CREATING DATABASE

-- drop database bookstore;

SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;
SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0;
SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='TRADITIONAL,ALLOW_INVALID_DATES';

-- ---
-- Schema bookstore
-- ---

create database Bookstore;
use Bookstore;
show tables;

CREATE TABLE PUBLISHER(PUBLISHER_IDENTIFICATION_NUMBER VARCHAR(50) NOT NULL,
  PUBLISHER_NAME VARCHAR(100) NOT NULL,
  PUBLISHER_ADDRESS VARCHAR(300),
  PUBLISHER_CONTACT_NUMBER VARCHAR(45),
  PRIMARY KEY (PUBLISHER_IDENTIFICATION_NUMBER));

DESC publisher;

CREATE TABLE BOOK(ISBN VARCHAR(100) NOT NULL, TITLE VARCHAR(200) NOT NULL,
  AUTHOR VARCHAR(100) NULL, AMOUNT_IN_INVENTORY DOUBLE NOT NULL,
 PRICE DOUBLE NOT NULL,
  SUBJECT_AREA ENUM('TEXTBOOK', 'NOVEL', 'COMIC', 'CHILDRENBOOK', 'COOKBOOK') NOT NULL,
  YEAR_OF_PUBLICATION YEAR NOT NULL, PUBLISHER_IDENTIFICATION_NUMBER VARCHAR(50) NOT
NULL, NEWEDITION ENUM('YES','NO'), PRIMARY KEY (ISBN),
  CONSTRAINT fk_BOOK_PUBLISHER FOREIGN KEY(PUBLISHER_IDENTIFICATION_NUMBER)
REFERENCES PUBLISHER(PUBLISHER_IDENTIFICATION_NUMBER)
  ON DELETE NO ACTION ON UPDATE NO ACTION);

DESC book;

CREATE TABLE CUSTOMER(CUSTOMER_IDENTIFICATION_NUMBER VARCHAR(50) NOT NULL,
  CUSTOMER_NAME VARCHAR(100) NOT NULL,
  CUSTOMER_ADDRESS VARCHAR(300) NOT NULL,
  READING_PREFERENCE ENUM('TEXTBOOK', 'NOVEL', 'COMIC', 'CHILDRENBOOK', 'COOKBOOK') NOT
NULL, PROFESSION VARCHAR(100) NOT NULL, EMAIL_ID VARCHAR(50) NOT NULL,
  NEWUSER VARCHAR(50) , PRIMARY KEY (CUSTOMER_IDENTIFICATION_NUMBER));

DESC CUSTOMER;

