**CIS-310 Database Design**

**Assignment #9**

**70 points**

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In this assignment you will create and populate with the data values a Henry Books database. The database contains 6 tables. The ERD for the database and the data values with which the tables will be populated are in pages 3-8 of this document. In the Assignment 9 folder you will find the SQL code in a file named *Assignment 9 - Fall2021 - SQL Code for Populating the Tables* that you have to utilize and expand. The file contains the comments and places where you have to insert a missing code that you need to write. Note that the syntax used in the textbook varies slightly from the SQL Server syntax so please watch the demos in which I use the SQL Server syntax. Also, the SQL code used in Assignments 4 & 8 will be helpful.

**Part A (50 points)**

1. Open the SQL file named *Assignment 9 - Fall2021 - SQL Code for Populating the Tables*. Read all the comments and identify the marked places into which you have to insert the code from points b, c, and d below.
2. Write the code to drop the 6 tables in the proper order.
3. Write the code to create the table structure for each of the 6 tables. For each table define the columns/attributes and their data types as well as the PK. Look at the ERD and the data values in the tables to find the names of the tables and the name of the attributes. Look at the data values in the tables to determine the proper data type for the attributes.
4. Use the ALTER TABLE command to define all the FKs like we did in Assignment 8 for the Henry Books database.
5. Save the code as *Assignment\_9\_Part A\_Your\_FirstName\_Your\_LastName* on the J drive.
6. Run the SQL code. If the code runs successfully, it should create the 6 tables, define PKs and FKs, and populate them with the given data. If the code does not run, fix the errors and run it again. The code has to run successfully to be able to do Part B of this assignment. If you make any corrections, use refresh for the changes to take place, and resave the code.
7. Right-click on the Database Diagram, select New Database Diagram, add the 6 tables to the ERD diagram. The links between them will be created automatically as you have already defined the PKs and FKs and relationships by the SQL code. Rearrange the tables and connections in the ERD so that they fit on one page. Save the diagram as *Assignment 9 Diagram*.

I will go to the database of every student to check if the six tables have been created and populated and if you created the ERD diagram.

**Part B (20 points)**

Using the Henry Books database write the SQL queries for four of the following problems. Save the four queries in a single SQL file in your account on J drive. Run each query, one at a time.

Problem 1

Write and execute the CREATE VIEW command to create the PAPERBACK view that consists of the book code, title, publisher name, and price for every book that is available in paperback. Note that you have to join 2 tables.

Paste the SQL code that you used to create the PAPERBACK view and the output generated by (SELECT \* FROM PAPERBACK;) below this line.

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DROP VIEW IF EXISTS PAPERBACK;

CREATE VIEW PAPERBACK AS

SELECT BOOK.BOOKCODE, BOOK.TITLE, PUBLISHER.PUBLISHERNAME, BOOK.PRICE

FROM BOOK, PUBLISHER

WHERE BOOK.PUBLISHERCODE = PUBLISHER.PUBLISHERCODE

AND BOOK.PAPERBACK=TRUE;

Problem 2

Write and execute the CREATE VIEW command to create the PLUME view that consists of the book code, title, type, price, and author’s name for every book published by Plum and a price of less than $13. Note that you have to join 3 tables.

Paste the SQL code that you used to create the PLUME view and the output generated by (SELECT \* FROM PLUME;) below this line.

-------------------------------------------------------------------------------------------------------------------------------

DROP VIEW IF EXISTS PLUME;

CREATE VIEW PLUME AS

SELECT BOOK\_CODE, TITLE, PRICE, TYPE, AUTHOR\_FIRST, AUTHOR\_LAST

FROM BOOK, AUTHOR, PUBLISHER

WHERE PRICE < 13

(SELECT PRICE

FROM BOOK

WHERE PUBLISHER\_CODE = ‘PL’);

Problem 3

Write a stored procedure named USP\_DISP\_AUTHOR that will accept the author number as an input argument/parameter and display the author number, author first name and author last name. Run the procedure using the EXEC statement followed by name of the procedure and a value for the parameter such as ‘20’.

