Student Name: Zoe

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)

a. 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.

b. Write the code to drop the 6 tables in the proper order.

c. 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.

d. Use the ALTER TABLE command to define all the FKs like we did in Assignment 8 for the Henry Books database.

e. Save the code as *Assignment_9_Part A_Your_FirstName_Your_LastName* on the J drive.

f. 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.

g. 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.
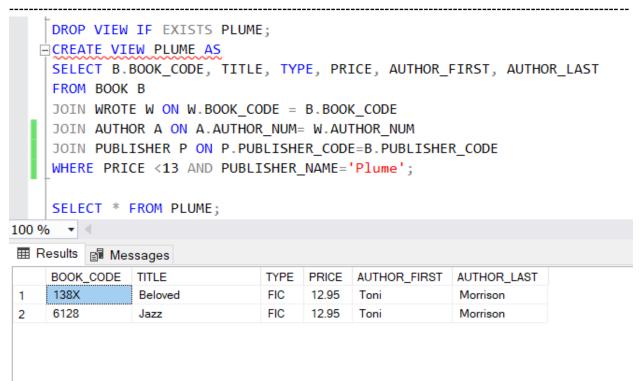
Problem 1

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.

```sql
DROP VIEW IF EXISTS PAPERBACK;
CREATE VIEW PAPERBACK AS
SELECT BOOK_CODE, TITLE, PUBLISHER_NAME, PRICE
FROM BOOK B
JOIN PUBLISHER P ON B.PUBLISHER_CODE = P.PUBLISHER_CODE
WHERE PAPERBACK = 'Y';


SELECT * FROM PAPERBACK;
```

100 %

Results | Messages

	BOOK_CODE	TITLE	PUBLISHER_NAME	PRICE
1	0180	A Deepness in the Sky	Tor Books	7.19
2	0189	Magic Terror	Fawcett Books	7.99
3	0200	The Stranger	Vintage Books	8.00
4	0808	The Edge	Jove Publications	6.99
5	138X	Beloved	Plume	12.95
6	2766	Of Mice and Men	Penguin USA	6.95
7	3350	Group: Six People in Search of a Life	Berkley Publishing	10.40
8	3743	Nine Stories	Lb Books	5.99
9	3906	The Soul of a New Machine	Back Bay Books	11.16
10	5163	Travels with Charley	Penguin USA	7.95
11	5790	Catch-22	Scribner	12.00
12	6128	Jazz	Plume	12.95
13	6328	Band of Brothers	Touchstone Books	9.60
14	669X	A Guide to SQL	Course Technology	37.95
15	6908	Franny and Zooey	Lb Books	5.99
16	7405	East of Eden	Penguin USA	12.95
17	7559	The Fall	Vintage Books	8.00
18	8092	Godel, Escher, Bach	Basic Books	14.00
19	8720	When Rabbit Howls	Jove Publications	6.29
20	9627	Song of Solomon	Plume	14.00
21	9701	The Grapes of Wrath	Penguin USA	13.00
22	9882	Slay Ride	Jove Publications	6.99
23	9883	The Catcher in the Rye	Lb Books	5.99

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 B.BOOK_CODE, TITLE, TYPE, PRICE, AUTHOR_FIRST, AUTHOR_LAST
FROM BOOK B
JOIN WROTE W ON W.BOOK_CODE = B.BOOK_CODE
JOIN AUTHOR A ON A.AUTHOR_NUM= W.AUTHOR_NUM
JOIN PUBLISHER P ON P.PUBLISHER_CODE=B.PUBLISHER_CODE
WHERE PRICE <13 AND PUBLISHER_NAME='Plume';

SELECT * FROM PLUME;
```

100 %

▦ Results ▤ Messages

	BOOK_CODE	TITLE	TYPE	PRICE	AUTHOR_FIRST	AUTHOR_LAST
1	138X	Beloved	FIC	12.95	Toni	Morrison
2	6128	Jazz	FIC	12.95	Toni	Morrison

3

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 fast 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.