CREATE TABLE CUSTOMER_DIRECTORY (CUSTOMER_IDENTIFICATION_NUMBER VARCHAR(50) NOT
NULL, CUSTOMER_PHONE_NUMBER VARCHAR(50) NOT NULL,
  PRIMARY KEY (CUSTOMER_PHONE_NUMBER,CUSTOMER_IDENTIFICATION_NUMBER),
  CONSTRAINT `fk_CUSTOMER_DIRECTORY_CUSTOMER1`
  FOREIGN KEY (CUSTOMER_IDENTIFICATION_NUMBER) REFERENCES
CUSTOMER(CUSTOMER_IDENTIFICATION_NUMBER) ON DELETE CASCADE ON UPDATE CASCADE);

```sql
DESC CUSTOMER_DIRECTORY;


CREATE TABLE CARD_PAYMENT(CREDIT_CARD_NUMBER VARCHAR(50) NOT NULL,
 CARD_TYPE ENUM('CREDITCARD', 'STORECREDIT') NOT NULL,
 NAME VARCHAR(50),  ADDRESS VARCHAR(50),  EXPIRATION_DATE DATE NOT NULL,
 CREDIT_LIMIT DOUBLE NOT NULL,  PRIMARY KEY (CREDIT_CARD_NUMBER));

DESC CARD_PAYMENT;

CREATE TABLE TRANSACTION(
 TRANSACTION_ID VARCHAR(100) NOT NULL, NUMBER_OF_BOOKS_BOUGHT INT NOT NULL,
 AMOUNT_MONEY DOUBLE NOT NULL, TRANSACTION_TYPE ENUM('CASH', 'STORECREDIT',
'CREDITCARD') NOT NULL,  DATE_OF_ORDER DATE NOT NULL, DATE_OF_DELIVERY DATE NOT NULL,
CUSTOMER_IDENTIFICATION_NUMBER VARCHAR(50),  CREDIT_CARD_NUMBER VARCHAR(50),
PRIMARY KEY (TRANSACTION_ID),
 INDEX `fk_TRANSACTION_CARD_PAYMENT1_idx` (CREDIT_CARD_NUMBER ASC),
 CONSTRAINT `fk_TRANSACTION_CUSTOMER1` FOREIGN KEY
(CUSTOMER_IDENTIFICATION_NUMBER) REFERENCES
CUSTOMER(CUSTOMER_IDENTIFICATION_NUMBER) ON DELETE NO ACTION ON UPDATE NO
ACTION, CONSTRAINT `fk_TRANSACTION_CARD_PAYMENT1` FOREIGN KEY
(CREDIT_CARD_NUMBER) REFERENCES CARD_PAYMENT (CREDIT_CARD_NUMBER) ON DELETE NO
ACTION ON UPDATE NO ACTION);

DESC TRANSACTION;

CREATE TABLE BOOKS_BOUGHT(TRANSACTION_ID VARCHAR(50) NOT NULL, BOOK_ISBN
VARCHAR(100) NOT NULL,  NUMBER_OF_BOOKS_BOUGHT INT NOT NULL,COMMENTS
VARCHAR(300),  PRIMARY KEY (TRANSACTION_ID, BOOK_ISBN),
 INDEX `fk_BOOKS_BOUGHT_TRANSACTION1_idx` (TRANSACTION_ID ASC),
 INDEX `fk_BOOKS_BOUGHT_BOOK1_idx` (BOOK_ISBN ASC),
 CONSTRAINT `fk_BOOKS_BOUGHT_TRANSACTION1` FOREIGN KEY (TRANSACTION_ID) REFERENCES
TRANSACTION(TRANSACTION_ID) ON DELETE NO ACTION ON UPDATE NO ACTION,
 CONSTRAINT `fk_BOOKS_BOUGHT_BOOK1` FOREIGN KEY (BOOK_ISBN) REFERENCES BOOK(ISBN)
ON DELETE NO ACTION ON UPDATE NO ACTION);

DESC BOOKS_BOUGHT;

CREATE TABLE BOOKS_RETURNED(TRANSACTION_ID VARCHAR(50) NOT NULL, BOOK_ISBN
VARCHAR(100) NOT NULL,
 NUMBER_OF_BOOKS_RETURNED INT NOT NULL, RETURN_DATE DATE NOT NULL, PRIMARY KEY
(TRANSACTION_ID, BOOK_ISBN),
 INDEX `fk_BOOKS_RETURNED_TRANSACTION1_idx` (TRANSACTION_ID ASC),
 CONSTRAINT `fk_BOOKS_RETURNED_BOOK1` FOREIGN KEY (BOOK_ISBN) REFERENCES BOOK(ISBN)
ON DELETE NO ACTION ON UPDATE NO ACTION,
 CONSTRAINT `fk_BOOKS_RETURNED_TRANSACTION1` FOREIGN KEY (TRANSACTION_ID)
REFERENCES TRANSACTION(TRANSACTION_ID)
  ON DELETE NO ACTION ON UPDATE NO ACTION);

DESC BOOKS_RETURNED;
```

```sql
CREATE TABLE DELETE_USER(
  CUSTOMER_IDENTIFICATION_NUMBER VARCHAR(50) NOT NULL, PRIMARY KEY
(CUSTOMER_IDENTIFICATION_NUMBER),
  CONSTRAINT `fk_DELETE_USER_CUSTOMER1` FOREIGN KEY
(CUSTOMER_IDENTIFICATION_NUMBER)
  REFERENCES CUSTOMER (CUSTOMER_IDENTIFICATION_NUMBER) ON DELETE CASCADE ON
UPDATE CASCADE);

DESC DELETE_USER;
```

