba.AUTHOR_ID=a.AUTHOR_ID
209 LEFT JOIN project1_book_copies bc ON bk.ISBN10=bc.ISBN10
210 WHERE bk.TITLE LIKE '%$param24%' OR
211 bk.TITLE LIKE '$param24' OR
212 bk.TITLE LIKE '$param24%' OR
213 bk.ISBN13 LIKE '$param24%' OR
214 bk.ISBN13 LIKE '$param24%' OR
215 a.NAME LIKE '$param24%' OR
216 a.NAME LIKE '$param24%' OR
217 a.NAME LIKE '$param24%'
218
219

```

Query Result
Script Output
DBMS Output
Explain Plan
Autotrace
SQL History

Download
Execution time: 0.116 seconds

	ISBN10	ISBN13	TITLE	NAME	NO_OF_COPIES	BRANCH_ID
1	0553272837	9780553272833	Brazen Virtue (Sacred (null)		0	4
2	0312145543	9780312145545	Brewing Up A Storm: (null)		1	2
3	0425181111	9780425181119	Strangers (null)		0	1
4	0373484100	9780373484102	Night Tales: Night Shi (null)		1	3
5	0449907481	9780449907481	A Thousand Acres (B: (null)		1	4
6	0945586051	9780945586050	The Doctor The Patier (null)		0	1
7	0945586051	9780945586050	The Doctor The Patier (null)		0	2
8	0590419625	9780590419628	The Teacher From Thr (null)		0	2
9	0385472951	9780385472951	The Partner (null)		1	3
10	0425182878	9780425182871	Chosen Prey (Lucas D (null)		1	5
11	0553564528	9780553564525	Guilty As Sin: A Novel (null)		0	1

```
SELECT DISTINCT bc.ISBN10,bk.ISBN13, bk.TITLE, a.NAME,bc.NO_OF_COPIES,bc.BRANCH_ID
FROM project1_books bk
INNER JOIN project1_book_authors ba ON bk.ISBN10=ba.ISBN10
INNER JOIN project1_authors a ON ba.AUTHOR_ID=a.AUTHOR_ID
INNER JOIN project1_book_copies bc ON bk.ISBN10=bc.ISBN10
INNER JOIN project1_library_branch lb ON bc.BRANCH_ID=lb.BRANCH_ID
INNER JOIN project1_book_copies_load bcl ON bc.ISBN10=bcl.BOOK_ID
WHERE bk.TITLE LIKE '%&param24%' OR
bk.TITLE LIKE '%&param24' OR
bk.TITLE LIKE '&param24%' OR
bk.ISBN13 LIKE '%&param24%' OR
bk.ISBN13 LIKE '&param24%'OR
bk.ISBN13 LIKE '%&param24' OR
a.NAME LIKE '%&param24%' OR
a.NAME LIKE '&param24%' OR
a.NAME LIKE '%&param24';
```

Project1

Consumer group: LOW

Data Load

