IT214
DATABASE MANAGEMENT SYSTEM

PROJECT SUBMISSION

Database Title : GSRTC Reservation System

<u>SQL Queries</u>

<u>Team Details</u>

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1) **Retrieve the bus schedules available between a particular source and destination on the given date.**

SELECT
"HAVING".schedule_id,route.route_id,origin,destination,bus.bus_number,bus.bus_type,departure_da
te,departure_time,arrival_time FROM "HAVING" JOIN route ON ("HAVING".route_id =
route.route_id)JOIN bus_schedule AS b ON (b.schedule_id = "HAVING".schedule_id) JOIN bus ON
(bus.bus_number ="HAVING".bus_number)
WHERE route.origin= 'Valsad' AND route.destination='Vadodara' AND departure_date='2017-11-
11'
ORDER BY route.route_id

2) Retrieve the number of buses running on a particular route on a particular date.

SELECT route.route_id,count(bus_number) AS no_of_buses_available FROM "HAVING" JOIN route
ON ("HAVING".route_id = route.route_id) JOIN bus_schedule AS b ON (b.schedule_id =
"HAVING".schedule_id)
WHERE route.origin= 'Ahmedabad' AND route.destination='Rajkot' AND departure_date='2017-11-
11' GROUP BY route.route_id

To display the bus numbers that run on that route on that given date:-

*SELECT "HAVING".schedule_id,b.departure_date,bus_number,route.route_id FROM "HAVING" JOIN
route ON ("HAVING".route_id = route.route_id) JOIN bus_schedule AS b ON (b.schedule_id =
"HAVING".schedule_id)*
WHERE route.origin= 'Ahmedabad' AND route.destination='Rajkot' AND departure_date='2017-11-11'

3) Number of passengers travelling on a particular route in a particular bus on date.

SELECT "HAVING".schedule_id,route.origin,
route.destination,bus_schedule.departure_date,sum(child+adult) AS
tot_pass,"HAVING".bus_number FROM booking_details JOIN "HAVING"
ON("HAVING".schedule_id=booking_details.schedule_id) JOIN route ON ("HAVING".route_id =
route.route_id) JOIN bus_schedule on (bus_schedule.schedule_id = "HAVING".schedule_id)
WHERE route.origin ='Rajkot' AND route.destination='Jamnagar'
GROUP BY "HAVING".bus_number, "HAVING".schedule_id,route.route_id,route.origin,
route.destination,bus_schedule.departure_date

4) Total number of tickets booked on a date.

SELECT bus_schedule.departure_date,sum(child+adult) AS tot_tickets_booked FROM
booking_details JOIN bus_schedule ON (bus_schedule.schedule_id = booking_details.schedule_id)
WHERE bus_schedule.departure_date = '2017-11-11'
GROUP BY bus_schedule.departure_date

5) Total amount of money made on a date.

SELECT e.departure_date,sum(child*child_fare+adult*adult_fare) AS total_fare FROM(SELECT
departure_date,route_id,bus_number,adult_fare,child_fare FROM(SELECT
schedule_id,route_id,bus_number,departure_date FROM bus_schedule NATURAL JOIN "HAVING")
AS a
NATURAL JOIN has_fare_for) AS e JOIN
(SELECT departure_date,bus_number,route_id,child,adult FROM booking_details JOIN bus_schedule
ON(booking_details.schedule_id=bus_schedule.schedule_id))AS c ON(e.route_id=c.route_id AND
e.bus_number=c.bus_number AND e.departure_date=c.departure_date) GROUP BY e.departure_date

6) Display the number of advanced bookings out of all the bookings.

SELECT count(booking_mode) as Advanced_Booking FROM booking_details
WHERE booking_mode = 'A'

7) If a person, enters an origin and a destination on a particular date. Display all buses on that route and the corresponding fare. And the available schedules too. So, that he can decide which bus schedule to select.

SELECT
"HAVING".schedule_id,"HAVING".bus_number,origin,destination,bus.bus_type,child_fare,adult_fare,
departure_date,departure_time,arrival_time FROM "HAVING" JOIN route ON ("HAVING".route_id =
route.route_id)JOIN bus_schedule AS b ON (b.schedule_id = "HAVING".schedule_id) JOIN bus ON
(bus.bus_number ="HAVING".bus_number) JOIN has_fare_for ON (has_fare_for.route_id =
"HAVING".route_id AND has_fare_for.bus_number = "HAVING".bus_number)
WHERE route.origin= 'Rajkot' AND route.destination='Ahmedabad' AND departure_date ='2017-
11-11'

8) Display minimum details of the senior citizens on board.

SELECT pname,age,gender,booking_id FROM passenger
WHERE age>65

9) Display booking details of a person.

SELECT
booking_id,pname,seat_number,age,transaction_type,booking_mode,bus_number,bus_type,departur
e_date,origin,destination,departure_time,arrival_time FROM booking_details AS b JOIN
bus_schedule AS s ON(b.schedule_id=s.schedule_id)
NATURAL JOIN route NATURAL JOIN bus NATURAL JOIN passenger

10) Display all the cities covered by a bus on its routes.

SELECT bus_number,origin AS city FROM "HAVING" NATURAL JOIN route UNION SELECT
bus_number,destination AS city FROM "HAVING" NATURAL JOIN route

11) Display the schedule of a particular bus number.

SELECT bus_number,departure_date,origin,destination,departure_time,arrival_time from
has_fare_for natural join route natural join "HAVING" natural join bus_schedule where
bus_number=1 order by departure_date,departure_time

12) Frequency of buses to a destination on a particular date.

SELECT count("HAVING".schedule_id) AS bus_frequency from "HAVING" JOIN route ON
("HAVING".route_id = route.route_id) JOIN bus_schedule AS b ON (b.schedule_id =
"HAVING".schedule_id)
WHERE route.destination= 'Vadodara' AND departure_date ='2017-11-11'

13) Display total fare that needs to be paid by the person for the booking made.

SELECT b.booking_id , sum(child*child_fare+adult*adult_fare) AS total_fare FROM booking_details
AS b JOIN "HAVING" AS h ON (h.schedule_id = b.schedule_id AND h.route_id = b.route_id) JOIN
has_fare_for AS f ON (f.route_id = h.route_id AND f.bus_number = h.bus_number)
WHERE booking_id = 1025
GROUP BY b.booking_id

14) Display details of passengers of a certain transaction type.

SELECT booking_id,pname, mobile_number FROM passenger NATURAL JOIN booking_details
WHERE transaction_type = 'Paytm'