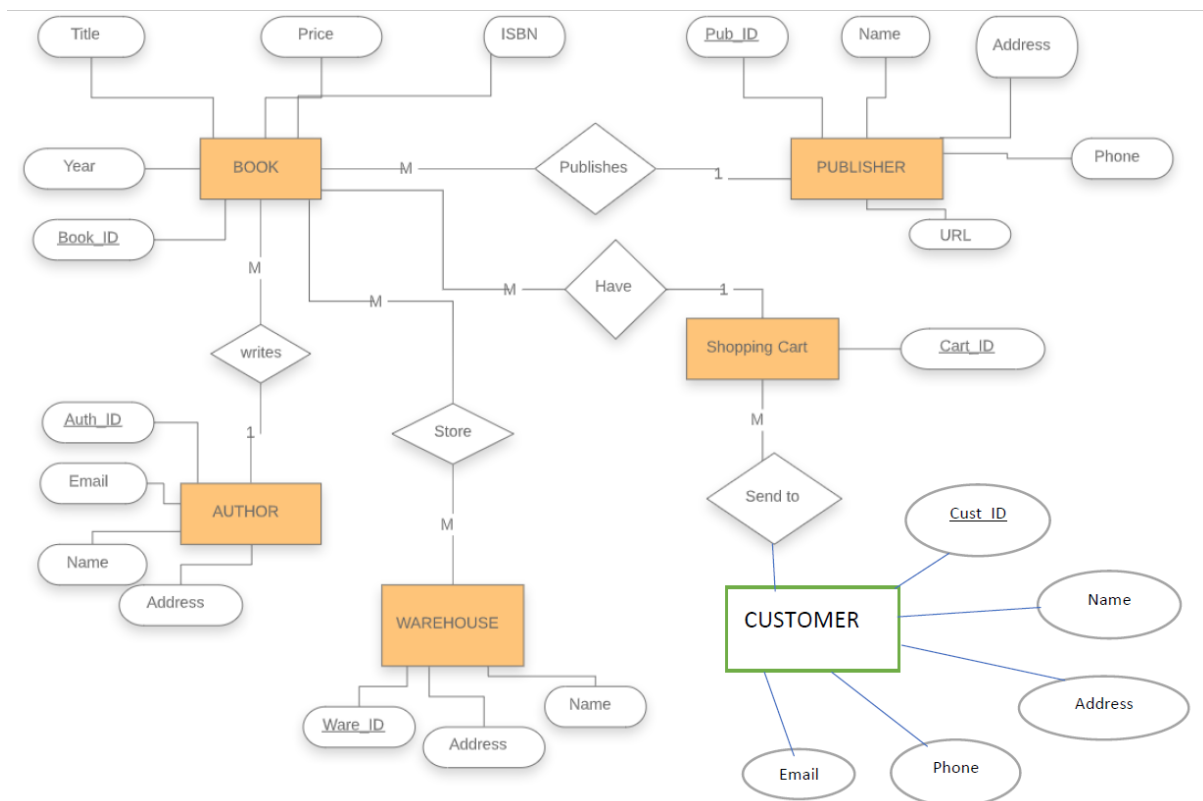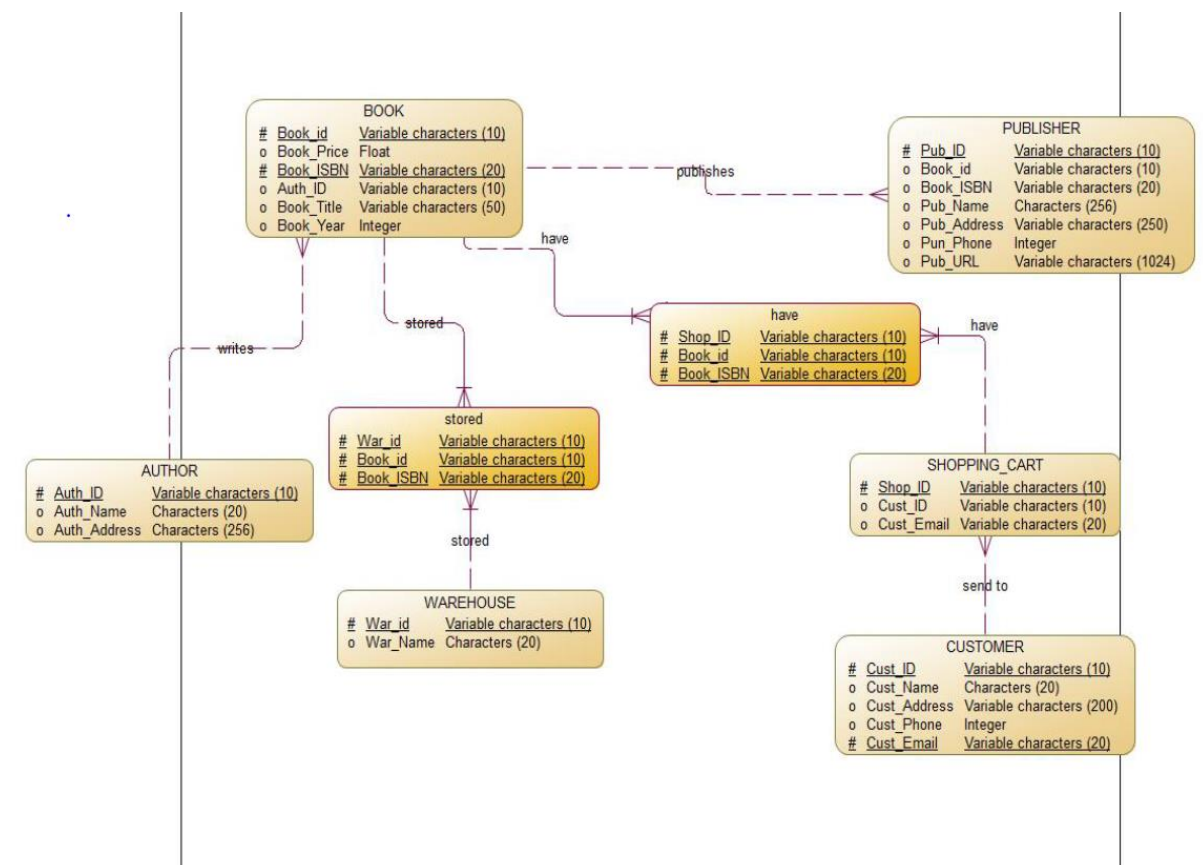# Relational Database Project – Book Store