INSERTING VALUES

```
USE BOOKSTORE;
set sql_safe_updates=0;
insert into publisher values('P101', 'Pearson','USA','3046789302');
insert into publisher values('P102', 'Oxford','UK','3041239302');
insert into publisher values('P103', 'Bloomsbury ','Kolkatta','3145289302');
insert into publisher values('P104', 'Penguin','Bangalore','3127814202');
insert into publisher values('P105', 'Hachette','Chennai','3193456332');

DESC publisher;
DESC book;

insert into book values('A10123','Java Fundamentals','Malik',20,50,'TEXTBOOK',2012,'P101',null);
insert into book values('B21421','Continental
Recipes','Krishnaveni',40,20,'COOKBOOK',2014,'P104',null);
insert into book values('C19836','Tenali Raman
Adventures','Jayaprada',50,25,'COMIC',2009,'P105',null);
insert into book values('D23847','Database Systems','Carlos
Coronel',25,45,'TEXTBOOK',2013,'P102',null);
insert into book values('D33482','English
Alphabets','Dr.Suess',20,10,'CHILDRENBOOK',2007,'P101',null);
insert into book values('E12454','Harry Potter','JKRowling',50,55,'NOVEL',2012,'P103',null);
insert into book values('F56754','Fantastic Beasts & where to find
them','JKRowling',32,25,'NOVEL',2015,'P103',null);
insert into book values('G35454','Chicken
Recipes','VijayaKumar',20,20,'COOKBOOK',2018,'P104','yes');
insert into book values('H23552','Shikari Shambu
Adventures','Arjun',30,25,'COMIC',2018,'P105','yes');
insert into book values('I46343','Big data','Sebastian',50,45,'TEXTBOOK',2018,'P102','yes');
insert into book values('J35464','English Words','Dr.Suess',20,10,'CHILDRENBOOK',2018,'P101','yes');
insert into book values('K15345','Shiva Trilogy - The immortals of Meluha','Amish
Tripathy',40,55,'NOVEL',2018,'P103','yes');
insert into book values('L65453','Sita : Warrior of Mithila ','Amish
Tripathy',25,25,'NOVEL',2018,'P103','yes');


CREATE TABLE CUSTOMER(CUSTOMER_IDENTIFICATION_NUMBER VARCHAR(50) NOT NULL
auto_increment,---
  CUSTOMER_NAME VARCHAR(100) NOT NULL,
  CUSTOMER_ADDRESS VARCHAR(300) NOT NULL,
  READING_PREFERENCE ENUM('TEXTBOOK', 'NOVEL', 'COMIC', 'CHILDRENBOOK', 'COOKBOOK') NOT
NULL,
  PROFESSION VARCHAR(100) NOT NULL,
  EMAIL_ID VARCHAR(50) NOT NULL,
  NEWUSER VARCHAR(50) ,
  UNSUBSCRIBE VARCHAR(50),
  PRIMARY KEY (CUSTOMER_IDENTIFICATION_NUMBER));

insert into customer values('10101','Sita','Chennai','NOVEL','doctor','sita@gmail.com',null);
```

```sql
insert into customer
values('10102','Sheela','Bangalore','TEXTBOOK','faculty','shee@gmail.com',null);
insert into customer
values('10103','Archana','Hyderabad','COOKBOOK','Student','arch@gmail.com',null);
insert into customer values('10104','Hafsa','Mysore','COMIC','IT','haf@gmail.com',null);
insert into customer values('10105','Priya','Shillong','CHILDRENBOOK','OTHER','pri@gmail.com',null);
insert into customer values('10107','Shwetha','Kolkata','NOVEL','Student','Shwe@gmail.com',null);
insert into customer values('10108','Swapna','Kashmir','COMIC','faculty','Swa@gmail.com','yes');
insert into customer values('10109','Anwar','Chennai','Novel','faculty','anw@gmail.com','yes');

select * from customer where newuser='yes';
select * from customer;

select * from customer_directory;
insert into customer_directory values('10101','3132324577');
insert into customer_directory values('10101','3047676578');
insert into customer_directory values('10102','3324767789');
insert into customer_directory values('10103','3625738393');
insert into customer_directory values('10104','3747637483');
insert into customer_directory values('10105','3827379989');
insert into customer_directory values('10107','3826534549');
insert into customer_directory values('10109','3656765321');

insert into CARD_PAYMENT values('WERGF15435','CREDITCARD','Sita','Chennai','2029-05-05',50000);
insert into CARD_PAYMENT values('RTDTH75412','STORECREDIT','Sheela','Bangalore','2023-10-02',20000);
insert into CARD_PAYMENT values('TRETH55476','CREDITCARD','Archana','Hyderabad','2025-02-01',40000);
insert into CARD_PAYMENT values('KIYKL75454','STORECREDIT','Hafsa','Mysore','2021-09-07',30000);
insert into CARD_PAYMENT values('TFTUG34345','CREDITCARD','Priya','Shillong','2027-02-05',70000);
insert into CARD_PAYMENT values('KERWE43264','STORECREDIT','Sita','Chennai','2020-05-03',35000);
insert into CARD_PAYMENT values('QWQWT45164','CREDITCARD','Shwetha','Kolkata','2027-05-03',75000);
insert into CARD_PAYMENT values('REWRT45164','CREDITCARD','Anwar','Chennai','2029-05-03',55000);

 desc transaction;
insert into TRANSACTION values('T101',20,8000,'CASH','2018-04-01','2018-04-05','10101',null);
insert into TRANSACTION values('T102',10,3000,'STORECREDIT','2018-04-03','2018-04-07','10102','RTDTH75412');
insert into TRANSACTION values('T103',15,2500,'CREDITCARD','2018-04-05','2018-04-09','10101','WERGF15435');
insert into TRANSACTION values('T104',12,5000,'CASH','2018-04-02','2018-04-06','10101',null);
insert into TRANSACTION values('T105',18,7000,'STORECREDIT','2018-04-01','2018-04-06','10101','KERWE43264');
insert into TRANSACTION values('T106',5,2800,'CREDITCARD','2018-04-03','2018-04-10','10103','TRETH55476');
```

```sql
insert into TRANSACTION values('T107',7,3500,'CREDITCARD','2018-09-11','2018-09-23','10107','QWQWT45164');
insert into TRANSACTION values('T109',10,6000,'CREDITCARD','2018-11-07','2018-11-25','10109','REWRT45164');
insert into TRANSACTION values('T111',10,5000,'CREDITCARD','2018-08-01','2018-11-04','10109','KIYKL75454');
delete from transaction where transaction_id='T111';


insert into BOOKS_BOUGHT values('T101','A10123',10,null);
insert into BOOKS_BOUGHT values('T101','E12454',10,null);
insert into BOOKS_BOUGHT values('T103','C19836',15,null);
insert into BOOKS_BOUGHT values('T105','D23847',18,null);
insert into BOOKS_BOUGHT values('T107','B21421',7,null);
insert into BOOKS_BOUGHT values('T109','E12454',5,null);
insert into BOOKS_BOUGHT values('T109','B21421',5,null);
insert into BOOKS_BOUGHT values('T111','F56754',10,null);

insert into BOOKS_RETURNED values('T105','D23847',5,'2018-04-22');
insert into BOOKS_RETURNED values('T101','A10123',2,'2018-04-22');
```

