DBMS MINI PROJECT

RESORT MANAGEENT SYSTEM:-

Submitted By:

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V Semester

J-Section

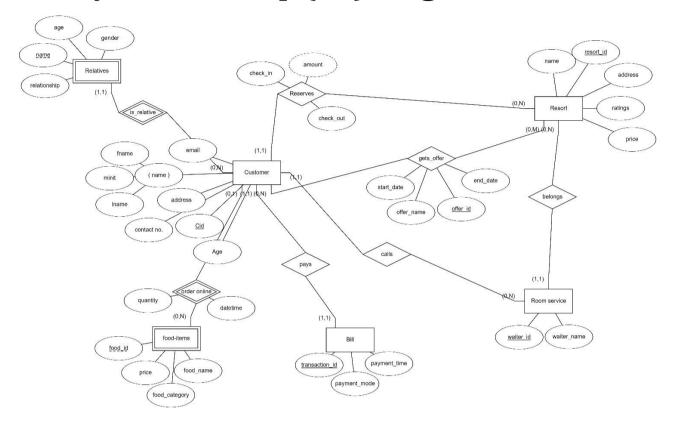
Project Description:

Traditionally, all the information of the customers who have booked a particular resort is stored in books/ledgers. This is very inefficient and labour intensive. This problem can be solved using SQL database, which is stored digitally and information is safe. The database consists of several entities like customer, resort, offers, food_item, reservation, bill,. Etc which contain all the necessary information.

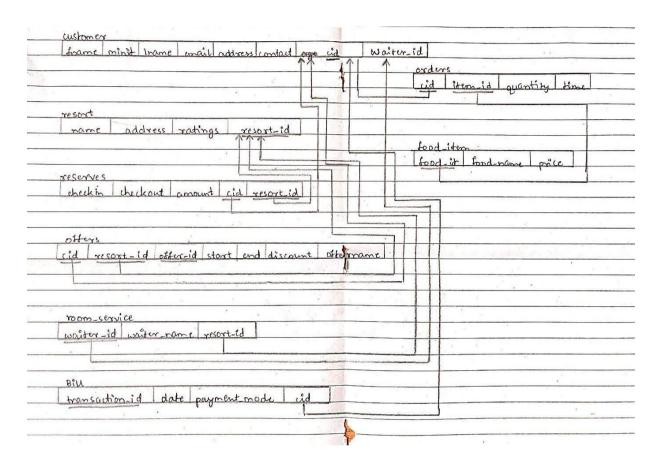
Scope:

To create a website system for managing resort reservations and make it easier for the user to book the resort and buy ticket

Entity Relationship (ER) Diagram:



Relational Schema:



DDL Statements-Building the Database

```
CREATE TABLE resort (
  resort id DECIMAL(4, 0) PRIMARY KEY CHECK
   (resort id > 0), resort name varchar(50) NOT
  NULL,
  address varchar (40) NOT
  NULL, rating
  DECIMAL(3,2),
  price per day float
);
CREATE TABLE room service (
  waiter id DECIMAL(3, 0) PRIMARY KEY,
  waiter name
  varchar(20), resort id
  DECIMAL (4, 0),
  FOREIGN KEY (resort id) REFERENCES resort(resort id) ON
  DELETE CASCADE
);
CREATE TABLE customer (
  cid Decimal(4, 0) PRIMARY KEY
  CHECK (cid > 0), fname
  VARCHAR (20),
```

```
minit
  CHAR (1),
   lname
  VARCHAR (20),
  address
  varchar(30),
  email
  varchar(30),
  contactNo
  DECIMAL(10, 0),
  waiter id DECIMAL(3, 0),
  FOREIGN KEY (waiter id) REFERENCES
room service (waiter id) ON DELETE CASCADE
);
CREATE TABLE offers
   ( offer id
  DECIMAL(2, 0),
  offer name
  varchar(20),
  cid DECIMAL(4, 0) CHECK (cid > 0),
   resort id DECIMAL(4, 0) CHECK
   (resort id > 0), discount int,
  startdate
  DATE,
  enddate
  DATE,
  FOREIGN KEY (resort id) REFERENCES resort(resort id)
  ON DELETE CASCADE, FOREIGN KEY (cid) REFERENCES
   customer(cid) ON DELETE CASCADE,
  PRIMARY KEY (resort id, cid, offer id)
CREATE TABLE reservation (
   cid DECIMAL(4, 0) CHECK (cid > 0),
   resort id DECIMAL(4, 0) CHECK
   (resort id > 0), checkin DATE NOT
  NULL,
```

```
checkout DATE NOT
  NULL, amount
   float,
  CHECK (checkout > checkin),
   FOREIGN KEY (cid) REFERENCES customer(cid) ON DELETE
  CASCADE,
  FOREIGN KEY (resort id) REFERENCES resort(resort id)
  ON DELETE CASCADE, PRIMARY KEY (resort id, cid)
);
CREATE TABLE
  relatives (cid
  DECIMAL (4, 0),
  relative name
  VARCHAR(20), gender
  char (1),
  relationship
  VARCHAR (20),
   FOREIGN KEY (cid) REFERENCES customer(cid) ON
DELETE CASCADE ON UPDATE CASCADE,
   PRIMARY KEY (cid, relative name)
);
CREATE TABLE
   food item (
   food id
  decimal(2, 0),
  food name
  varchar(20),
  price numeric
  CHECK (
     price BETWEEN 0.00 AND 500.00
```

```
),
  PRIMARY KEY (food id)
);
= customer orders food via some food
delivery app CREATE TABLE orders (
   cid DECIMAL(4, 0),
  item id
  DECIMAL(3, 0),
  quantity INT,
   time DATETIME,
  FOREIGN KEY(cid) REFERENCES customer(cid) ON DELETE
  RESTRICT,
  FOREIGN KEY(item id) REFERENCES food item(food id)
  ON DELETE RESTRICT, PRIMARY KEY (cid, item id)
);
= number of digits in transaction Id varies, 12
is most common CREATE TABLE bill (
   transaction id DECIMAL(12, 0)
  PRIMARY KEY, date DATE,
  cid DECIMAL(4, 0),
  paymentmode varchar(10),
  FOREIGN KEY(cid) REFERENCES customer(cid) ON DELETE RESTRICT
);
```