```
DROP PROC IF EXISTS USP_DISP_AUTHOR;
CREATE PROC USP_DISP_AUTHOR
@authornum INT
AS
SELECT AUTHOR_NUM, AUTHOR_FIRST, AUTHOR_LAST
FROM AUTHOR
WHERE @authornum = AUTHOR_NUM;

EXEC USP_DISP_AUTHOR '20';
```

100 %

⊞ Results ▥ Messages

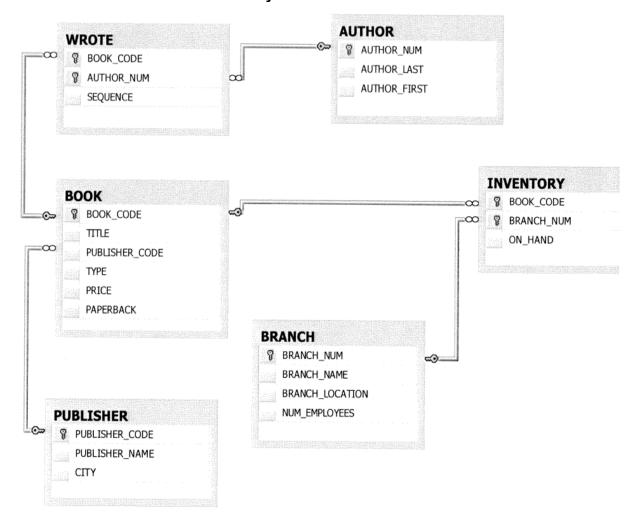|	AUTHOR_NUM	AUTHOR_FIRST	AUTHOR_LAST
1	20	John	Steinbeck

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.

```
DROP PROC IF EXISTS USP_DISP_BOOK_INFO;
CREATE PROC USP_DISP_BOOK_INFO
@bookcode CHAR(4)
AS
SELECT TITLE, B.PUBLISHER_CODE, PUBLISHER_NAME
FROM BOOK B
JOIN PUBLISHER P ON B.PUBLISHER_CODE=P.PUBLISHER_CODE
WHERE @bookcode = B.BOOK_CODE;