Entity–relationship model

Logical Design: Relational Model of the Book Store using Power Designer 16.0

Data Definition Language

```
CREATE DATABASE BookStore;

use BookStore;


/*===============================================================*/
/* Table: AUTHOR                            */
/*===============================================================*/


drop table if exists AUTHOR;

create table AUTHOR

(

 AUTH_ID         varchar(10)            not null,

  AUTH_NAME        char(20)             null,

  AUTH_ADDRESS      char(100)             null,

   constraint PK_AUTHOR primary key clustered (AUTH_ID)

);


/*===============================================================*/
/* Table: BOOK                            */
/*===============================================================*/


drop table if exists BOOK;

create table BOOK

(

  BOOK_ID         varchar(10)            not null,

  BOOK_PRICE       float             null,

  BOOK_ISBN        varchar(20)             not null,

  AUTH_ID         varchar(10)            null,

  BOOK_TITLE       varchar(50)             null,

  BOOK_YEAR        integer             null,

   constraint PK_BOOK primary key clustered (BOOK_ID, BOOK_ISBN)

);


/*===============================================================*/
/* Table: CUSTOMER                            */
/*===============================================================*/

drop table if exists CUSTOMER;
```

```sql
create table CUSTOMER
(
   CUST_ID          varchar(10)          not null,
   CUST_NAME        char(20)             null,
   CUST_ADDRESS     varchar(200)         null,
   CUST_PHONE       integer              null,
   CUST_EMAIL       varchar(20)          not null,
   constraint PK_CUSTOMER primary key clustered (CUST_ID, CUST_EMAIL)
);


/*==============================================================*/
/* Table: HAVE                          */
/*==============================================================*/


drop table if exists HAVE;
create table HAVE
(
   SHOP_ID          varchar(10)          not null,
   BOOK_ID          varchar(10)          not null,
   BOOK_ISBN        varchar(20)          not null,
   constraint PK_HAVE primary key clustered (SHOP_ID, BOOK_ID, BOOK_ISBN)
);


/*==============================================================*/
/* Table: PUBLISHER                        */
/*==============================================================*/


drop table if exists PUBLISHER;
create table PUBLISHER
(
   PUB_ID           varchar(10)          not null,
   BOOK_ID          varchar(10)          null,
   BOOK_ISBN        varchar(20)          null,
   PUB_NAME         char(30)             null,
   PUB_ADDRESS      varchar(250)         null,
   PUN_PHONE        integer              null,
   PUB_URL          varchar(1024)        null,
```

```
   constraint PK_PUBLISHER primary key clustered (PUB_ID)
);


/*==============================================================*/
/* Table: SHOPPING_CART                          */
/*==============================================================*/


drop table if exists SHOPPING_CART;

create table SHOPPING_CART
(
   SHOP_ID          varchar(10)           not null,
   CUST_ID          varchar(10)           null,
   CUST_EMAIL       varchar(20)           null,
   constraint PK_SHOPPING_CART primary key clustered (SHOP_ID)
);


/*==============================================================*/
/* Table: STORED                             */
/*==============================================================*/


drop table if exists STORED_T;

create table STORED_T
(
   WAR_ID          varchar(10)           not null,
   BOOK_ID          varchar(10)           not null,
   BOOK_ISBN        varchar(20)           not null,
   constraint PK_STORED_T primary key clustered (WAR_ID, BOOK_ID, BOOK_ISBN)
);
/*==============================================================*/
/* Table: WAREHOUSE                          */
/*==============================================================*/


drop table if exists WAREHOUSE;

create table WAREHOUSE
(
   WAR_ID          varchar(10)           not null,
   WAR_NAME         char(20)             null,
```
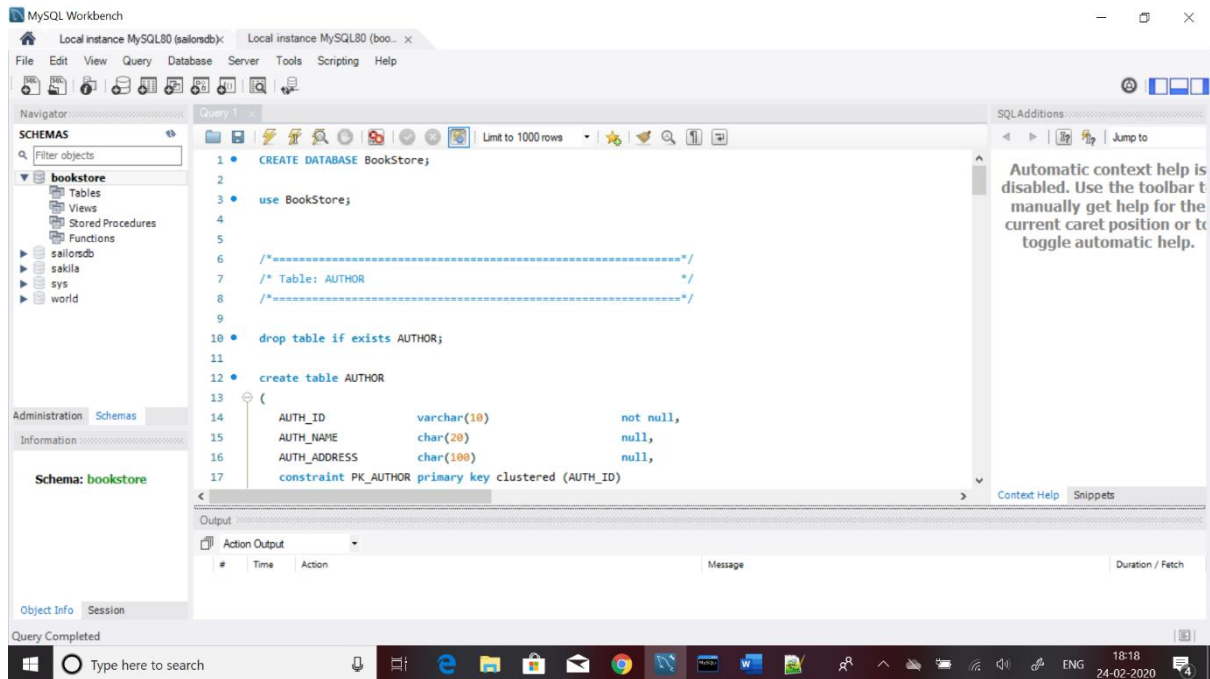
constraint PK_WAREHOUSE primary key clustered (WAR_ID)

);

Inserting data in tables……..

