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|  | | DB LAB 03 | | | | |  | |
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|  | | | |  |  | | | |
|  | | | | Basil Ali Khan(20K-0477) |  | | | |
|  | | | | 12 September 2022—Database and Management System Lab—Sir Ahmed Budhi |  | | | |
|  | | |  | | |  | | |

**SCENARIO#01:**

**Step 01:**

CREATE TABLE Faculty

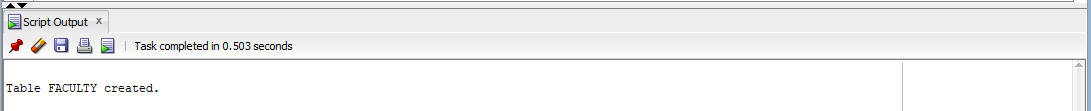
(Faculty\_id NUMBER(6) NOT NULL,

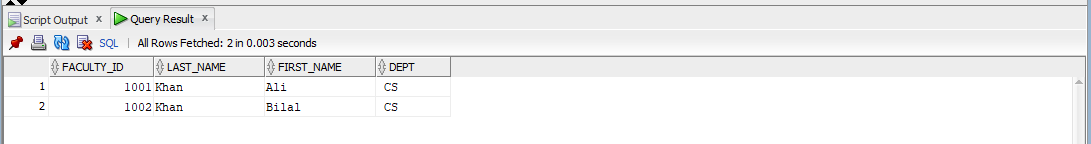
Last\_Name VARCHAR2(15) NOT NULL,

First\_Name VARCHAR2(15) NOT NULL,

Dept CHAR(3),

CONSTRAINTS faculty\_pk PRIMARY KEY(Faculty\_Id));





**Step 02:**

CREATE TABLE Department

(Dept\_code CHAR(3) NOT NULL,

Dept\_Name VARCHAR2(20) NOT NULL,

CONSTRAINT dept\_pk PRIMARY KEY (Dept\_code));

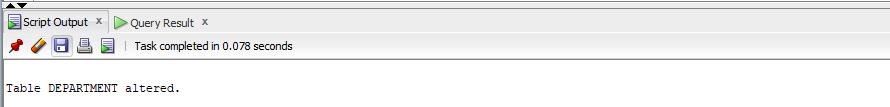




**Step 03:**

ALTER TABLE Department

ADD Location CHAR(7);





**Step 04:**

ALTER TABLE Faculty

ADD CONSTRAINT faculty\_dept\_fk FOREIGN KEY (DEPT) REFERENCES Department(DEPT\_CODE);

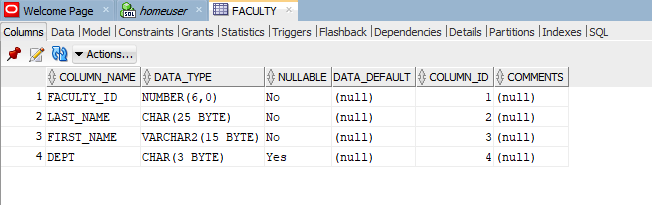


**Step 05:**

ALTER TABLE Faculty

MODIFY Last\_Name CHAR(25);





SCENARIO#02:

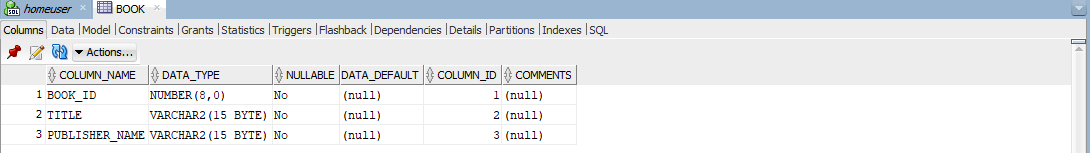
(1)

CREATE TABLE BOOK

(book\_Id NUMBER(8) NOT NULL PRIMARY KEY,

Title VARCHAR2(15) NOT NULL,

Publisher\_Name VARCHAR(15) NOT NULL);



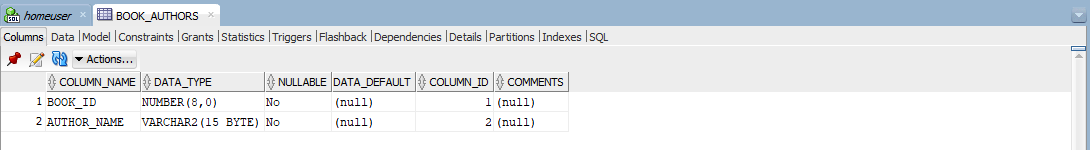
(2)

CREATE TABLE BOOK\_AUTHORS

(Book\_Id NUMBER(8) NOT NULL,

Author\_Name VARCHAR2(15) NOT NULL,

CONSTRAINTS pk\_bidlname PRIMARY KEY (Book\_Id, Author\_Name));



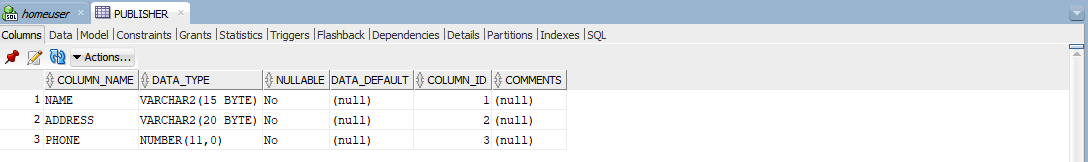
(3)

CREATE TABLE PUBLISHER

(Name VARCHAR2(15) NOT NULL PRIMARY KEY,

Address VARCHAR2(20) NOT NULL,

Phone NUMBER(11) NOT NULL);



(4)

