```
/*queries*/
/*1*/
       select room_id, room_status from room;
/*2*/
       select *, count(*) from reservation
       group by room_id order by(count(*)) desc limit 10;
/*3*/
       SELECT *
       FROM reservation_details
       WHERE check_in >= date_sub(current_timestamp(), INTERVAL 14 day);
/*4*/
       SELECT employee id, employee first name, employee last name, count(*) as
num_of_cleans
       FROM cleaned by
       INNER JOIN employees
       USING (employee_id)
       group by employee id
       order by(count(*)) desc limit 1;
/*5*/
       select r.reservation_id,c.client_id,client_first_name,client_last_name
       from reservation_details rd
       inner join reservation r
       on rd.reservation id = r.reservation id
       inner join client_ c
       on c.client_id=r.client_id
       where check_out >= current_date();
/*6*/
       select *,count(*) from reservation
       inner join client_
       using(client_id)
       group by client_id having count(*)>1;
/*7*/
  select YEAR(check in) AS year, MONTH(check in) AS month, sum(calc price) as revenue
       from reservation_details
       group by month(check in)
       order by year desc;
/*Procedures*/
/*1*/
       DELIMITER $$
CREATE PROCEDURE update startorfinish cleaning(IN room id INT,IN employee id INT
,IN action_type VARCHAR(20))
BEGIN
       IF(action_type='action_start')
        THEN
```

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insert into cleaned_by (room_id,employee_id,clean_time)
              values (room id , employee id ,current timestamp());
    update room
              set room.room_status="Waiting for cleaning", changed_status_time =
current_timestamp()
              where room.room_id=room_id_;
       end if;
       IF(action_type='action_end')
              THEN
                      update cleaned_by
                      set clean_finish = current_timestamp()
                      where cleaned by.room id = room id and
employee_id=employee_id_ and clean_finish is null;
      update room
      set room.room_status="Available", changed_status_time = current_timestamp()
      where room.room_id=room_id_;
              end if;
END
$$
DELIMITER;
       DROP PROCEDURE update_startorfinish_cleaning;
       select * from cleaned by;
       call update_startorfinish_cleaning(4,2,'action_end');
/*2*/
       /*function for the procedure*/
       DELIMITER $$
       CREATE FUNCTION
              temp_status(res_id_ INT) RETURNS VARCHAR(40)
       BEGIN
       DECLARE roomstatus VARCHAR(40) DEFAULT 'The room doesnt exist';
       SELECT
              room_status
    INTO roomstatus
       FROM
  room
  INNER JOIN
  reservation
  using (room_id)
       WHERE
              reservation_id=res_id_;
       RETURN roomstatus;
       END $$
```

```
DELIMITER;
  -- the procedure
  DELIMITER $$
       CREATE PROCEDURE change status(IN res id INT)
              -- In case the room is Available
              BEGIN
    DECLARE new_res_id INT;
    DECLARE new_room_status VARCHAR (30);
    SET new_room_status= temp_status(res_id_); -- using the utility function temp_status
for getting the room_status from reservation_id
    CASE
                      WHEN new_room_status='Available'
                             THEN
                             UPDATE room
                             INNER JOIN reservation AS r
                             ON room.room id=r.room id
                             SET
changed status time=current timestamp(),room status='Occupied'
                             WHERE reservation_id=res_id_;
    -- In case the room is Occupied
                      WHEN new_room_status='Occupied'
                             THEN
                             UPDATE room
                             INNER JOIN reservation AS r
                             ON room.room_id=r.room_id
                             SET
changed_status_time=current_timestamp(),room_status='Waiting for cleaning'
                             WHERE reservation id=res id;
    -- In case the room is Waiting for cleaning
                      WHEN new_room_status='Waiting for cleaning'
                             THEN
                             UPDATE room
                             INNER JOIN reservation AS r
                             ON room.room_id=r.room_id
                             SET
changed_status_time=current_timestamp(),room_status='Available'
                             WHERE reservation_id=res_id_;
              END CASE;
       END
       $$
       DELIMITER;
  -- Procedure call: dont forget to call the procedure function in line 65 - temp_status
```

select* from reservation;

```
select *from room;
       call change status(20);
       DROP PROCEDURE change_status;
/*function*/
       DELIMITER $$
       CREATE FUNCTION
               room_status(room_id_ INT) RETURNS varchar(40)
       BEGIN
       DECLARE roomstatus varchar(40) default 'The room doesnt exist';
       SELECT
               room_status
       INTO roomstatus FROM
               room
       WHERE
               room_id=room_id_;
       RETURN roomstatus;
       END$$
       DELIMITER;
       drop function room_status;
       set global log_bin_trust_function_creators = 1;
       select room_status(10);
       select * from room;
-- Calculated price querya - calculating the calc_price of all elements
       update reservation_details rd
       inner join reservation as r
       on rd.reservation_id=r.reservation_id
       inner join room
       on r.room_id=room.room_id
       inner join room_price rp
       on room.room_type=rp.room_type
       set calc_price = DATEDIFF( rd.check_out,rd.check_in)*price_per_day;
```