SELECT * FROM bookstore.publisher;

Insert into Publisher (PUB_ID, BOOK_ID, BOOK_ISBN, PUB_NAME, PUB_ADDRESS, PUN_PHONE ,PUB_URL) values(01,'ABC1', 'ABCD1','Penguin Random House', 'Luchana 23 Madrid Spain',535819,'http://www.penguinrandomhouse.com/');

Insert into Publisher (PUB_ID, BOOK_ID, BOOK_ISBN, PUB_NAME, PUB_ADDRESS, PUN_PHONE ,PUB_URL) values(02, 'ABC2', 'ABCD2',   'Hachette Livre','50 Victoria Embankment',227000, 'https://www.hachette.com');

Insert into Publisher (PUB_ID, BOOK_ID, BOOK_ISBN, PUB_NAME, PUB_ADDRESS, PUN_PHONE ,PUB_URL) values(03,'ABC3', 'ABCD3', 'HarperCollins', 'The News Building London Bridge Street',2427737,'https://www.harpercollins.com/');
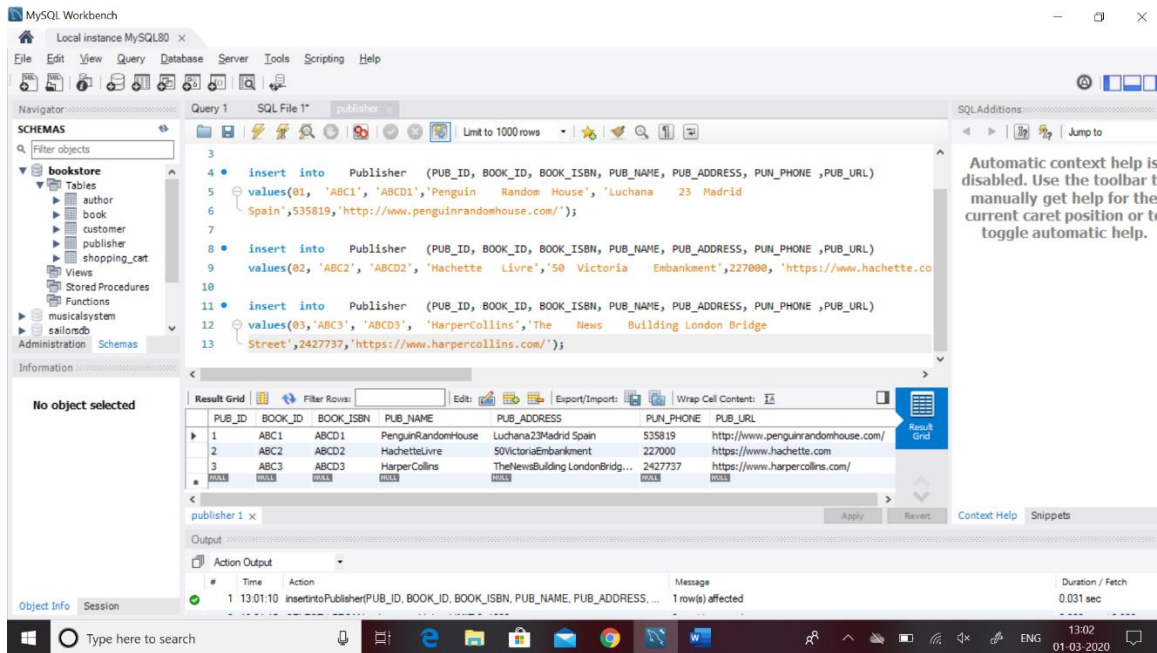
select * from author;

insert into Author values (01,'Cat Sebastian', '9296 Henry St. Auburndale   FL 33823');

insert into Author values (02,'Lorraine Heath', '974 Broad Dr. Marcus Hook PA   19061');

insert into Author values (03,'Jill   Shalvis','187 Cherry Rd.   Reston   VA 20191');

insert into Author values (04,'Kevin Kwan','13 Locust St.   Round   Lake IL   60073');

insert into Author values (05,'Elisabeth   Noreback','26 Rock Creek Dr. Tuscaloosa AL 35405');