EXEC USP_DISP_BOOK_INFO '3906';
```

100 %

⊞ Results ⊞ Messages

	TITLE	PUBLISHER_CODE	PUBLISHER_NAME
1	The Soul of a New Machine	BY	Back Bay Books

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

Introduction to the Henry Books Database Case

Ray Henry is the owner of a bookstore chain named Henry Books. Like the management of Premiere Products, Ray has decided to store his data in a database. He wants to achieve the same benefits; that is, he wants to ensure that his data is current and accurate. He also needs to create forms to interact with the data and to produce reports from that data. In addition, he wants to be able to ask questions concerning the data and to obtain answers to these questions easily and quickly.

In running his chain of bookstores, Ray gathers and organizes information about branches, publishers, authors, and books. Figure 1.4 shows sample branch and publisher data for Henry Books. Each branch has a number that uniquely identifies the branch. In addition, Ray tracks the branch's name, location, and number of employees. Each publisher has a code that uniquely identifies the publisher. In addition, Ray tracks the publisher's name and city.

BRANCH

BRANCH_NUM	BRANCH_NAME	BRANCH_LOCATION	NUM_EMPLOYEES
1	Henry Downtown	16 Riverview	10
2	Henry On The Hill	1289 Bedford	6
3	Henry Brentwood	Brentwood Mall	15
4	Henry Eastshore	Eastshore Mall	9

PUBLISHER

PUBLISHER_CODE	PUBLISHER_NAME	CITY
AH	Arkham House	Sauk City WI
AP	Arcade Publishing	New York
BA	Basic Books	Boulder CO
BP	Berkley Publishing	Boston
BY	Back Bay Books	New York
CT	Course Technology	Boston
FA	Fawcett Books	New York
FS	Farrar Straus and Giroux	New York
HC	HarperCollins Publishers	New York
JP	Jove Publications	New York
JT	Jeremy P. Tarcher	Los Angeles
LB	Lb Books	New York
MP	McPherson and Co.	Kingston
PE	Penguin USA	New York
PL	Plume	New York
PU	Putnam Publishing Group	New York
RH	Random House	New York
SB	Schoken Books	New York
SC	Scribner	New York
SS	Simon and Schuster	New York
ST	Scholastic Trade	New York
TA	Taunton Press	Newtown CT
TB	Tor Books	New York
TH	Thames and Hudson	New York
TO	Touchstone Books	Westport CT
VB	Vintage Books	New York
WN	W.W. Norton	New York
WP	Westview Press	Boulder CO

Figure 1.5 shows sample author data for Henry Books. Each author has a number that uniquely identifies the author. In addition, Ray records each author's last and first names.

FIGURE 1.5   Sample author data for Henry Books

AUTHOR

AUTHOR_NUM	AUTHOR_LAST	AUTHOR_FIRST
1	Morrison	Toni
2	Solotaroff	Paul
3	Vintage	Vernor
4	Francis	Dick
5	Straub	Peter
6	King	Stephen
7	Pratt	Philip
8	Chase	Truddi
9	Collins	Bradley
10	Heller	Joseph
11	Wills	Gary
12	Hofstadter	Douglas R.
13	Lee	Harper
14	Ambrose	Stephen E.
15	Rowling	J.K.
16	Salinger	J.D.
17	Heaney	Seamus
18	Camus	Albert
19	Collins, Jr.	Bradley
20	Steinbeck	John
21	Castelman	Riva
22	Owen	Barbara
23	O'Rourke	Randy
24	Kidder	Tracy
25	Schleining	Lon

Figure 1.6 shows sample book data for Henry Books. Each book has a code that uniquely identifies the book. For each book, Ray also tracks the title, publisher, type of book, price, and whether the book is a paperback.

8

BOOK

BOOK_CODE	TITLE	PUBLISHER CODE	TYPE	PRICE	PAPERBACK
0180	A Deepness in the Sky	TB	SFI	7.19	Yes
0189	Magic Terror	FA	HOR	7.99	Yes
0200	The Stranger	VB	FIC	8.00	Yes
0378	Venice	SS	ART	24.50	No
079X	Second Wind	PU	MYS	24.95	No
0808	The Edge	JP	MYS	6.99	Yes
1351	Dreamcatcher: A Novel	SC	HOR	19.60	No
1382	Treasure Chests	TA	ART	24.46	No
138X	Beloved	PL	FIC	12.95	Yes
2226	Harry Potter and the Prisoner of Azkaban	ST	SFI	13.96	No
2281	Van Gogh and Gauguin	WP	ART	21.00	No
2766	Of Mice and Men	PE	FIC	6.95	Yes
2908	Electric Light	FS	POE	14.00	No
3350	Group: Six People in Search of a Life	BP	PSY	10.40	Yes
3743	Nine Stories	LB	FIC	5.99	Yes
3906	The Soul of a New Machine	BY	SCI	11.16	Yes
5163	Travels with Charley	PE	TRA	7.95	Yes
5790	Catch-22	SC	FIC	12.00	Yes
6128	Jazz	PL	FIC	12.95	Yes
6328	Band of Brothers	TO	HIS	9.60	Yes
669X	A Guide to SQL	CT	CMP	37.95	Yes
6908	Franny and Zooey	LB	FIC	5.99	Yes
7405	East of Eden	PE	FIC	12.95	Yes
7443	Harry Potter and the Goblet of Fire	ST	SFI	18.16	No
7559	The Fall	VB	FIC	8.00	Yes
8092	Godel, Escher, Bach	BA	PHI	14.00	Yes
8720	When Rabbit Howls	JP	PSY	6.29	Yes
9611	Black House	RH	HOR	18.81	No
9627	Song of Solomon	PL	FIC	14.00	Yes
9701	The Grapes of Wrath	PE	FIC	13.00	Yes
9882	Slay Ride	JP	MYS	6.99	Yes
9883	The Catcher in the Rye	LB	FIC	5.99	Yes
9931	To Kill a Mockingbird	HC	FIC	18.00	No

FIGURE 1.7 Sample data that relates books to authors and books to branches for Henry Books

WROTE

BOOK_CODE	AUTHOR_NUM	SEQUENCE
0180	3	1
0189	5	1
0200	18	1
0378	11	1
079X	4	1
0808	4	1
1351	6	1
1382	23	2
1382	25	1
138X	1	1
2226	15	1
2281	9	2
2281	19	1
2766	20	1

INVENTORY

BOOK_CODE	BRANCH_NUM	ON_HAND
0180	1	2
0189	2	2
0200	1	1
0200	2	3
0378	3	2
079X	2	1
079X	3	2
079X	4	3
0808	2	1
1351	2	4
1351	3	2
1382	2	1
138X	2	3
2226	1	3

WROTE		
BOOK_CODE	AUTHOR_NUM	SEQUENCE
2908	17	1
3350	2	1
3743	16	1
3906	24	1
5163	20	1
5790	10	1
6128	1	1
6328	14	1
669X	7	1
6908	16	1
7405	20	1
7443	15	1
7559	18	1
8092	12	1
8720	8	1
9611	5	2
9611	6	1
9627	1	1
9701	20	1
9882	4	1
9883	16	1
9931	13	1

INVENTORY		
BOOK_CODE	BRANCH_NUM	ON_HAND
2226	3	2
2226	4	1
2281	4	3
2766	3	2
2908	1	3
2908	4	1
3350	1	2
3743	2	1
3906	2	1
3906	3	2
5163	1	1
5790	4	2
6128	2	4
6128	3	3
6328	2	2
669X	1	1
6908	2	2
7405	3	2
7443	4	1
7559	2	2
8092	3	1
8720	1	3
9611	1	2
9627	3	5
9627	4	2
9701	1	2
9701	2	1
9701	3	3
9701	4	2
9882	3	3
9883	2	3
9883	4	2
9931	1	2