DML Statements-Populating the Database

```
insert into food_item Values('01','thaali','400');
insert into food_item Values('02','pizza','250');
insert into food_item Values('03','ghee rice','120');
insert into food_item Values('04','schezwan fried rice','120');
insert into food_item Values('05','chicken biryani','180');
insert into food_item Values('06', 'mutton thaali', '320');
insert into food_item Values('07', 'surma fish', '240');
insert into offers Values('01','winter vaction', '1001','1006','20','2022-12-20','2022-12-
insert into offers Values('02','diwali offer', '1005','1001','15','2022-10-01','2022-12-
insert into offers Values('03','special offer', '1007','1007','25','2022-11-01','2022-12-
31');
insert into resort Values ('1001', "The Dukes Retreat", Lonavala', 5, 1999);
insert into resort Values ('1002', "Ferreira Resort", 'Lonavala', 4, 1799);
insert into resort Values ('1003', "Villa San Lorentz", 'Lonavala', 5, 1699);
insert into resort Values ('1004', "Misty Meadows", 'Lonavala', 4, 1499);
insert into resort Values ('1005', "Sunshine Resort", 'Lonavala', 5, 1699);
insert into resort Values ('1006', "Dandeli Jungle Resort", 'Dandeli', 5, 1499);
insert into resort Values ('1007', "Wild Planet Jungle Resort", 'Dandeli', 5, 1299);
insert into resort Values ('1008', "Swast-Mast Resort", 'Lonavala', 4, 1399);
insert into resort Values ('1009', "Alurkar Resort", 'Belgaum', 5, 1499);
insert into resort Values ('1010', "Gavkari", 'Belgaum', 5,999);
insert into room_service Values('101','chotu','1001');
insert into room_service Values('102','bhola','1002');
insert into room_service Values('103','brijesh','1003');
insert into room service Values('104', 'ajay', '1004');
insert into room_service Values('105','shukh','1005');
insert into room service Values('106','vikalp','1006');
insert into room_service Values('107','alam','1007');
insert into room_service Values('108','suresh','1008');
insert into room_service Values('109','keshav','1006');
insert into room_service Values('110','sharad','1009');
insert into room_service Values('111', 'munna', '1010');
insert into customer Values('1001','narendra','','modi','gujarat','modi@gmail.com'
,'1234567890','106');
insert into customer Values('1002','amit','','shah','gujarat' ,'shah@gmail.com'
,'1234567890','102');
```

```
insert into customer Values('1003','atal','b','vajpayee','bihar','vajpayee@gmail.com'
,'1234567890','103');
insert into customer Values('1004','abdul','','kalam','patna','aniket@gmail.com'
,'1234567890','104');
insert into customer Values('1005','yogi','','adityanath','uttar pradesh' ,'yogi@gmail.com'
,'1234567890','102');
insert into customer Values('1006','balasaheb','','thakre','mumbai','thakre@gmail.com'
,'1234567890','101');
insert into customer Values('1007','basavraj','','bommai','karnataka' ,'bommai@gmail.com'
,'1234567890','102');
insert into bill Values('250707244234','2022-11-21','1001','upi');
insert into bill Values('202622637838','2022-11-22','1002','debit card');
insert into bill Values('644161913172','2022-11-15','1003','credit card');
insert into bill Values('988602103725','2022-11-21','1004','upi');
insert into bill Values('859741505883','2022-11-21','1005','cash');
insert into bill Values('346488919858','2022-11-26','1006','credit card');
insert into orders Values('1001','1','3','2022-11-21 10:55:05');
insert into orders Values('1002','4','4','2022-11-21 13:56:55');
insert into orders Values('1003','5','2','2022-11-10 12:35:05');
insert into orders Values('1004','7','8','2022-11-20 21:55:05');
insert into orders Values('1002','3','1','2022-11-18 07:24:05');
insert into orders Values('1006','4','4','2022-11-25 09:18:05');
insert into relatives Values('1002','bhaskar bhat','m','friend');
insert into relatives Values('1003','vijay verma','m','friend');
insert into relatives Values('1003','sujay patil','m','friend');
insert into relatives Values('1004','sharad shukla','m','friend');
insert into relatives Values('1004', 'anil desai', 'm', 'son');
insert into relatives Values('1005', 'manish gupta', 'm', 'colleague');
insert into relatives Values('1005', 'kartik singh', 'm', 'colleague');
insert into relatives Values('1005','shilpa trivedi','f','colleague');
insert into relatives Values('1006', 'manthan patil', 'm', 'friend');
insert into reservation values('1001','1001','2022-11-11','2022-11-21',15592);
insert into reservation values('1002','1002','2022-11-15','2022-11-22',12593);
insert into reservation values('1003','1003','2022-11-15','2022-11-227',11893);
insert into reservation values('1004','1004','2022-11-16','2022-11-21',7495);
insert into reservation values('1005','1005','2022-11-18','2022-11-21',4077.6);
insert into reservation values('1006','1006','2022-11-20','2022-11-26',8994);
```

Tools Used

- UI for database operations streamlit
- Database connection mysql-connector-python
- Xampp

```
requirements.txt - Notepad

File Edit Format View Help

mysql_connector_repackaged==0.3.1

python-dotenv==0.21.0

requests==2.27.1

streamlit==1.14.0

streamlit_lottie==0.0.3

streamlit_option_menu==0.3.2
```