Paste the SQL code that you used to create the USP\_DISP\_AUTHOR procedure and the output generated by EXEC statement below this line.

-------------------------------------------------------------------------------------------------------------------------------

CREATE PROCEDURE USP\_DISP\_AUTHOR

@authornum INT char(3)

AS

BEGIN

SELECT AUTHOR\_NUM, AUTHOR\_FIRST, AUTHOR\_LAST

FROM AUTHOR

WHERE AUTHOR\_NUM = @authornum

END

EXEC USP\_DISP\_AUTHOR ‘20’;

Problem 4

Write a stored procedure named USP\_DISP\_BOOK\_INFO that will accept the book code as an input argument/parameter and display the title, publisher code and publisher name. Run the procedure using the EXEC statement followed by name of the procedure and a value for the parameter such as ‘3906’.

Paste the SQL code that you used to create the USP\_DISP\_BOOK\_INFO procedure and the output generated by EXEC statement below this line.

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CREATE PROCEDURE USP\_DISP\_BOOK\_INFO

@bookcode char(5)

AS

BEGIN

SELECT TITLE, PUBLISHER\_CODE, PUBLISHER\_NAME

FROM BOOK, PUBLISHER

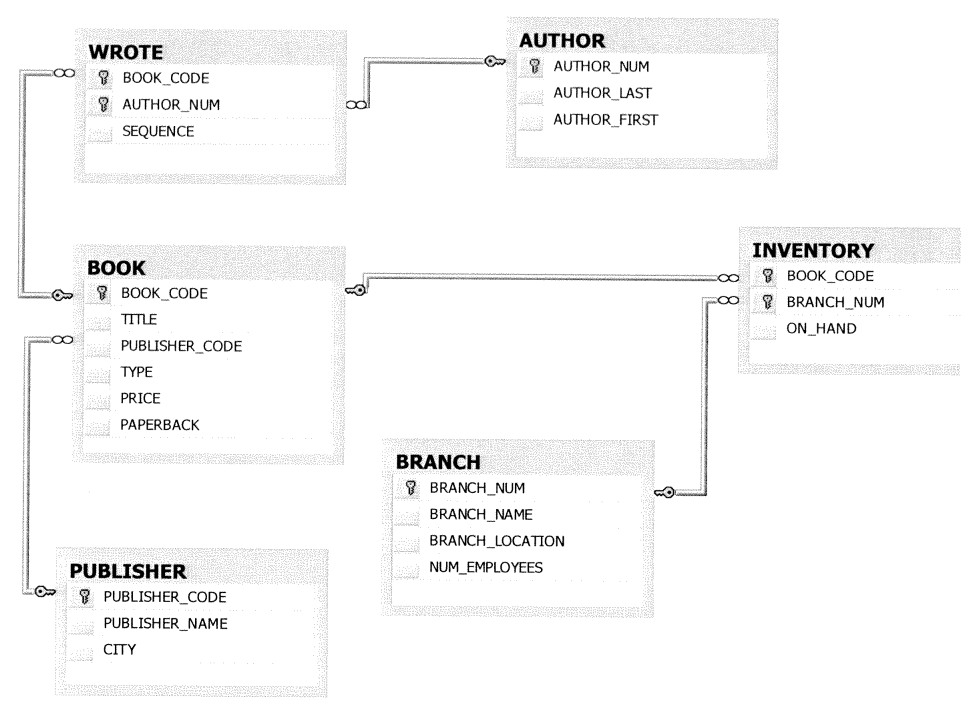
WHERE BOOK\_CODE =@bookcode

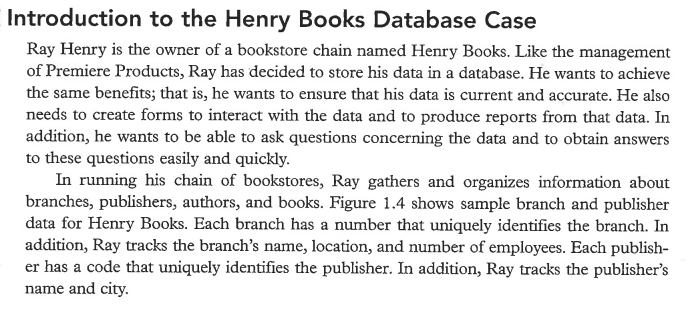
END

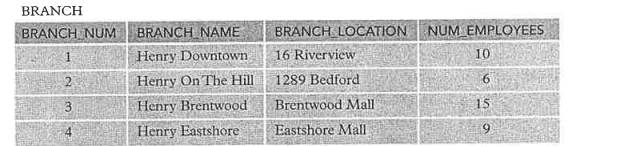
EXEC USP\_DISP\_BOOK\_INFO ‘3906’;

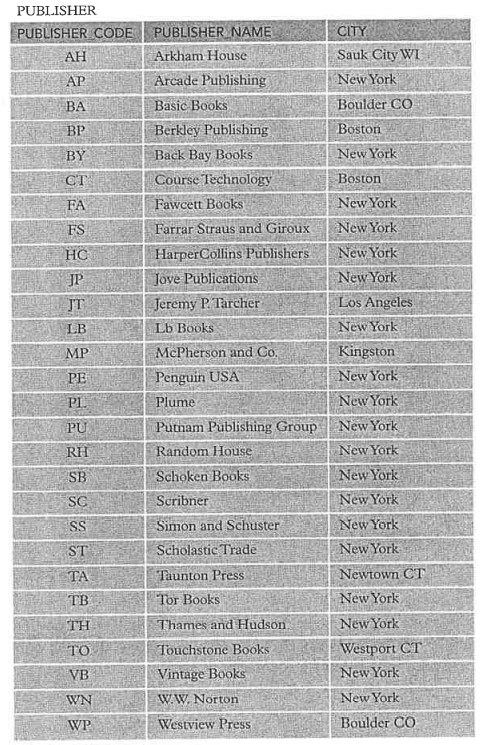
**After you paste into this document the SQL code and the output it generated for the four problems, save this document as Word or pdf file named Assignment9\_YourFirstName\_YourLastName and submit via Blackboard. See the Assignments/Assignments/Assignment 9 folder.**