insert into Author values (06,'Pamela Brown', '409 Santa Clara Ave. Cedar Rapids IA 52402');
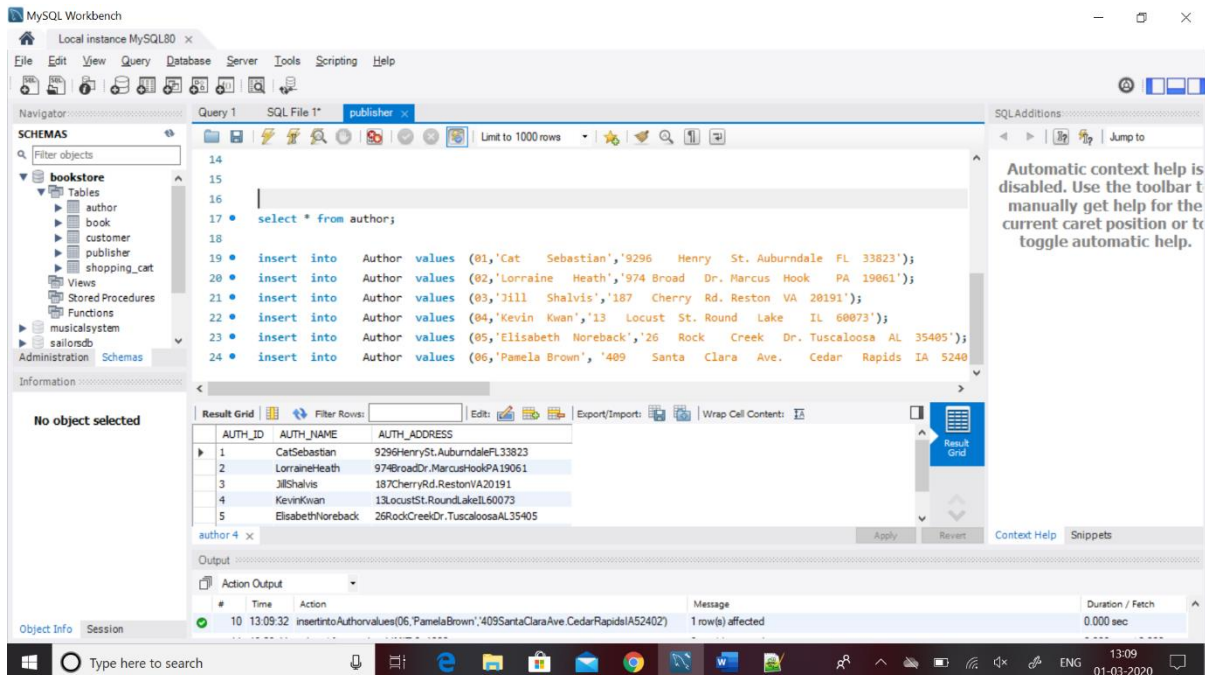
select * from book;

insert   into   book   (BOOK_ID, BOOK_PRICE,BOOK_ISBN,   AUTH_ID, BOOK_TITLE,BOOK_YEAR)
          values   ('B001, 384.00 ,'9706279318', 'A001' , 'A Gentleman NeverKeeps   Score' , 2018);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B002', 94.50 ,'9728304828','A002' , 'Texas Glory ' , 2015);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B003', 45.00 ,'9702833373','A003' , ' Texas Glory ' , 2017);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B004', 234.50 ,'9703859383','A004' , 'Crazy Rich Asians' , 2018);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B005', 23.60 ,'9793937483','A005' , 'Tell me you are mine' , 2015);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B006', 200.60 ,'9729473047','A006' , 'The spy and the traitor' , 2010);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B007', 145.00 ,'9703746264','A007' , 'Paradise Sky by Joe Lansdale' , 2016);

insert into Book (BOOK_ID, BOOK_PRICE,BOOK_ISBN, AUTH_ID, BOOK_TITLE,BOOK_YEAR)
values ('B008', 165.99 ,'9739482733','A008' , 'Meet Camaro from The Night Charter' , 2010);
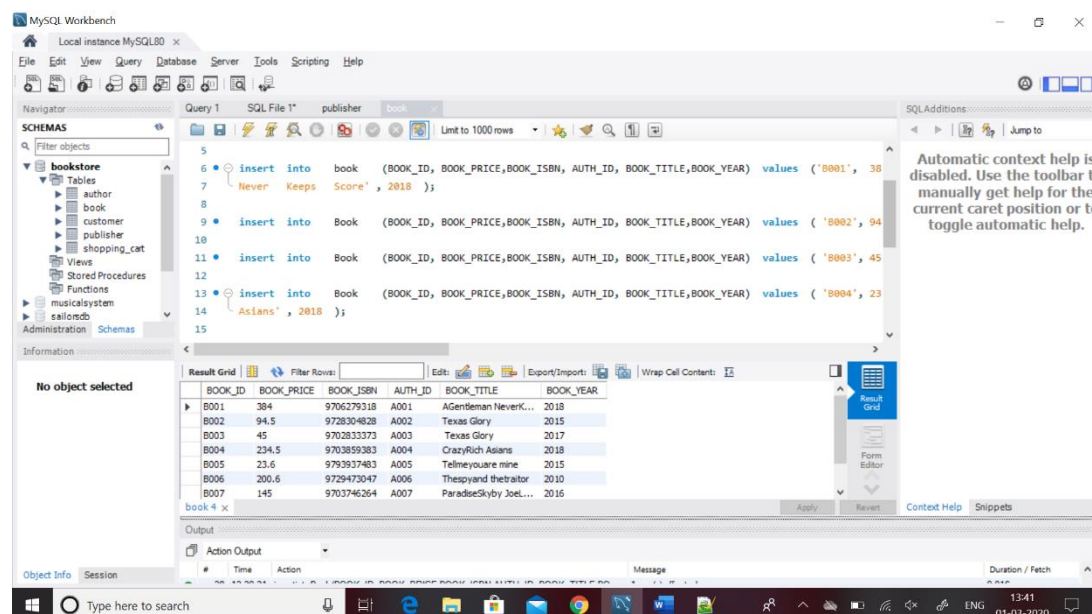
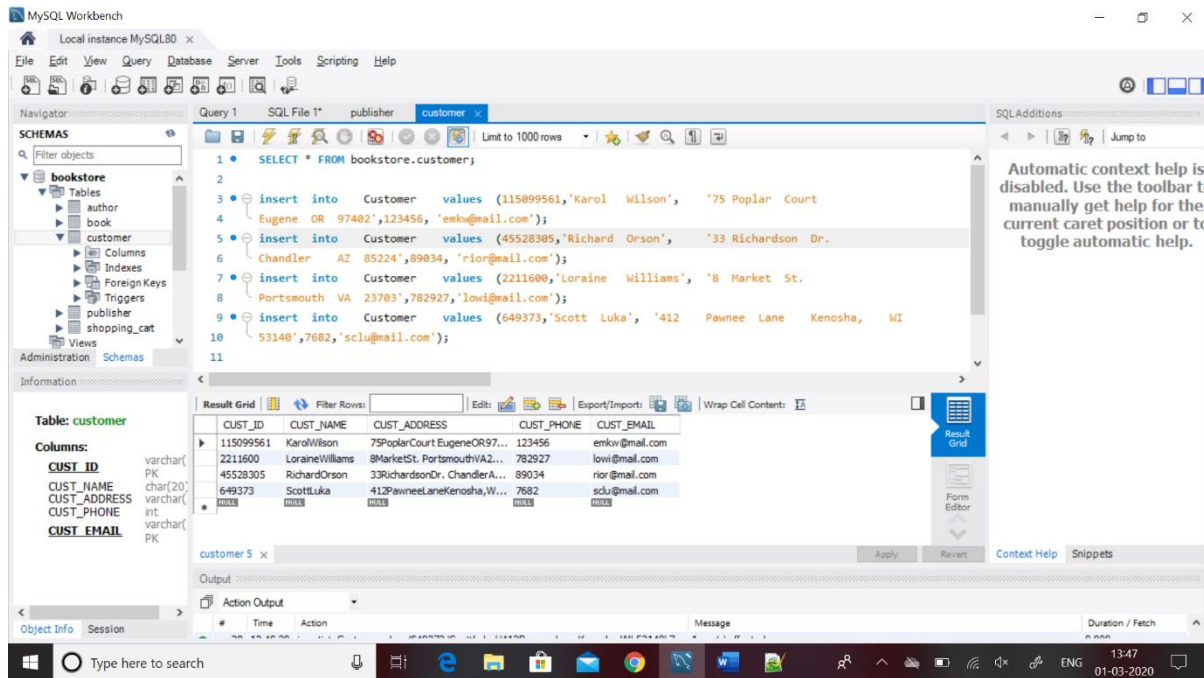