QUERIES

JOIN QUERIES

1. Display first name of customer and name waiter assigned to him

select fname, waiter_name from customer as c join room_service as w on c.waiter_id = w.waiter_id;

```
MariaDB [resort_590] > select fname, waiter_name from customer as
 c join room_service as w on c.waiter_id = w.waiter_id;
 fname
             waiter_name
  narendra
            | vikalp
  amit
             bhola
             brijesh
  atal
  abdul
            | ajay
  yogi
            | bhola
 balasaheb |
             chotu
  basavraj
             bhola
7 rows in set (0.001 sec)
MariaDB [resort_590]>
```

2. Display food_name, price and quantity of all food orders made by customer with cid=1001

3. Display resort_id, resort name and address of all those resorts where the number of bookings is greater than 1.

```
select r.resort_id, r.resort_name,r.address from resort r where r.resort_id in (
select re.resort_id from reservation re group by re.resort_id having count(*) >
    1
);
```

4. Display information of resort which are available for booking

select r.resort_id, r.resort_name, r.address from resort r where not exists
(select * from reservation re where re.resort_id=r.resort_id);

```
MariaDB [resort_590]>
MariaDB [resort_590]> select r.resort_id, r.resort_name, r.addre
ss from resort r where not exists (select * from reservation re
where re.resort_id=r.resort_id);
 resort_id | resort_name
                                         address
       1003 | Villa San Lorentz
                                          Lonavala
       1007 | Wild Planet Jungle Resort
                                         Dandeli
       1008 | Swast-Mast Resort
                                          Lonavala
            | Alurkar Resort
                                          Belgaum
       1009
            Gavkari
                                          Belgaum
       1010
                                          Dandeli
       1234
              sat30
6 rows in set (0.004 sec)
```

AGGREGATE FUNCTIONS

1. Display total bookings for each resort

select r.resort_id, r.resort_name, count(*) as total_bookings from resort r join reservation rs on r.resort_id=rs.resort_id group by resort_id;

2. List all resorts city wise

select r.address as location, count(*) total_resorts from resort r group by r.address;

```
MariaDB [resort_590]>
MariaDB [resort_590]> select r.address as location, count(*) tot
al_resorts from resort r group by r.address;
+------+
| location | total_resorts |
+-----+
| Belgaum | 2 |
| Dandeli | 4 |
| Lonavala | 6 |
+------+
3 rows in set (0.002 sec)
```

3. To find number of payments done through different modes

select paymentmode,count(*) from bill GROUP BY paymentmode;

4. Number of resorts Rating wise

select rating,count(*) from resort GROUP BY rating;

SET OPERATIONS

1. List all customers who have booked a resort with "Diwali offer" in Lonavala.

```
(select re.cid from reservation re natural join resort r where address="lonavala")
Union
(select c.cid from customer c natural join offers o where offer_name="diwali offer");
```

2. List all customers who have NOT paid the bill but have ordered food item

```
MariaDB [resort_590]> (select c.cid,c.fname,c.lname from custome
r c where c.cid not in (select b.cid from bill b))
   -> intersect
   -> (select c.cid, c.fname, c.lname from customer c where c.c
id in (select o.cid from orders o));
+----+----+
| cid | fname | lname |
+----+-----+
| 9510 | aqaz | aqz |
+----+-----+
1 row in set (0.001 sec)
MariaDB [resort_590]> |
```

3. List Customer who not got any offer

Select cid, fname from customer except select cid from offers;

```
MariaDB [resort_590] > Select cid from customer except select cid from offers;
+-----+
| cid |
+-----+
| 1804 |
| 2222 |
| 3310 |
| 3551 |
| 4444 |
| 6800 |
| 9510 |
| 1006 |
| 1002 |
| 1003 |
| 1004 |
+-----+
```