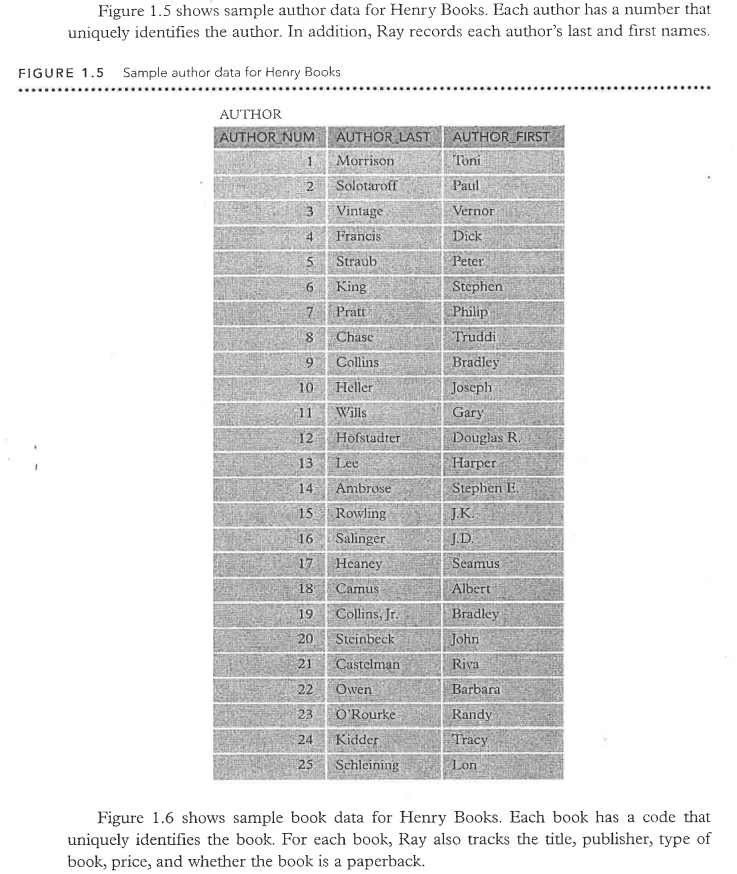
**The Henry Books Database ERD**

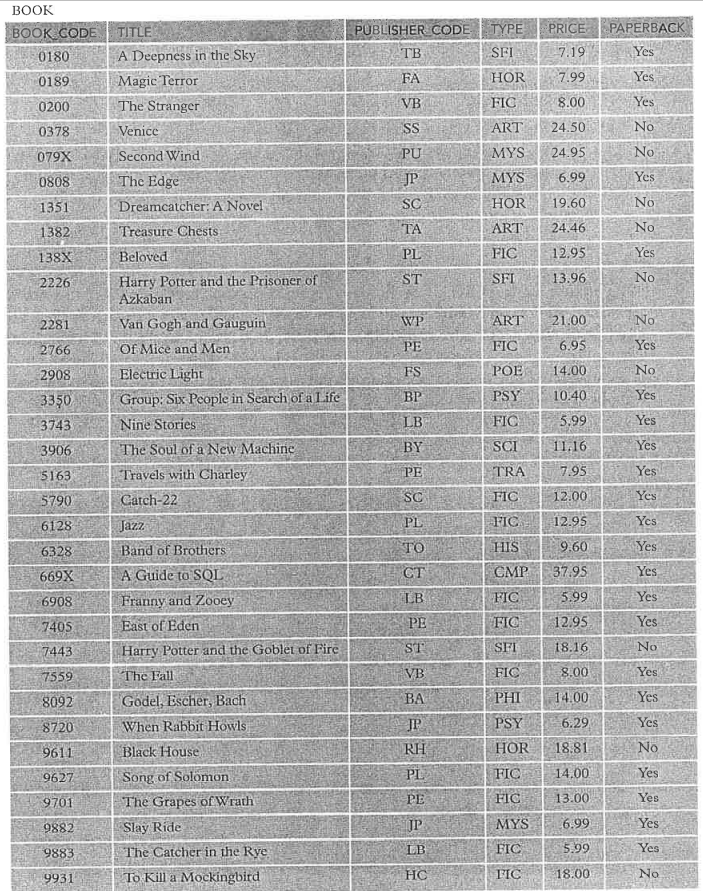


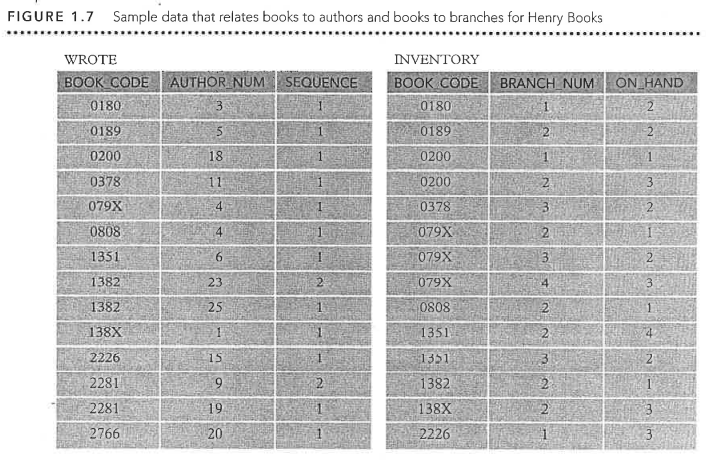










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