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/***
STEPS:
1.CREATE DATABASE AND USE IT
2. IMPORT BOTH CSV FILE
3. ANALYSING DATA
4. WORING ON DIFFERENT QUESTIONS***/
--SETUP DATABASE
CREATE DATABASE IPL_DATABASE_PROJECT;
USE IPL_DATABASE_PROJECT;
/******SOME DATA ANALYSIS*****/
-- SEEING IMPORTED TABLES
SELECT * FROM IPL BALL;
SELECT * FROM IPL_MATCHES;
--NUMBER OF ROWS IN TABLES
SELECT COUNT(*) AS NO_OF_ROWS
FROM IPL_MATCHES;
SELECT COUNT(*) AS NO_OF_ROWS
FROM IPL_BALL;
--NUMBER OF COLUMNS IN TABLES
SELECT COUNT(*) as NO_OF_COLUMNS FROM information_schema.columns WHERE
 table_name = 'IPL_MATCHES';
SELECT COUNT(*) as NO_OF_COLUMNS FROM information_schema.columns WHERE
 table_name = 'IPL_BALL';
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-- ANALYSIS QUESTION
--Q.1) How many players have won player of the match award at least once
SELECT COUNT(DISTINCT(player_of_match)) AS PLAYER_OF_MATCH_COUNT FROM
 IPL_MATCHES;
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--Q.2) Get details of top 5 matches which were won by maximum number of runs/
 result_margin.
--FIRST UPDATE NULL VALUES OF THIS COLUMN
UPDATE IPL MATCHES
SET result margin='0'
WHERE result_margin IS NULL;
-- CHECKING TOP 5 MATCHES
SELECT TOP 5 * FROM IPL MATCHES
ORDER BY result_margin DESC
--Q.3) Order the rows by city in which the match was played
SELECT*FROM IPL MATCHES
ORDER BY city;
--Q.4) Find venue of 10 most recently played matches
SELECT TOP 10 venue FROM IPL_MATCHES
ORDER BY date DESC;
-- Q.5) Return a column with comment based on total runs
SELECT *,
CASE
WHEN total_runs=0 THEN 'DOT'
WHEN total_runs=1 THEN 'SINGLE'
WHEN total runs=2 THEN 'DOUBLE'
WHEN total_runs=2 THEN 'THREE'
WHEN total_runs=4 THEN 'FOUR'
WHEN total_runs=5 THEN 'FIVE'
WHEN total runs=6 THEN 'SIX'
END AS RUN COMMENT
FROM IPL_BALL;
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--Q.6) Create table deliveries_v02 with all the columns of deliveries and an
 additional column ball_result containing value boundary, dot or other
 depending on the total_run (boundary for >= 4, dot for 0 and other for any
 other number)
--FIRST INSERT NEW COLUMN IN IPL BALL DATASET
ALTER TABLE IPL_BALL
ADD ball_result_label VARCHAR(50);
-- UPDATE NEW COLUMN WITH VALUES
UPDATE IPL_BALL
SET
      ball_result_label=
      CASE total runs
          WHEN Ø THEN 'DOT'
          WHEN 1 THEN 'SINGLE'
          WHEN 2 THEN 'DOUBLE'
          WHEN 3 THEN 'THREE'
          WHEN 4 THEN 'FOUR'
          WHEN 5 THEN 'FIVE'
          WHEN 6 THEN 'SIX'
      END
WHERE total_runs IN (0,1,2,3,4,5,6);
--MAKE NEW TABLE deliveries_v02 FROM OLD TABLE IPL_BALL
SELECT * INTO deliveries_v02
FROM IPL_BALL;
-- CHECKING TABLE IS CREATED OR NOT
SELECT *FROM deliveries_v02;
 --Q.7) Write a query to fetch the total number of boundaries and dot balls.
SELECT ball_result_label,COUNT(*) AS COUNT_
FROM deliveries v02
WHERE ball_result_label='SIX' OR ball_result_label='DOT' OR
                                                                       P
 ball_result_label='FOUR'
GROUP BY ball_result_label
--Q.8) What is the highest runs by which any team won a match.
SELECT MAX(result_margin) AS WINNER_RUN_MARGIN FROM IPL_MATCHES;
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--Q.9) On an average, teams won by how many runs in ipl.