4. To find resort which not have reserved

Select resort_id from resort EXCEPT Select resort_id from reservation;

```
MariaDB [resort_590]> Select resort_id from resort EXCEPT Select resort_id from reservation;
+------+
| resort_id |
+-----+
| 1008 |
| 1009 |
| 1010 |
| 1234 |
| 4952 |
+------+
5 rows in set (0.001 sec)
```

FUNCTIONS

1. To convert rating to feedback

```
    DELIMITER $$
    CREATE FUNCTION ratef(rate decimal(1))
    RETURNS VARCHAR(50)
    DETERMINISTIC
    BEGIN
    IF rate < 3 THEN</li>
    RETURN "Average";
    ELSE
    RETURN "Very Good";
    END IF;
    END IF;
    END$$
    DELIMITER;
```

```
MariaDB [resort_590] > select resort_name, ratef(rating) as feedback from resort;
 resort_name
                             feedback
 The Dukes Retreat
                              Very Good
 Ferreira Resort
                              Very Good
 Villa San Lorentz
                              Very Good
                              Very Good
 Misty Meadows
                              Very Good
  Sunshine Resort
  Dandeli Jungle Resort
                              Very Good
 Wild Planet Jungle Resort
                              Very Good
  Swast-Mast Resort
                              Very Good
 Alurkar Resort
                              Very Good
 Gavkari
                              Very Good
 Vishal12
                              Very Good
 sat30
                              Very Good
 vivianr
                              Average
 sat22
                              Very Good
14 rows in set, 4 warnings (0.009 sec)
MariaDB [resort_590]>
```

STORED PROCEDURE

1. display information of all resorts in a given city

```
DELIMITER $$
CREATE OR REPLACE PROCEDURE get_resort_count(IN city varchar(15), OUT r_count integer)
BEGIN
SELECT COUNT(*) into r_count FROM resort where address=city; END $$
DELIMITER;
SET @r_count=0;
CALL get_resort_count("Nanadi", @r_count); SELECT @r_count;
```

```
MariaDB [resort_590] > DELIMITER $$
MariaDB [resort_590] > CREATE OR REPLACE PROCEDURE get__resort_count(IN city varchar(15), OUT r_count integer)
    -> BEGIN
    -> SELECT COUNT(*) into r_count FROM resort where address=city; END $$
Query OK, 0 rows affected (0.007 sec)
MariaDB [resort_590]> DELIMITER ;
MariaDB [resort_590]>
MariaDB [resort_590] > SET @r_count=0;
Query OK, 0 rows affected (0.000 sec)
MariaDB [resort_590]> CALL get__resort_count("Nanadi", @r_count); SELECT @r_count;
Query OK, 1 row affected (0.035 sec)
| @r_count |
         1 |
1 row in set (0.000 sec)
MariaDB [resort_590]> select *from resort where address="nanadi";
 resort_id | resort_name | address |
                                       rating |
                                                 price_per_day
       1208 | Vishal12
                           | Nanadi
                                          4.50
                                                         100000 |
 row in set (0.001 sec)
```