```

228 SELECT DISTINCT bc.ISBN10,bk.ISBN13, bk.TITLE, a.NAME,bc.NO_OF_COPIES,bc.BRANCH_ID
229 FROM project1_books bk
230 INNER JOIN project1_book_authors ba ON bk.ISBN10=ba.ISBN10
231 INNER JOIN project1_authors a ON ba.AUTHOR_ID=a.AUTHOR_ID
232 INNER JOIN project1_book_copies bc ON bk.ISBN10=bc.ISBN10
233 INNER JOIN project1_library_branch lb ON bc.BRANCH_ID=lb.BRANCH_ID
234 INNER JOIN project1_book_copies_load bcl ON bc.ISBN10=bcl.BOOK_ID
235 WHERE bk.TITLE LIKE '%$param24%' OR
236 bk.TITLE LIKE '%$param24%' OR
237 bk.TITLE LIKE '%$param24%' OR
238 bk.ISBN13 LIKE '%$param24%' OR
239 bk.ISBN13 LIKE '%$param24%' OR
240 bk.ISBN13 LIKE '%$param24%' OR
241 a.NAME LIKE '%$param24%' OR
242 a.NAME LIKE '%$param24%' OR
243 a.NAME LIKE '%$param24%';

```

Query Result
Script Output
DBMS Output
Explain Plan
Autotrace
SQL History

Download
Execution time: 0.157 seconds

	ISBN10	ISBN13	TITLE	NAME	NO_OF_COPIES	BRANCH_ID
6	0060168013	9780060168018	Pigs In Heaven	Barbara Kingsolver	0	2
7	067176537X	9780671765378	The Therapeutic Touc	Dolores Krieger	1	2
8	067176537X	9780671765378	The Therapeutic Touc	Dolores Krieger	1	5
9	0671888587	9780671888589	I'll Be Seeing You	Mary Higgins Clark	1	3
10	0425182908	9780425182901	Isle Of Dogs (Andy Br	Patricia Cornwell	0	5
11	042518630X	9780425186305	Purity In Death	J.D. Robb	1	1
12	042518630X	9780425186305	Purity In Death	J.D. Robb	1	2
13	0060914068	9780060914066	Love, Medicine And A	Bernie S. Siegel M.D.	1	2
14	0060914068	9780060914066	Love, Medicine And A	Bernie S. Siegel M.D.	1	5
15	0245542957	9780245542954	Pacific Northwest	Hans Johannes Hoefe	1	3
16	0679810307	9780679810308	Shabanu: Daughter O	Suzanne Fisher Staple	1	1
17	0679810307	9780679810308	Shabanu: Daughter O	Suzanne Fisher Staple	0	2
18	0394743741	9780394743745	The Yawning Heights	Aleksandr Zinoviev	1	3

```

SELECT * FROM project1_book_copies bc

WHERE bc.BRANCH_ID LIKE '_';
SELECT ISBN,TITLE,'Y' as AVAILABLE, LISTAGG(NAME, ',' ) WITHIN GROUP (ORDER BY NAME)
as Author,NO_OF_COPIES FROM
(SELECT ISBN,'Y',TITLE,NO_OF_COPIES,NAME FROM (SELECT a.ISBN,TITLE,NAME,
NO_OF_COPIES FROM
project1_book_copies a,project1_books b,project1_authors c,project1_books_authors d
WHERE a.ISBN=b.ISBN10 AND c.AUTHOR_ID=d.AUTHOR_ID AND
b.ISBN13=d.ISBN13 AND NO_OF_COPIES>0 AND BRANCH_ID=:BRANCH_DETAILS
and (a.ISBN10=:BOOK_2 or lower(TITLE) like '%' || lower(:BOOK_2) || '%' or
lower(NAME) like '%' || lower(:BOOK_2) || '%'))
GROUP BY ISBN10,TITLE ,NO_OF_COPIES;