SELECT ROUND(AVG(result_margin),2) AS AVERAGE_RUN_MARGIN FROM IPL_MATCHES;
 --Q.10) How many extra runs were conceded in ipl by SK Warne
SELECT SUM(extra_runs) AS RUNS_CONCEDED FROM IPL_BALL
WHERE bowler='SK Warne';
 --Q.11) How many boundaries (4s) and (6s) have been hit in ipl
SELECT total_runs, COUNT(total_runs) AS COUNT_
FROM IPL_BALL
WHERE total_runs=4 OR total_runs=6
GROUP BY total runs;
 --Q.12) How many balls did SK Warne bowl to batsman SR Tendulkar.
SELECT COUNT(*) AS COUNT_OF_BALL
FROM IPL_BALL
WHERE batsman='SR Tendulkar' AND bowler='SK Warne';
--Q.11) How many matches were played in the March and June
SELECT COUNT(*) AS COUNT_OF_MATCHES FROM IPL_MATCHES
WHERE MONTH(date) = 03 OR MONTH(date) = 06;
--Q.12) Add column season in IPL_MATCHES dataset and update this column taking >
 year of match from date column.
--ADDING COLUMN
ALTER TABLE IPL_MATCHES
ADD season int;
-- UPDATE COLUMN WITH YEAR
UPDATE IPL_MATCHES
SET season =YEAR(date)
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--Q.13) Name the players who won player of match only once in this period.
SELECT player_of_match, COUNT(player_of_match) FROM IPL_MATCHES
GROUP BY player of match
HAVING COUNT(player_of_match)=1
--Q.14) Fetch data of all the matches played on 2nd May 2013
SELECT *FROM IPL MATCHES
WHERE date= '2013-05-02';
--Q.15) Fetch data of all the matches where the margin of victory is more than
  100 runs
SELECT *FROM IPL_MATCHES
WHERE result margin>100;
 --Q.16) Fetch data of all the matches where the final scores of both teams
  tied and order it in descending order of the date.
SELECT *FROM IPL MATCHES
WHERE result='tie'
ORDER BY date DESC;
--Q.17) Get the count of cities that have hosted an IPL match
SELECT COUNT(DISTINCT city) AS COUNT_OF_CITIES
FROM IPL_MATCHES;
 --Q.18) Write a query to fetch the total number of dismissals by dismissal
SELECT dismissal_kind, COUNT(dismissal_kind)AS DISMISSAL_COUNT
FROM DELIVERIES
WHERE dismissal_kind != 'NA'
GROUP BY dismissal_kind
ORDER BY DISMISSAL COUNT DESC;
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--Q.19) Write a query to get the top 5 bowlers who conceded maximum extra runs
SELECT TOP 5 bowler, COUNT(extra_runs) AS COUNT_OF_EXTRA_RUNS
FROM IPL_BALL
GROUP BY bowler
ORDER BY COUNT_OF_EXTRA_RUNS DESC;
  --Q.20) Write a query to fetch the total runs scored for each venue and order
 it in the descending order of total runs scored.
SELECT M. venue , COUNT (B. total_runs) AS TOTAL_RUNS
FROM IPL MATCHES AS M
JOIN
IPL_BALL AS B
ON M.id=B.id
GROUP BY M. venue
ORDER BY TOTAL_RUNS DESC;
--Q.21) Write a query to fetch the year-wise total runs scored at Eden Gardens 🤝
 and order it in the descending order of total runs scored
SELECT M. venue , YEAR (M.date) AS YEAR_OF_MATCH, COUNT (B.total_runs) AS TOTAL_RUNS
FROM IPL_MATCHES AS M
JOIN
IPL_BALL AS B
ON M.id=B.id
WHERE M. venue='Eden Gardens'
GROUP BY M. venue, YEAR (M. date)
ORDER BY TOTAL_RUNS DESC;
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--Q.22) Create table deliveries_v03 with all columns of deliveries_v02 and an
 additional column for row number partition over id.
-- CREATING VIEW AND ADD COLUMN AND SAME TIME USED PARTITION BY
WITH CTE AS
   SELECT *,
         ROW_NUMBER() OVER (PARTITION BY id ORDER BY id ) AS r_nums
   FROM deliveries_v02
UPDATE CTE
SET r_num = r_nums;
-- CREATING TABLE FROM OLD TABLE
SELECT * INTO deliveries_v03
FROM deliveries_v02;
--Q.23) Use the r_num created in deliveries_v03 to identify instances where id >>
 is repeating .
SELECT *
     deliveries v03
FROM
WHERE r_num = 2
--Q.24) Use subqueries to fetch data of all the ball_id which are repeating.
SELECT
   FROM
           deliveries_v03
   WHERE
           id in ( SELECT id
               FROM deliveries_v03
               WHERE r_num=2 )
   ORDER BY id
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