TRIGGERS

1. display error message when a new entry is added to a resort which is already booked.

```
DELIMITER $$
CREATE OR REPLACE TRIGGER valid_reservation_on_insert BEFORE INSERT
ON reservation FOR EACH ROW BEGIN
DECLARE error msg VARCHAR(255);
SET error msg = ("Resort is already booked!");
resort id=NEW.resort id) THEN SIGNAL SQLSTATE='45000'
SET MESSAGE_TEXT = error_msg; END IF;
END $$
CREATE OR REPLACE TRIGGER valid_reservation_on_update BEFORE UPDATE
ON reservation FOR EACH ROW BEGIN
DECLARE error msg VARCHAR(255);
SET error_msg = ("Resort is already booked!");
checkout from reservation where
resort id=NEW.resort id) THEN SIGNAL SQLSTATE '45000'
SET MESSAGE_TEXT = error_msg; END IF;
END $$ DELIMITER ;
```

```
MariaDB [resort_590]> DELIMITER $$
MariaDB [resort_590] > CREATE OR REPLACE TRIGGER valid_reservation_on_insert
    -> BEFORE INSERT
    -> ON reservation FOR EACH ROW
    -> BEGIN
    -> DECLARE error_msg VARCHAR(255);
    -> SET error_msg = ("Resort is already booked!");
    -> -- if checkin for new entry is before checkout for that resort
    -> IF NEW.checkin < (select checkout from reservation where
    -> resort_id=NEW.resort_id) THEN
   -> SIGNAL SQLSTATE '45000'
   -> SET MESSAGE_TEXT = error_msg;
   -> END IF;
    -> END $$
Query OK, 0 rows affected (0.015 sec)
MariaDB [resort_590] > CREATE OR REPLACE TRIGGER valid_reservation_on_update
    -> BEFORE UPDATE
    -> ON reservation FOR EACH ROW
    -> BEGIN
   -> DECLARE error_msg VARCHAR(255);
    -> SET error_msg = ("Resort is already booked!");
    -> -- if checkin for new entry is before checkout for that resort
    -> IF NEW.checkin < (select checkout from reservation where
   -> resort_id=NEW.resort_id) THEN
   -> SIGNAL SQLSTATE '45000'
   -> SET MESSAGE_TEXT = error_msg;
   -> END IF;
    -> END $$
Query OK, 0 rows affected (0.306 sec)
MariaDB [resort_590] > DELIMITER :
```

Example

```
MariaDB [resort_590] > insert into customer values (4444, "Sourabh", "", "varma
 ", "karnataka", "sad@gmail.com", 1234566789, NULL);
 Query OK, 1 row affected (0.005 sec)
 MariaDB [resort_590]> select * from reservation;
  cid | resort_id | checkin
                                   checkout
                                                  amount
                1001 | 2022-11-11 | 2022-11-21 |
1001 | 2023-02-08 | 2023-02-21 |
1002 | 2022-11-15 | 2022-11-22 |
   1001
                                                     15592
   3310
                                                     25987
   1002
                                                     12593
   9510
                1002 | 2023-02-08 | 2023-02-21 |
                                                     23387
                1004 | 2022-11-16 | 2022-11-21 |
                                                      7495
   1004
                                   2022-11-21
   1005
                1005 | 2022-11-18
                                                    4077.6
                     2022-11-20
                                     2022-11-26
   1006
                1006
                                                      8994
   6800
                1007
                     2023-02-08
                                      2023-02-21
                                                     16887
   1804
                5465 | 2022-12-01 | 2022-12-07 |
                                                     60000
 9 rows in set (0.000 sec)
 MariaDB [resort_590] > insert into reservation values(4444,1003,"2022-11-25"
 ,"2022-11-30",1699,000000);
 ERROR 1136 (21501): Column count doesn't match value count at row 1
 MariaDB [resort_590] > insert into reservation values(4444,1003,"2022-11-25"
  "2022-11-30",1699.000000);
 Query OK, 1 row affected (0.003 sec)
 MariaDB [resort_590]>
insertion
Case when error is triggered
 MariaDB [resort_590]> insert into customer values (2222, "pratik", "", "katti"
  "karnataka", "sadadd@gmail.com", 1111566789, NULL);
 Query OK, 1 row affected (0.004 sec)
"2022-12-04",1699.000000);
```

Successful

CURSORS

Cursor:

To Create backup table for food item

```
CREATE TABLE `Curbackup_foodItem` (
 `food_id` int(11) DEFAULT NULL,
 `food_name` varchar(30) DEFAULT NULL,
 'price' int(11) DEFAULT NULL
);
DELIMITER $$
CREATE PROCEDURE curs()
BEGIN
DECLARE done INT DEFAULT 0;
DECLARE foodid, price int(10);
DECLARE foodname VARCHAR(20);
DECLARE cur CURSOR FOR SELECT * FROM food_item;
DECLARE CONTINUE HANDLER FOR NOT FOUND SET done = 1;
OPEN cur;
label: LOOP
FETCH cur INTO foodid, foodname, price;
INSERT INTO Curbackup_foodItem VALUES(foodid, foodname, price);
IF done = 1 THEN LEAVE label;
END IF;
END LOOP;
CLOSE cur;
END;$$
DELIMITER;
```



Developing a Frontend

The frontend should support

- 1. Addition, Modification and Deletion of records from any chosen table − Done ✓
- 2. There should be a window to accept and run any SQL statement and display the result − Done ✓

Frontend made using Streamlit

Frontend Visuals

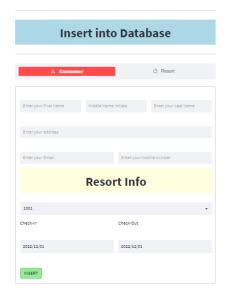


Sat30 Resorts

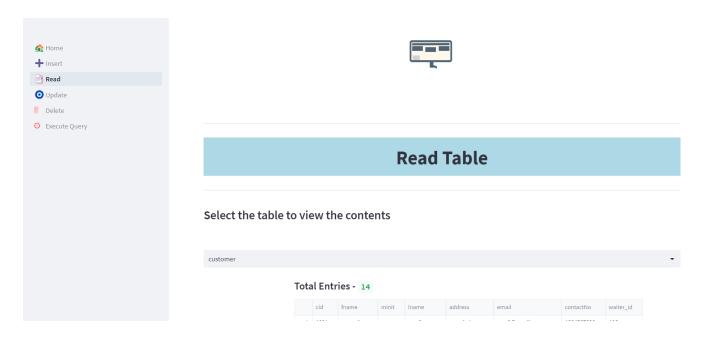
Off to get some vitamin sea!

INSERT - OPERATION

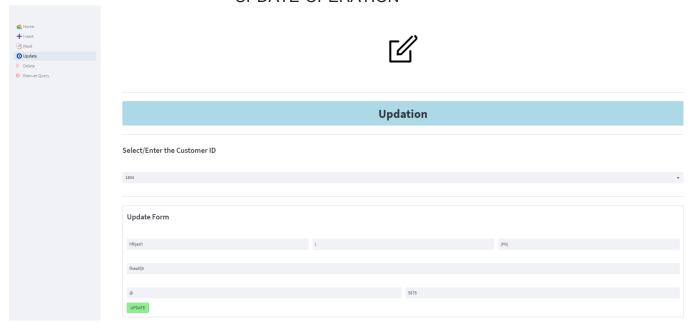




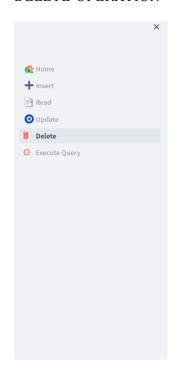
READ-OPERATION

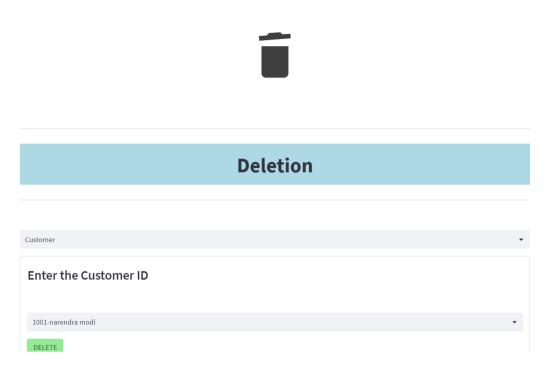


UPDATE-OPERATION



DELETE-OPERATION





QUERY-EXECUTION