SELECT * FROM bookstore.customer;

insert into Customer values (115099561,'Karol Wilson', '75 Poplar Court Eugene OR 97402',123456, 'emkw@mail.com');

insert into Customer values (45528305,'Richard Orson', '33 Richardson Dr. Chandler AZ 85224',89034, 'rior@mail.com');

insert into Customer values (2211600,'Loraine Williams', '8 Market St. Portsmouth VA 23703',782927,'lowi@mail.com');

insert into Customer values (649373,'Scott Luka', '412 Pawnee Lane Kenosha, WI 53140',7682,'sclu@mail.com');
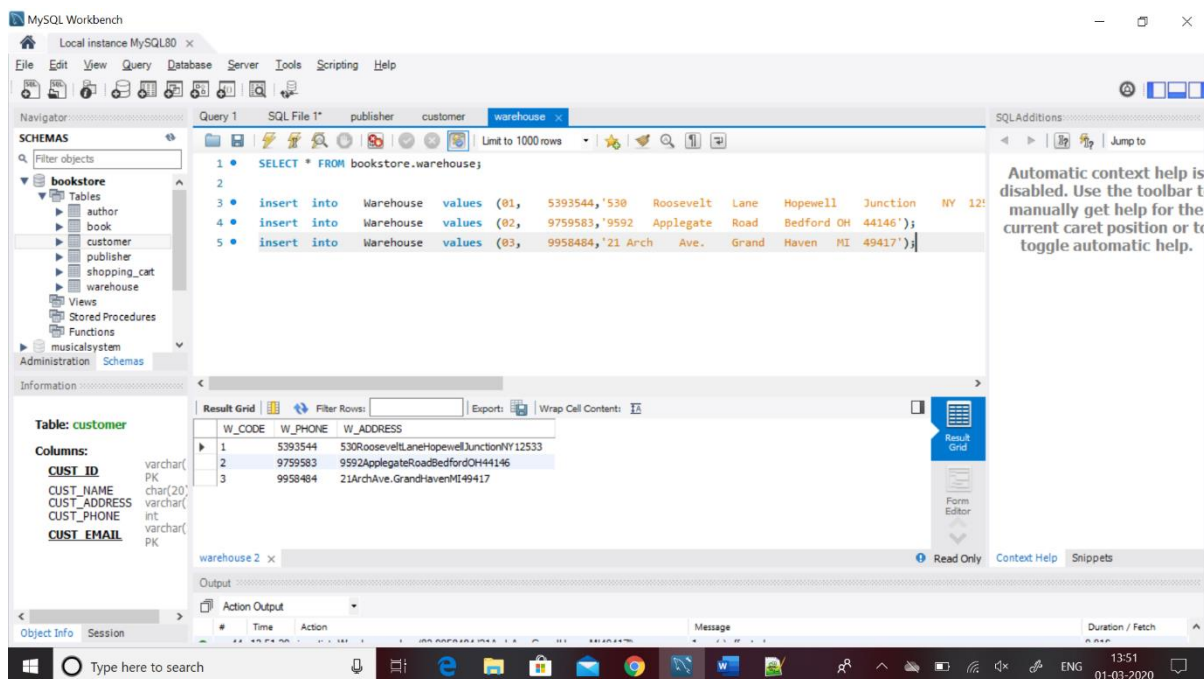
SELECT * FROM bookstore.warehouse;

insert into Warehouse values (01, 5393544, '530 Roosevelt Lane Hopewell Junction NY 12533');

insert into Warehouse values (02, 9759583,'9592 Applegate Road Bedford OH 44146');

