## **1. Conversion Rate**

Below you see a table of the actions of customers visiting the website by clicking on two different types of advertisements given by an E-Commerce company. Write a query to return the conversion and cancellation rates for each Advertisement type.

**Actions:**

|  |  |  |
| --- | --- | --- |
| Visitor\_ID | Adv\_Type | Action |
| 1 | A | Left |
| 2 | A | Order |
| 3 | B | Left |
| 4 | A | Order |
| 5 | A | Review |
| 6 | A | Left |
| 7 | B | Left |
| 8 | B | Order |
| 9 | B | Review |
| 10 | A | Review |

**Desired\_Output:**

|  |  |
| --- | --- |
| Adv\_Type | Conversion\_Rate |
| A | 0.33 |
| B | 0.25 |

1. Create above table (Actions) and insert values,

CREATE TABLE Actions

(

Visitor\_ID int,

Adv\_Type VARCHAR(10),

Action\_m VARCHAR(10),

);

INSERT INTO Actions (Visitor\_ID, Adv\_Type,Action\_m)

VALUES

(1,'A','Left'),

(2,'A','Order'),

(3,'B','Left'),

(4,'A','Order'),

(5,'A','Review'),

(6,'A','Left'),

(7,'B','Left'),

(8,'B','Order'),

(9,'B','Review'),

(10,'A','Review');

1. Retrieve count of total Actions, and Orders for each Advertisement Type,

SELECT Adv\_Type, Count(Action\_m) As Num\_Action, (SELECT Count(Action\_m) FROM Actions WHERE Action\_m = 'Order' AND Adv\_Type = 'A' ) As Num\_order

FROM Actions

WHERE Adv\_Type = 'A'

GROUP BY Adv\_Type

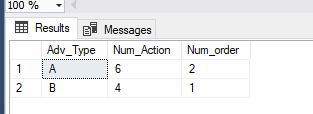
UNION

SELECT Adv\_Type, Count(Action\_m) As Num\_Action, (SELECT Count(Action\_m) FROM Actions WHERE Action\_m = 'Order' AND Adv\_Type = 'B' ) As Num\_order

FROM Actions

WHERE Adv\_Type = 'B'

GROUP BY Adv\_Type



1. Calculate Orders (Conversion) rates for each Advertisement Type by dividing by total count of actions casting as float by multiplying by 1.0.

SELECT Adv\_Type, ROUND(CAST( Num\_Order as float)/CAST (Num\_Action as float), 2) AS Conversion\_Rate

FROM (SELECT Adv\_Type, Count(Action\_m) As Num\_Action, (SELECT Count(Action\_m) FROM Actions WHERE Action\_m = 'Order' AND Adv\_Type = 'A' ) As Num\_order

FROM Actions

WHERE Adv\_Type = 'A'

GROUP BY Adv\_Type

UNION

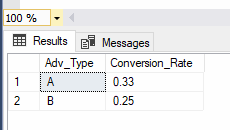
SELECT Adv\_Type, Count(Action\_m) As Num\_Action, (SELECT Count(Action\_m) FROM Actions WHERE Action\_m = 'Order' AND Adv\_Type = 'B' ) As Num\_order

FROM Actions

WHERE Adv\_Type = 'B'

GROUP BY Adv\_Type

) New\_table



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