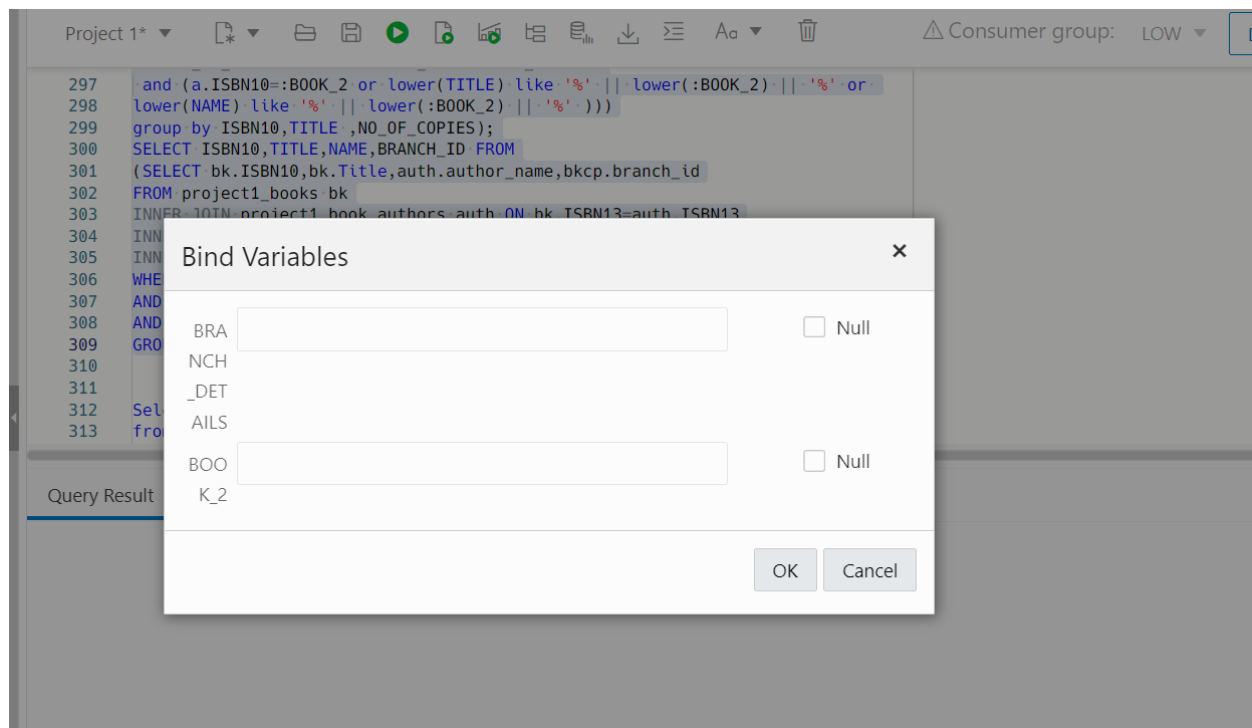
```

Union

```

SELECT ISBN,TITLE,'N' as AVAILABLE, LISTAGG(NAME, ',' ) WITHIN GROUP (ORDER BY NAME)
as Author,NO_OF_COPIES FROM
(SELECT ISBN,'N',TITLE,NO_OF_COPIES,NAME FROM (SELECT a.ISBN,TITLE,NAME,
NO_OF_COPIES FROM
project1_book_copies a,project1_books b,project1_authors c,project1_books_authors d
where a.ISBN10=b.ISBN10 and c.AUTHOR_ID=d.AUTHOR_ID and b.ISBN13=d.ISBN13
and NO_OF_COPIES=0 and BRANCH_ID=:BRANCH_DETAILS
and (a.ISBN10=:BOOK_2 or lower(TITLE) like '%' || lower(:BOOK_2) || '%' or
lower(NAME) like '%' || lower(:BOOK_2) || '%'))