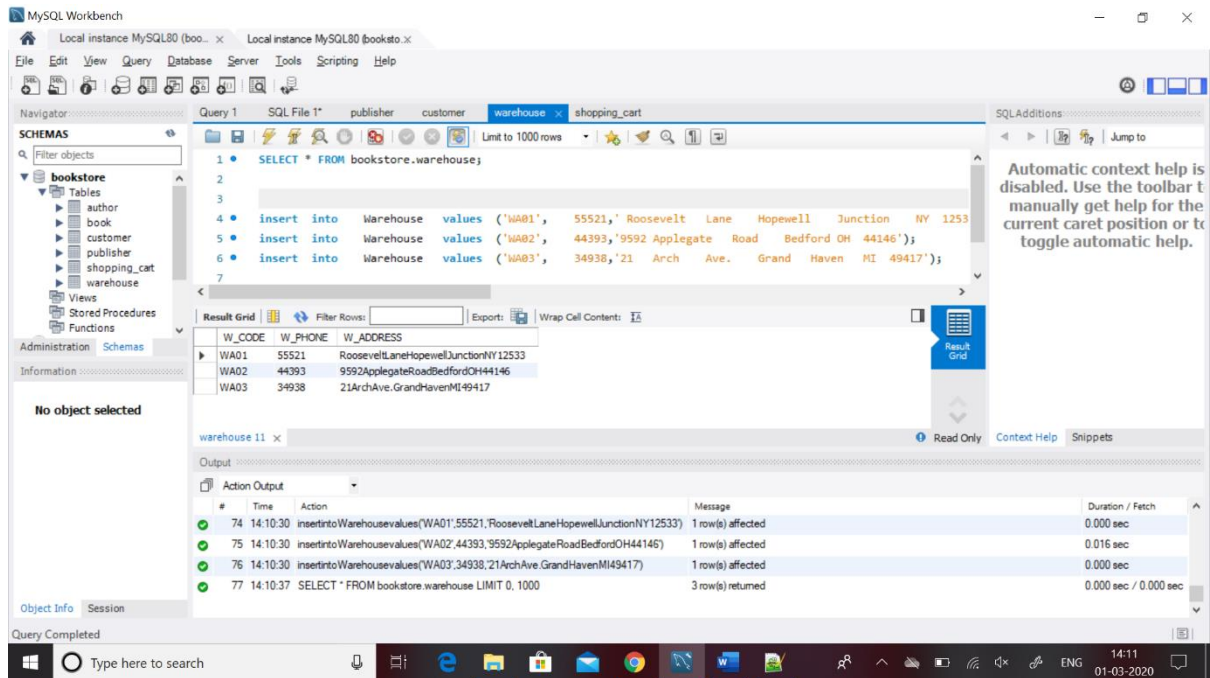insert into Warehouse values (03, 9958484,'21 Arch Ave. Grand Haven MI 49417');

SELECT * FROM bookstore.warehouse;

insert into Warehouse values ('WA01', 55521,' Roosevelt Lane Hopewell Junction NY 12533');

insert into Warehouse values ('WA02', 44393,'9592 Applegate Road Bedford OH 44146');

insert into Warehouse values ('WA03', 34938,'21 Arch Ave. Grand Haven MI 49417');

SELECT * FROM bookstore.shopping_cart;

insert   into   shopping_cart   values   ('S01',115099561,'emkw@mail.com');

insert   into   shopping_cart   values   ('S02',45528305,'rior@mail.com');

insert   into   shopping_cart   values   ('S03',2211600,'lowi@mail.com');

insert   into   shopping_cart   values   ('S04',649373,'sclu@mail.com');
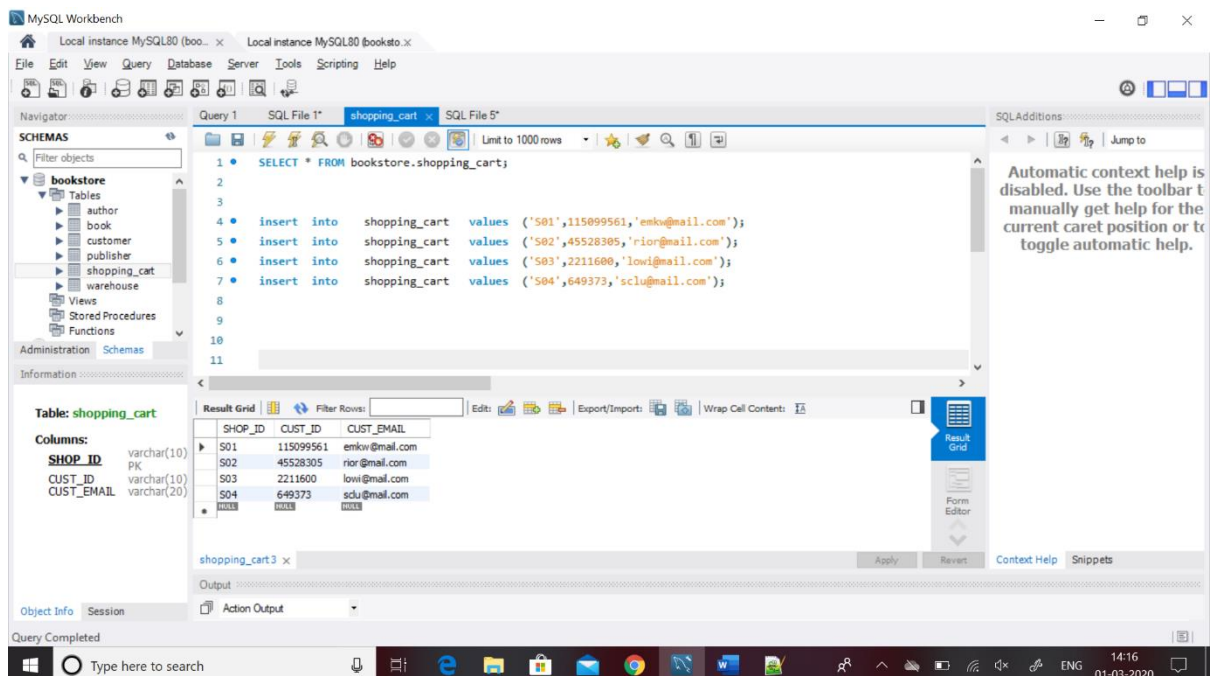
SELECT * FROM WAREHOUSE_HAVE_BOOKS;

insert   into   warehouse_have_books   (WH_CODE,Book_ISBN,count)

values('WA01','9728304828',15);

insert   into   warehouse_have_books   (WH_CODE,Book_ISBN,count)

values('WA01','9739482733',29);

```
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA01','9729473047',151);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA02','9703859383',20);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA02','9793937483',383);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA02','9706279318',293);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA03','9702833373',393);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA03','9729473047',38);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA03','9706279318',48);
insert into warehouse_have_books (WH_CODE,Book_ISBN,count)
values('WA03','9739482733',29);


SELECT * FROM shoppingbaskets_have_books;
insert into shoppingbaskets_have_books values('9706279318','S01',1);
insert into shoppingbaskets_have_books values('9703746264','S01',1);
insert into shoppingbaskets_have_books values('9729473047','S01',1);
insert into shoppingbaskets_have_books values('9739482733','S02',1);
insert into shoppingbaskets_have_books values('9728304828','S02',1);
insert into shoppingbaskets_have_books values('9702833373','S02',2);
insert into shoppingbaskets_have_books values('9703859383','S02',1);
insert into shoppingbaskets_have_books values('9793937483','S03',1);
insert into shoppingbaskets_have_books values('9703859383','S03',1);
insert into shoppingbaskets_have_books values('9702833373','S03',1);
insert into shoppingbaskets_have_books values('9739482733','S04',1);
insert into shoppingbaskets_have_books values('9702833373','S04',1);
insert into shoppingbaskets_have_books values('9729473047','S04',1);
insert into shoppingbaskets_have_books values('9793937483','S04',1);
```