CREATING VIEWS

create view customerview as
select c.CUSTOMER_IDENTIFICATION_NUMBER,c.CUSTOMER_NAME, t.TRANSACTION_ID,
b.BOOK_ISBN from customer as c left outer join transaction as t on
c.CUSTOMER_IDENTIFICATION_NUMBER=t.CUSTOMER_IDENTIFICATION_NUMBER
join books_bought as b on t.TRANSACTION_ID=b.TRANSACTION_ID where
c.CUSTOMER_IDENTIFICATION_NUMBER=substring_index(user(),'@',1);

create view view1 as select
c.CUSTOMER_IDENTIFICATION_NUMBER,c.CUSTOMER_NAME,c.READING_PREFERENCE,c.EMAIL_ID
from customer as c where c.READING_PREFERENCE in
(select SUBJECT_AREA from book where NEWEDITION='yes') order by c.READING_PREFERENCE;

create view view2 as select ISBN,SUBJECT_AREA from book where NEWEDITION='yes'
and SUBJECT_AREA in (select READING_PREFERENCE from customer) order by SUBJECT_AREA;

Query for identifying potential customers for new books:

```
select v1.CUSTOMER_IDENTIFICATION_NUMBER,v1.CUSTOMER_NAME,v1.EMAIL_ID,
v2.ISBN,v2.SUBJECT_AREA from view1 v1,view2 v2
where v1.READING_PREFERENCE=v2.SUBJECT_AREA order by v2.SUBJECT_AREA,
v1.CUSTOMER_NAME;
```

Query for getting the subject area where most number of books are sold:

```
select b1.SUBJECT_AREA,sum(bb.number_of_books_bought) as Number_of_books_sold
from books_bought bb,book as b1
where b1.isbn=bb.book_isbn group by b1.SUBJECT_AREA order by Number_of_books_sold desc;
```

Query for getting the Author whose books were sold most:

```
select b1.AUTHOR,sum(bb.number_of_books_bought) as Number_of_books_sold
from books_bought bb,book as b1
where b1.isbn=bb.book_isbn group by b1.AUTHOR order by Number_of_books_sold desc;
```

```
desc books_returned;
```

Query for getting the subject area where most number of books were returned:

```
select b1.SUBJECT_AREA,sum(br.number_of_books_returned) as Number_of_books_returned
from books_returned br,book as b1 where b1.isbn=br.book_isbn group by b1.SUBJECT_AREA order
by Number_of_books_returned desc;
```

Query for getting Books whose number is low in inventory to decide whether they should be replenished:

```
select * from book where AMOUNT_IN_INVENTORY<25;
```

Query to find customers who are Faculty:

```
select * from customer where PROFESSION = 'faculty';
```

Query to find customers who are Students:

```
select * from customer where PROFESSION = 'student';
```

Query to find books from specific Author:

```
select * from book where Author='JKRowling';
```

Query to find Books of specific category:

```
select * from book where SUBJECT_AREA='novel';
```

THANK YOU