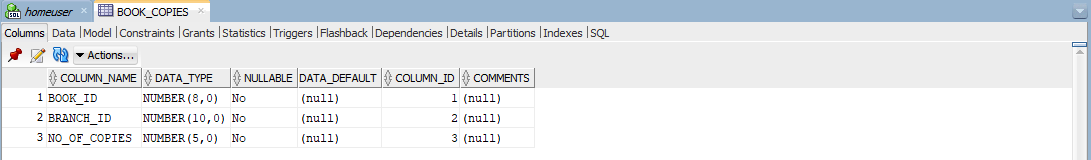
CREATE TABLE BOOK\_COPIES

(Book\_Id NUMBER(8) NOT NULL,

Branch\_Id NUMBER(10) NOT NULL,

No\_Of\_Copies NUMBER(5) NOT NULL,

CONSTRAINTS pk\_boidbrid PRIMARY KEY(Book\_Id, Branch\_Id));



(5)

CREATE TABLE BOOK\_LOANS

(Book\_Id NUMBER(8) NOT NULL,

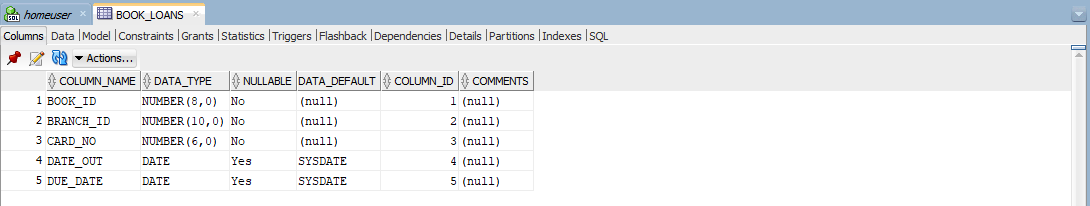
Branch\_Id NUMBER(10) NOT NULL,

Card\_No NUMBER(6) NOT NULL,

Date\_out DATE DEFAULT SYSDATE,

Due\_Date DATE DEFAULT SYSDATE,

CONSTRAINTS pk\_boidbridcn PRIMARY KEY(Book\_Id, Branch\_Id, Card\_No));



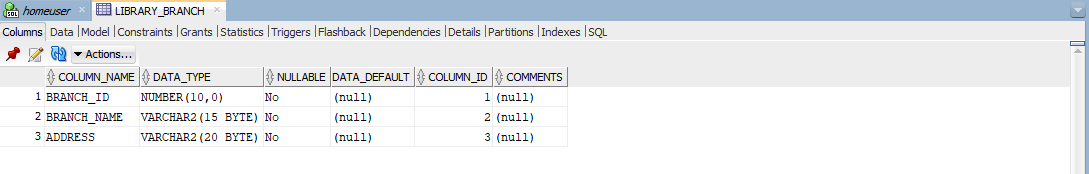
(6)

CREATE TABLE LIBRARY\_BRANCH

(Branch\_Id NUMBER(10) NOT NULL PRIMARY KEY,

Branch\_Name VARCHAR(15) NOT NULL,

Address VARCHAR(20) NOT NULL);



(7)

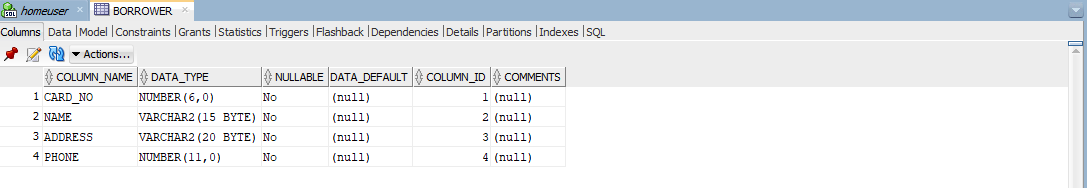
CREATE TABLE BORROWER

(Card\_No NUMBER(6) NOT NULL PRIMARY KEY,

Name VARCHAR2(15) NOT NULL,

Address VARCHAR2(20) NOT NULL,

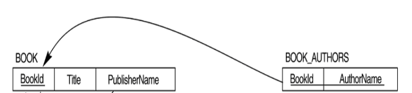
Phone NUMBER(11) NOT NULL);



(8)

ALTER TABLE BOOK\_AUTHORS

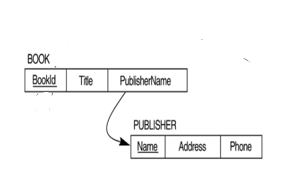
ADD FOREIGN KEY (Book\_Id) REFERENCES BOOK(Book\_Id);



(9)

ALTER TABLE BOOK

ADD FOREIGN KEY (Publisher\_Name) REFERENCES PUBLISHER(Name);



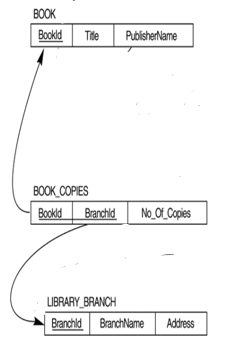
(10)

ALTER TABLE BOOK\_COPIES

ADD FOREIGN KEY (Book\_Id) REFERENCES BOOK(Book\_Id);

ALTER TABLE BOOK\_COPIES

ADD FOREIGN KEY (Branch\_Id) REFERENCES LIBRARY\_BRANCH(Branch\_Id);



(11)

ALTER TABLE BOOK\_LOANS

ADD FOREIGN KEY (Book\_Id) REFERENCES BOOK(Book\_id);

ALTER TABLE BOOK\_LOANS

ADD FOREIGN KEY (Branch\_Id) REFERENCES LIBRARY\_BRANCH(Branch\_Id);

ALTER TABLE BOOK\_LOANS

ADD FOREIGN KEY (Card\_No) REFERENCES BORROWER(Card\_No);