QUERIES

1) Which book is being sell more right now?
   select B.BOOK_ISBN, B.BOOK_TITLE,sum(UNK) as maxbooks from BOOK B,
   shoppingbaskets_have_books SB
   where SB.BOOK_ISBN=B.BOOK_ISBN
   group by BOOK_ISBN, BOOK_TITLE
   order by maxbooks desc
   LIMIT 1
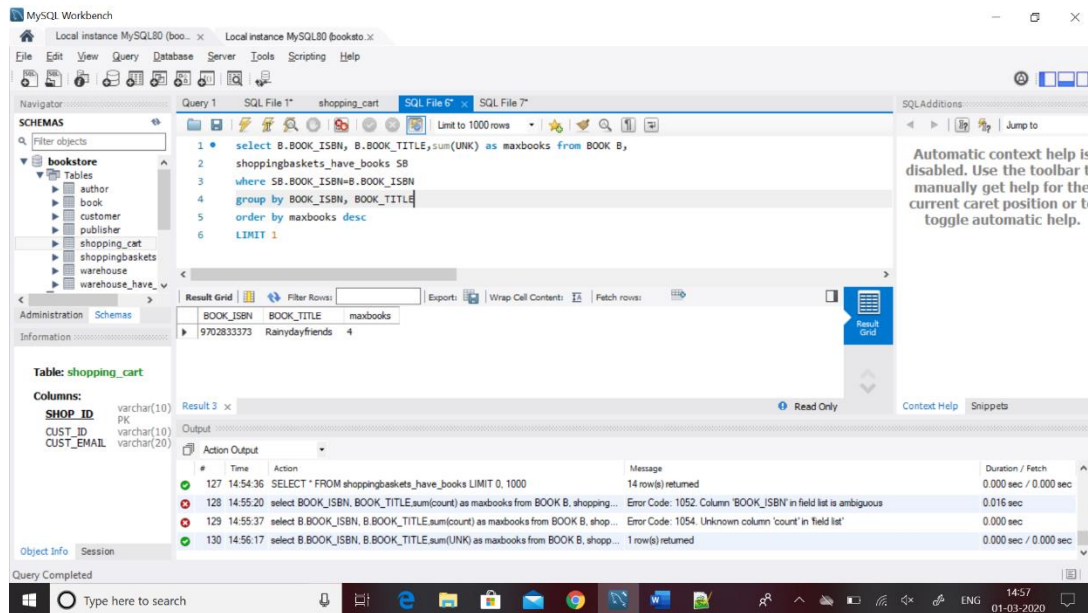
2) Which customer is buying more books?
   select maxnumber, Customer
   from (select sum(UNK) as maxnumber, CUST_NAME as Customer
    from customer C, shopping_cart SB,shoppingbaskets_have_books SBB
    where C.CUST_EMAIL=SB.CUST_EMAIL
    and SB.SHOP_ID=SBB.SHOP_ID
    group by CUST_NAME
    order by maxnumber desc) mysums
   LIMIT 1
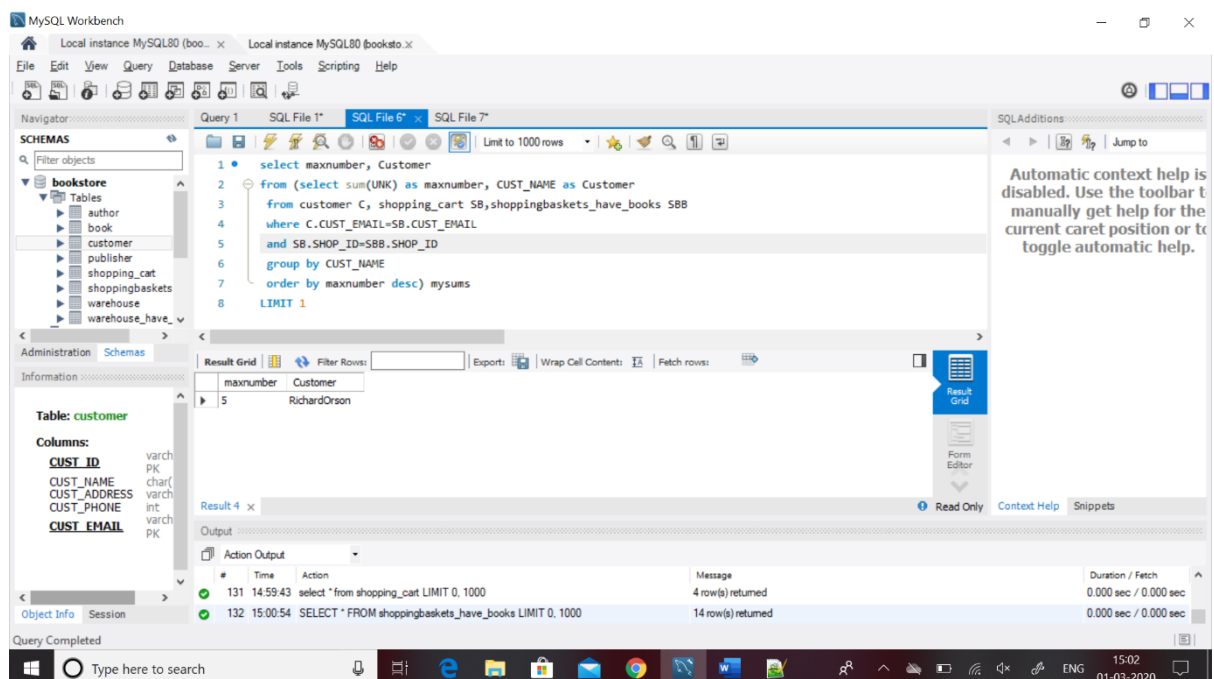
3) Which warehouse has Texas Glory in stock?

