Q1 )Show all trains information travelling between Goa Mumbai and Ajmer-Lonavala where at least half the coaches are due for maintenance on or before 30 November this year

select distinct t.\*, rs.route\_id, r.route\_name from train t join RunningSchedule rs on t.train\_id = rs.train\_id join route r on rs.route\_id = r.route\_id where r.route\_name like '%Goa-Mumbai%' or r.route\_name like '%Ajmer-Lonavala%' and t.train\_id in (select c.train\_id from coaches c where c.train\_id = t.train\_id group by c.train\_id having sum( case when c.distance\_after\_last\_maintenance > 5000 OR date\_add(c.last\_maintainence\_date,INTERVAL 6 MONTH)<='2023-11-30' then 1 else 0 end ) >= (count(\*) / 2) );

+----------+---------------+------+-----------+----------+------------+

| train\_id | meal\_on\_board | wifi | magazines | route\_id | route\_name |

+----------+---------------+------+-----------+----------+------------+

| t13 | Yes | Yes | No | R020 | Goa-Mumbai |

Q2.List all trains not scheduled on 10th October this year.

select distinct train\_id from schedule where date !='2023-10-10';

+----------+

| train\_id |

+----------+

| t1 |

| t11 |

| t13 |

| t4 |

| t5 |

| t6 |

| t7 |

| t8 |

| t9 |

+----------+

Q3. Display the details of the route where a train was always on time.

select \* from Route r where route\_id not in(select rs.route\_id from RunningSchedule rs where rs.route\_id=r.route\_id and rs.isdelayover30min=1);

+----------+-------------------------------+----------+------------------------+----------------------------------------+

| route\_id | route\_name | distance | time\_taken | operating\_days |

+----------+-------------------------------+----------+------------------------+----------------------------------------+

| R001 | Mumbai Central- Gandhinagar | 548 | 5 hours 40 minutes | 6 days a week except Sundays |

| R002 | New Delhi - Himachal | 412 | 6 hours 10 minutes | 6 days a week except Thursdays |

| R003 | Secunderabad - Visakhapatnam | 500 | 8 hrs 30 minutes | once a week (every Sunday) |

| R004 | Mumbai -SainagarShirdi | 248 | 5 hours 20 minutes | 6 days in a week but not on Tuesdays |

| R005 | Mumbai - Solapur | 400 | 6 hours and 35 minutes | 6 days in a week but not on Wednesdays |

| R006 | Bhopal-Delhi | 700 | 7 hours and 45 minutes | 6 days in a week but not on Saturdays |

| R007 | Lonavala - Ajmer | 1062 | 10 hours 45 minutes | once a week (every Saturday) |

| R008 | Dharwad - Bengaluru | 432 | 5 hours | "Monday |

| R009 | Bhopal - Indore | 246 | 3 hours | Every day |

| R010 | Mumbai - Goa | 588 | 6 hours | Every day |

| R011 | Gandhinagar - Mumbai Central | 548 | 5 hours 40 minutes | 6 days a week except Sundays |

| R012 | Himachal - New Delhi | 412 | 6 hours 10 minutes | 6 days a week except Thursdays |

| R013 | Visakhapatnam - Secunderabad | 500 | 8 hrs 30 minutes | once a week (every Sunday) |

| R014 | SainagarShirdi - Mumbai | 248 | 5 hours 20 minutes | 6 days in a week but not on Tuesdays |

| R015 | Solapur - Mumbai | 400 | 6 hours and 35 minutes | 6 days in a week but not on Wednesdays |

| R016 | Delhi-Bhopal | 700 | 7 hours and 45 minutes | 6 days in a week but not on Saturdays |

| R017 | Ajmer-Lonavala | 1062 | 10 hours 45 minutes | once a week (every Saturday) |

| R018 | Bengaluru-Dharwad | 432 | 5 hours | "Monday |

| R019 | Indore-Bhopal | 246 | 3 hours | Every day |

| R020 | Goa-Mumbai | 588 | 6 hours | Every day |

+----------+-------------------------------+----------+------------------------+----------------------------------------+

1. ows in set (0.04 sec)

Q4.Display the details of the agents who have made maximum commission in the Month of September.

select a.\* from agent a where month = 'september' and commission =( select max(commission) from agent where month = 'september');

+----------+--------------+----------------+----------------+-----------+------------+

| agent\_id | agentname | contact\_number | address | month | commission |

+----------+--------------+----------------+----------------+-----------+------------+

| a3 | Arjun Sharma | 2147483647 | 789 Oak Street | september | 2250 |

+----------+--------------+----------------+----------------+-----------+------------+

1 row in set (0.00 sec)

Q5.List all agents, in descending order of percentage of confirmed booking each trip in the month of October this year. Include agent and route information in your result.

select a.agent\_id, a.agentname, a.contact\_number, a.address, t.route\_id, count(case when t.status = 'confirm' then 1 end) \* 100.0 / count(\*) AS percentage\_confirmed\_bookings from booked\_ticket t left join agent a on t.agent\_id

= a.agent\_id where month(t.journeydate) = 10 and year(t.journeydate) = year(curdate()) and a.agent\_id is not null group by t.agent\_id, a.agentname, a.contact\_number, a.address, t.route\_id ORDER BY percentage\_confirmed\_bookings desc;

+----------+-----------------+----------------+-----------------------+----------+-------------------------------+

| agent\_id | agentname | contact\_number | address | route\_id | percentage\_confirmed\_bookings |

+----------+-----------------+----------------+-----------------------+----------+-------------------------------+

| a11 | Aarush Banerjee | 2147483647 | 567 Pineapple Street | R020 | 100.00000 |

| a14 | Myra Reddy | 2147483647 | 456 Lime Street | R008 | 100.00000 |

| a15 | Kabir Malhotra | 2147483647 | 789 Grape Street | R008 | 100.00000 |

| a16 | Avani Verma | 2147483647 | 234 Banana Street | R001 | 100.00000 |

| a20 | Zara Sharma | 2147483647 | 456 Avocado Street | R008 | 100.00000 |

| a23 | Yuvaan Rana | 2147483647 | 567 Pear Street | R020 | 100.00000 |

| a8 | Saanvi Desai | 2147483647 | 321 Walnut Street | R020 | 100.00000 |

| a17 | Aryan Bhatnagar | 2147483647 | 567 Watermelon Street | R001 | 0.00000 |

+----------+-----------------+----------------+-----------------------+----------+-------------------------------+

8 rows in set (0.00 sec)