



Joins and Aggregates - 2

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Compute Following

1. Number of ad impressions.

```
100001:{"ImpressionID": "100001", "Campaigner": "ABC Ltd"}
100002:{"ImpressionID": "100002", "Campaigner": "XYZ Ltd"}
100003:{"ImpressionID": "100003", "Campaigner": "XYZ Ltd"}
100004:{"ImpressionID": "100004", "Campaigner": "XYZ Ltd"}
100005:{"ImpressionID": "100005", "Campaigner": "XYZ Ltd"}
100006:{"ImpressionID": "100006", "Campaigner": "ABC Ltd"}
100007:{"ImpressionID": "100007", "Campaigner": "ABC Ltd"}
100008:{"ImpressionID": "100008", "Campaigner": "ABC Ltd"}
100009:{"ImpressionID": "100009", "Campaigner": "ABC Ltd"}
100010:{"ImpressionID": "100010", "Campaigner": "ABC Ltd"}
```

Campaigner	Count
ABC Ltd	6
XYZ Ltd	4

2. Number of ad clicks.

```
100009:{"ImpressionID": "100009", "Campaigner": "ABC Ltd"}
100010:{"ImpressionID": "100010", "Campaigner": "ABC Ltd"}
100002:{"ImpressionID": "100002", "Campaigner": "XYZ Ltd"}
```

Campaigner	Count
ABC Ltd	2
XYZ Ltd	1

3. Compute CTR

Campaigner	Count
ABC Ltd	33.33%
XYZ Ltd	25.00%