select W_CODE, W_ADDRESS

from warehouse W, warehouse_have_books WB, book B

where WB.WH_CODE=W.W_CODE

and WB.BOOK_ISBN = B.BOOK_ISBN

and B.BOOK_TITLE = 'Texas Glory';
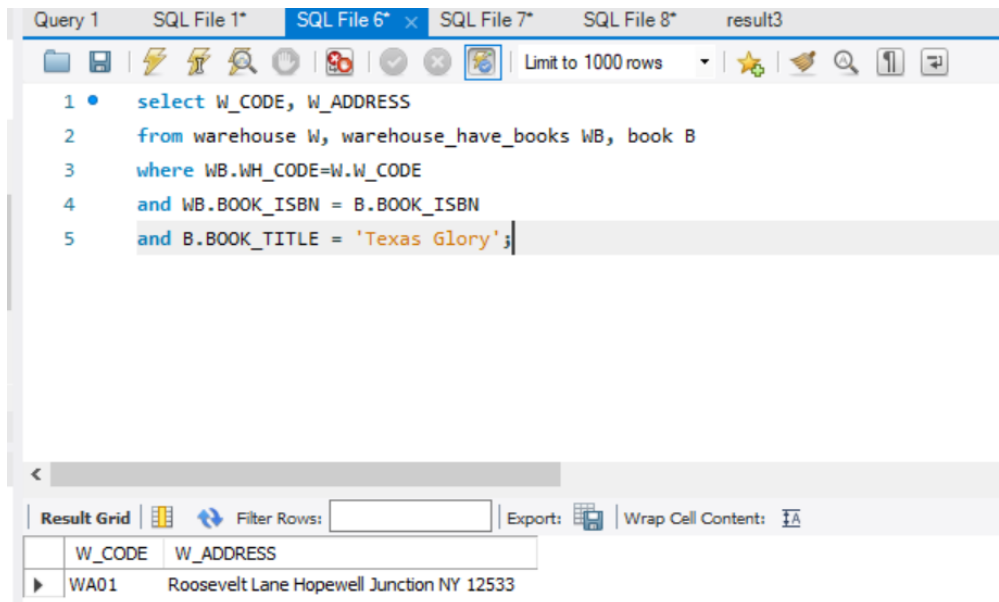
4) Which author has more books on sell?
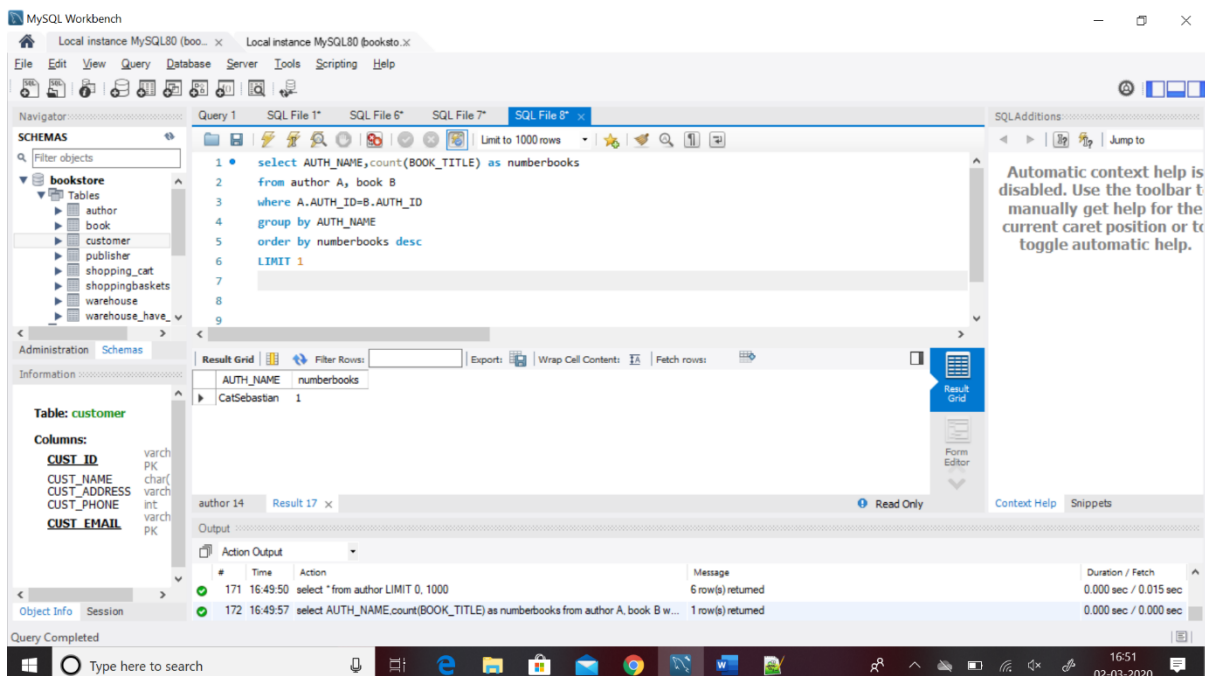
select AUTH_NAME,count(BOOK_TITLE) as numberbooks

from author A, book B

where A.AUTH_ID=B.AUTH_ID

group by AUTH_NAME

order by numberbooks desc

LIMIT 1

5) Which publisher offers less books?
   select P.PUB_NAME, count(BOOK_TITLE) as numberofbooks
   from Publisher P, Book B
   where P.PUB_ID=B.PUB_ID
   group by P.PUB_ID
   order by numberofbooks desc
   LIMIT 1