group by ISBN10,TITLE ,NO_OF_COPIES);
SELECT ISBN10,TITLE,NAME,BRANCH_ID FROM
(SELECT bk.ISBN10,bk.Title,auth.author_name,bkcp.branch_id
FROM project1_books bk
INNER JOIN project1_book_authors auth ON bk.ISBN13=auth.ISBN13
INNER JOIN project1_authors a ON auth.AUTHOR_ID=a.AUTHOR_ID
INNER JOIN project1_book_copies bkcp ON bkcp.ISBN=bk.ISBN10
WHERE UPPER(auth.NAME) LIKE UPPER(CONCAT('%',CONCAT('&NAME','%'))
AND UPPER(bk.Title) LIKE UPPER(CONCAT('%',CONCAT('&TITLE','%'))
AND bk.ISBN10 LIKE CONCAT('%',CONCAT('&ISBN10','%'))
GROUP BY bk.ISBN10,bk.Title,auth.name,bkcp.branch_id);

```

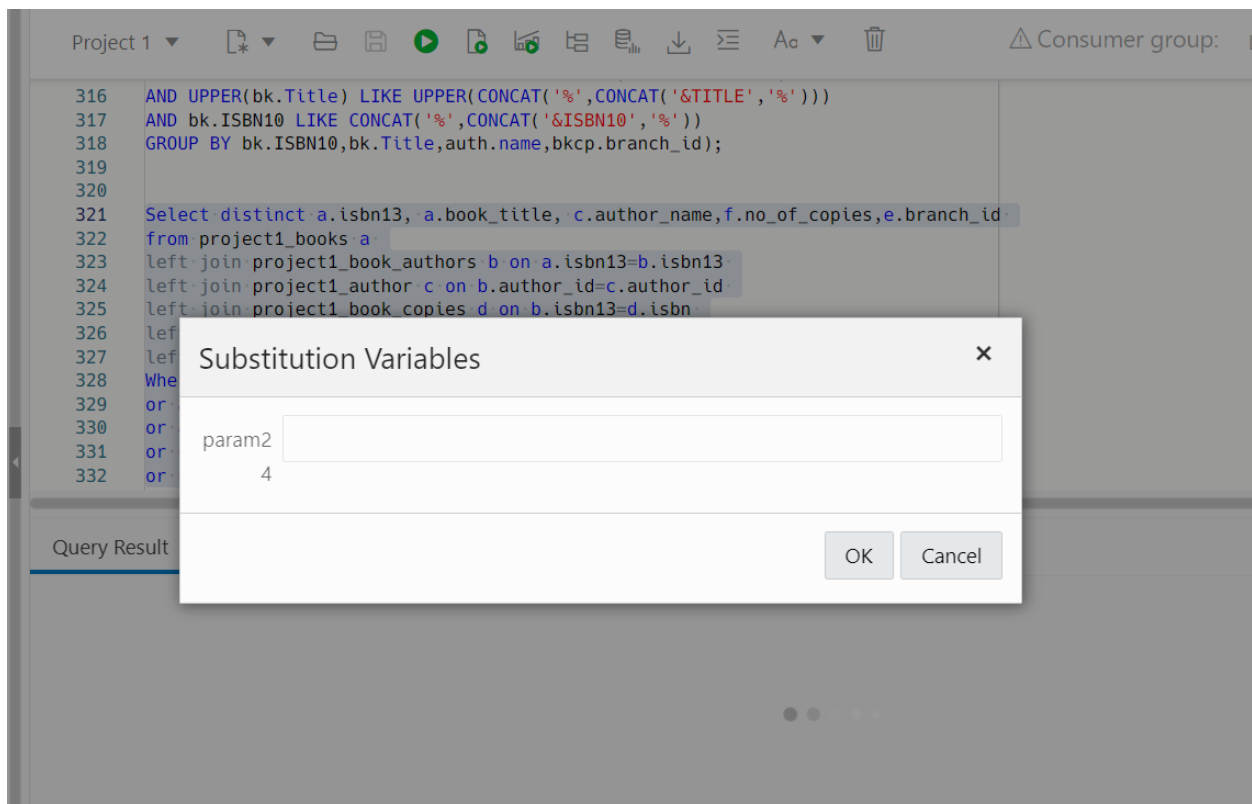


