**SQL – Assignment**

Company name= LearnVista pvt ltd

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**Analysis A**

1. We have a table that has 5 columns.

a. User\_id, poll\_id, poll\_option\_id, amount, created\_dt

c. One of the options is the outcome of the event.

               Event: How many matches will the Indian cricket team win in 2022?

1. Less than 50
2. 50-60
3. 61-65
4. Greater than 65

* India wins 63 matches in the end.
* Option C is the winner
* Money invested in options A, B, and D should be proportionately distributed amongst users who invested money in option C
* For example - If the total money invested in options A, B, and D is Rs. 1500 and there are 3 users who invested 500 in option C {250, 200, and 50}
* These users would receive (750, 600, and 150 respectively) – the sum is 1500.

1. Write down a query for the above settlement process

**Input Table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| User\_ID | Poll\_Id | Poll\_Option\_Id | Amount | Created\_dt |
| id1 | p1 | A | 200 | 2021-12-01 |
| id2 | p1 | C | 250 | 2021-12-01 |
| id3 | p1 | A | 200 | 2021-12-01 |
| id4 | p1 | B | 500 | 2021-12-01 |
| id5 | p1 | C | 50 | 2021-12-01 |
| id6 | p1 | D | 500 | 2021-12-01 |
| id7 | p1 | C | 200 | 2021-12-01 |
| id8 | p1 | A | 100 | 2021-12-01 |

**Output Table:** **Option C wins**

|  |  |
| --- | --- |
| User ID | Returns |
| id2 | 1000 |
| id5 | 200 |
| id7 | 800 |

**Solution(Paste your Query here):**

CREATE TABLE Settlement (

user\_id VARCHAR,

poll\_id VARCHAR,

poll\_option\_id VARCHAR,

amount INT,

created\_dt DATE

);

INSERT INTO Settlement (user\_id, poll\_id, poll\_option\_id, amount, created\_dt)

VALUES ('id1', 'p1', 'A', 200, '2021-12-01'),

('id2', 'p1', 'C', 250, '2021-12-01'),

('id3', 'p1', 'A', 200, '2021-12-01'),

('id4', 'p1', 'B', 500, '2021-12-01'),

('id5', 'p1', 'C', 50, '2021-12-01'),

('id6', 'p1', 'D', 500, '2021-12-01'),

('id7', 'p1', 'C', 200, '2021-12-01'),

('id8', 'p1', 'A', 100, '2021-12-01');

SELECT user\_id,

amount \* (SELECT SUM(amount) FROM Settlement )/(SELECT SUM(amount) FROM Settlement WHERE poll\_option\_id = 'C') AS Returns

FROM Settlement

WHERE poll\_option\_id = 'C';



**Analysis B**

1. Below table (Table 1) has city and month wise sales data. Create a SQL query to return output as illustrated in Table 2.

|  |  |  |  |
| --- | --- | --- | --- |
| **Input\_Table** | | | |
| **City** | **Year** | **Month** | **Sales** |
| Delhi | 2020 | 5 | 4300 |
| Delhi | 2020 | 6 | 2000 |
| Delhi | 2020 | 7 | 2100 |
| Delhi | 2020 | 8 | 2200 |
| Delhi | 2020 | 9 | 1900 |
| Delhi | 2020 | 10 | 200 |
| Mumbai | 2020 | 5 | 4400 |
| Mumbai | 2020 | 6 | 2800 |
| Mumbai | 2020 | 7 | 6000 |
| Mumbai | 2020 | 8 | 9300 |
| Mumbai | 2020 | 9 | 4200 |
| Mumbai | 2020 | 10 | 9700 |
| Bangalore | 2020 | 5 | 1000 |
| Bangalore | 2020 | 6 | 2300 |
| Bangalore | 2020 | 7 | 6800 |
| Bangalore | 2020 | 8 | 7000 |
| Bangalore | 2020 | 9 | 2300 |
| Bangalore | 2020 | 10 | 8400 |
| **Output\_Table** | | | | | | |
| **City** | **Year** | **Month** | **Sales** | **Previous Month Sales** | **Next Month Sales** | **YTD Sales** |
| Delhi | 2020 | 5 | 4300 |  | 2000 | 4300 |
| Delhi | 2020 | 6 | 2000 | 4300 | 2100 | 6300 |
| Delhi | 2020 | 7 | 2100 | 2000 | 2200 | 8400 |
| Delhi | 2020 | 8 | 2200 | 2100 | 1900 | 10600 |
| Delhi | 2020 | 9 | 1900 | 2200 | 200 | 12500 |
| Delhi | 2020 | 10 | 200 | 1900 |  | 12700 |
| Mumbai | 2020 | 5 | 4400 |  |  |  |
| Mumbai | 2020 | 6 | 2800 |  |  |  |
| Mumbai | 2020 | 7 | 6000 |  |  |  |
| Mumbai | 2020 | 8 | 9300 |  |  |  |
| Mumbai | 2020 | 9 | 4200 |  |  |  |
| Mumbai | 2020 | 10 | 9700 |  |  |  |
| Bangalore | 2020 | 5 | 1000 |  |  |  |
| Bangalore | 2020 | 6 | 2300 |  |  |  |
| Bangalore | 2020 | 7 | 6800 |  |  |  |
| Bangalore | 2020 | 8 | 7000 |  |  |  |
| Bangalore | 2020 | 9 | 2300 |  |  |  |
| Bangalore | 2020 | 10 | 8400 |  |  |  |

**Solution(Paste your Query here):**

CREATE TABLE Monthly\_Sales (

City VARCHAR,

Year INT,

Month INT,

Sales INT

);

INSERT INTO Monthly\_Sales (City, Year, Month, Sales) VALUES

('Delhi', 2020, 5, 4300),

('Delhi', 2020, 6, 2000),

('Delhi', 2020, 7, 2100),

('Delhi', 2020, 8, 2200),

('Delhi', 2020, 9, 1900),

('Delhi', 2020, 10, 200),

('Mumbai', 2020, 5, 4400),

('Mumbai', 2020, 6, 2800),

('Mumbai', 2020, 7, 6000),

('Mumbai', 2020, 8, 9300),

('Mumbai', 2020, 9, 4200),

('Mumbai', 2020, 10, 9700),

('Bangalore', 2020, 5, 1000),

('Bangalore', 2020, 6, 2300),

('Bangalore', 2020, 7, 6800),

('Bangalore', 2020, 8, 7000),

('Bangalore', 2020, 9, 2300),

('Bangalore', 2020, 10, 8400);

SELECT City, Year, Month, Sales,

CASE WHEN City = 'Delhi' THEN LAG(Sales) OVER (PARTITION BY City ORDER BY Year, Month) ELSE NULL END AS Previous\_Month\_Sales,

CASE WHEN City = 'Delhi' THEN LEAD(Sales) OVER (PARTITION BY City ORDER BY Year, Month) ELSE NULL END AS Next\_Month\_Sales,

CASE WHEN City = 'Delhi' THEN SUM(Sales) OVER (PARTITION BY City ORDER BY Year, Month) ELSE NULL END AS YTD\_Sales

FROM Monthly\_Sales

ORDER BY CASE WHEN City = 'Delhi' THEN 0 ELSE 1 END, City, Month;