```

Select distinct a.isbn13, a.book_title, c.author_name,f.no_of_copies,e.branch_id

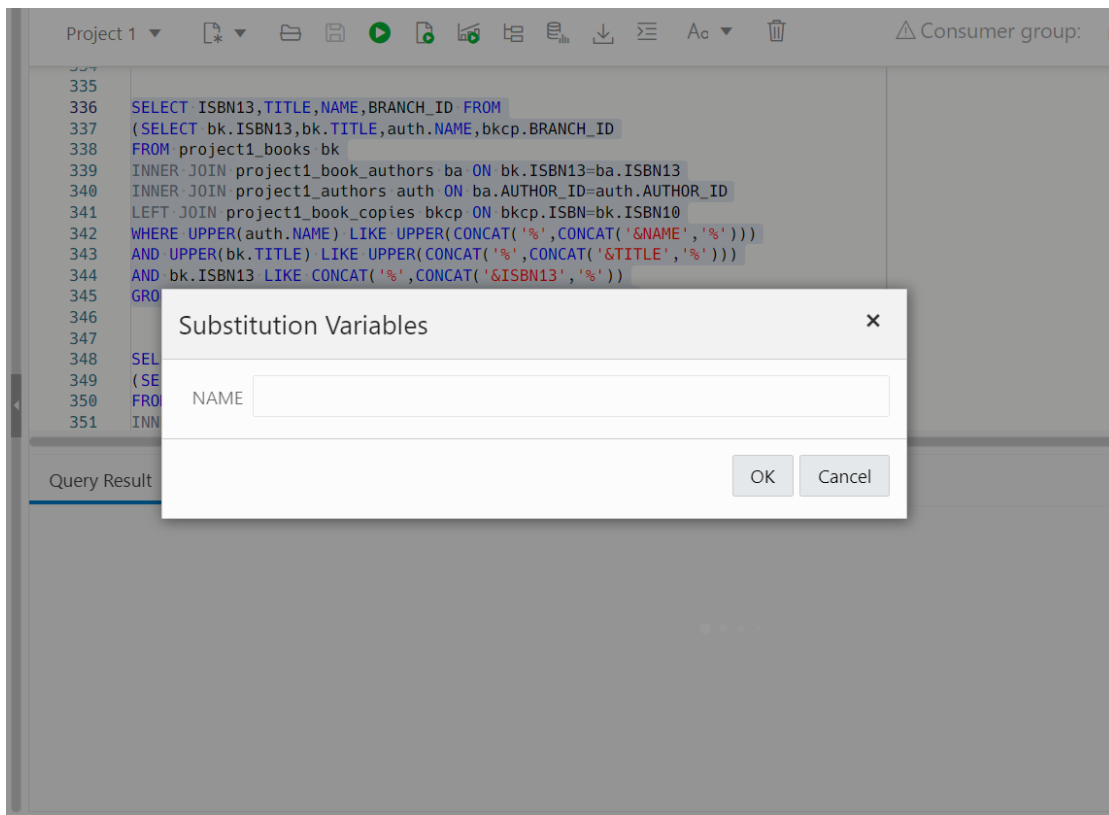
from project1_books a
left join project1_book_authors b on a.isbn13=b.isbn13
left join project1_author c on b.author_id=c.author_id
left join project1_book_copies d on b.isbn13=d.isbn
left join project1_library_branch e on d.branch_id=e.branch_id
left join project1_book_copies_load f on d.isbn=f.book_id
Where a.book_title like '&&param24%' or a.book_title like '&&param24'
or a.book_title like '&&param24%' or a.isbn13 like '&&param24%'
or a.isbn13 like '&&param24%' or a.isbn13 like '&&param24'
or c.author_name like '&&param24%'
or c.author_name like '&&param24%' or c.author_name like '&&param24';

```



Search by Author Name:

```
SELECT ISBN13,TITLE,NAME,BRANCH_ID FROM
(SELECT bk.ISBN13,bk.TITLE,auth.NAME,bkcp.BRANCH_ID
FROM project1_books bk
INNER JOIN project1_book_authors ba ON bk.ISBN13=ba.ISBN13
INNER JOIN project1_authors auth ON ba.AUTHOR_ID=auth.AUTHOR_ID
LEFT JOIN project1_book_copies bkcp ON bkcp.ISBN=bk.ISBN10
WHERE UPPER(auth.NAME) LIKE UPPER(CONCAT('%',CONCAT('&NAME','%'))))
AND UPPER(bk.TITLE) LIKE UPPER(CONCAT('%',CONCAT('&TITLE','%'))))
AND bk.ISBN13 LIKE CONCAT('%',CONCAT('&ISBN13','%'))
GROUP BY bk.ISBN13,bk.TITLE,auth.NAME,bkcp.BRANCH_ID);
```



REPORTS

top 10 popular books:

```
select * from
(
  select first_name, fine_amt from
  (
    select project1_fines.fine_amt, project1_borrower.first_name
    from project1_book_loans
    join project1_fines
    on project1_book_loans.loan_id=project1_fines.loan_id
    join project1_borrower
    on project1_book_loans.card_no = PROJECT1_BORROWER.card_no
    where project1_fines.paid='Yes'
    and project1_book_loans.date_in between add_months(trunc(sysdate, 'mm'), -1) and
    add_months(trunc(sysdate, 'mm'), 0)
  )
  order by fine_amt desc)
where rownum<=10;
```

The screenshot shows a SQL IDE interface. At the top, there's a toolbar with various icons for file operations, execution, and formatting. Below the toolbar, a SQL query is displayed in a text editor, with line numbers 180 through 196. The query is identical to the one in the previous block. Below the editor, there's a tabbed interface with 'Query Result' selected. The 'Query Result' tab shows a table with two columns: 'FIRST_NAME' and 'FINE_AMT'. Below the table header, it states 'No rows selected'. To the right of the table, it shows 'Execution time: 0.055 seconds'.

```
180  --Reports
181  select * from
182  (select first_name, fine_amt from
183  (
184  select project1_fines.fine_amt, project1_borrower.first_name
185  from project1_book_loans
186  join project1_fines
187  on project1_book_loans.loan_id=project1_fines.loan_id
188  join project1_borrower
189  on project1_book_loans.card_no = PROJECT1_BORROWER.card_no
190  where project1_fines.paid='Yes'
191  and project1_book_loans.date_in between add_months(trunc(sysdate, 'mm'), -1) and
192  add_months(trunc(sysdate, 'mm'), 0)
193  )
194  order by fine_amt desc)
195  where rownum<=1000;
196
```

FIRST_NAME	FINE_AMT
No rows selected	

Execution time: 0.055 seconds

Outstanding fine:

```
Select d.branch_name, d.branch_id, sum(a.fine_amt) AS Outstanding_Fine_Amount
from project1_fines a,project1_book_loans b,project1_book_copies
c,project1_library_branch d where a.loan_id = b.loan_id AND b.book_id = c.book_id
AND c.branch_id = d.branch_id group by d.branch_name, d.branch_id order by
Outstanding_Fine_Amount DESC;
```

```
201 select a.card_no,b.isbn,title, branch_name,due_date from project1_book_loans a,
202 project1_borrower bo, project1_book_copies b, project1_books c
203 ,project1_library_branch d
204 where a.card_no=bo.card_no and a.book_id=b.book_id and b.isbn=c.isbn10 and
205 d.branch_id=b.branch_id
206 and due_date<(select sysdate from dual) and date_in is NULL;
207
208
209 Select d.branch_name, d.branch_id, sum(a.fine_amt) AS Outstanding_Fine_Amount
210 from project1_fines a,project1_book_loans b,project1_book_copies
211 c,project1_library_branch d where a.loan_id = b.loan_id AND b.book_id = c.book_id
212 AND c.branch_id = d.branch_id group by d.branch_name, d.branch_id order by
213 Outstanding_Fine_Amount DESC;
214
215
216 -----
217 -----
218 -----
```

Query Result Script Output DBMS Output Explain Plan Autotrace SQL History

Download Execution time: 0.094 seconds

	BRANCH_NAME	BRANCH_ID	OUTSTANDING_FINE_AMOUNT
1	Grauwyler Park	3	400
2	Audelia Road	5	400
3	Lakewood	2	400
4	Highland Hills	4	400
5	Oak Lawn	1	390