

Komplettering:

[x] task 4.c - 'req#Items' and 'reqReduced+OrdinaryPrices' is not correct.

[x] After task 13: the correct number of rows or orders are 9825.

[x] task 15: not done

[x] PowerBI: Don't use sum of the variables, use instead average. This applies to all profit, and activation and all other variables.

[x] Overall page: looks good, values will change with new orders (9825) Profit and Activation.

[x] Analysis page: Add the card where you can see the total profit in profit page and total activation in activation page, rename the plots wherever needed and use average instead of sum.

[x] your report is missing

```
/* Task 1 */
```

```
CREATE DATABASE CAMPAIGN;
```

```
/* Task 2.4*/
```

```
ALTER TABLE profit ADD COLUMN activation DOUBLE;
```

```
/* Task 2.5*/
```

```
UPDATE profit p  
JOIN activation a ON p.type = a.type  
SET p.activation = a.activation;
```

```
/* Task 2.6*/
```

```
ALTER TABLE profit RENAME TO Campaign;
```

```
/* Task 3.8*/
```

```
SELECT * FROM campaign  
WHERE activation IS NULL OR profit IS NULL OR DisCheck IS NULL OR  
DisSecond IS NULL  
OR DisFirst IS NULL OR `reqReduced+OrdinaryPrices` IS NULL OR  
`reqOrdinaryPrice` IS  
NULL OR reqTime IS NULL OR `req#Items` IS NULL OR reqValue IS  
NULL OR  
brandSelection IS NULL OR reducedPrice IS NULL OR sale IS NULL OR  
freeReturn IS  
NULL OR freeExressShipping IS NULL OR freeShipping IS NULL OR  
payedGift IS NULL OR  
freeGift IS NULL OR threeForTwo IS NULL OR ladder IS NULL OR  
allorder IS NULL OR  
kombination IS NULL OR firstandsecondline IS NULL OR firstline IS
```

```
NULL OR chck IS
NULL OR `type` IS NULL OR `Day of year` IS NULL OR `Day of week`
IS NULL OR `Day of
month` IS NULL OR `Week of year` IS NULL OR `Month` IS NULL OR
`Quarter` IS NULL OR
`Year` IS NULL;
```

```
/* Task 4.a */
SELECT type, COUNT(*) AS TotalOrders, ROUND(AVG(profit), 2) AS
AvgProfit,
ROUND(AVG(activation), 2) AS AvgActivation
FROM Campaign
GROUP BY type;
```

```
CREATE VIEW Statistics AS
SELECT type, COUNT(*) AS TotalOrders, ROUND(AVG(profit), 2) AS
AvgProfit,
ROUND(AVG(activation), 2) AS AvgActivation
FROM Campaign
GROUP BY type;
```

```
/* Task 4.B */
SELECT type, freeGift, payedGift, freeShipping,
freeExressShipping, freeReturn,
COUNT(*) AS TotalOrders, ROUND(AVG(profit), 2) AS AvgProfit,
ROUND(AVG(activation),
2) AS AvgActivation
FROM Campaign
GROUP BY type, freeGift, payedGift, freeShipping,
freeExressShipping, freeReturn;
```

```
/* Task 4.c */
SELECT type, sale, reducedPrice, brandSelection, reqValue,
`req_items`, reqTime,
reqOrdinaryPrice, `reqReduced_OrdinaryPrices`, COUNT(*) AS
TotalOrders,
ROUND(AVG(profit), 2) AS AvgProfit, ROUND(AVG(activation), 2) AS
AvgActivation
FROM Campaign
GROUP BY type, sale, reducedPrice, brandSelection, reqValue,
`req_items`, reqTime,
reqOrdinaryPrice, `reqReduced_OrdinaryPrices`;
```

```
/* Task 4.D */
SELECT type, DisFirst, DisSecond, DisCheck, COUNT(*) AS
TotalOrders,
ROUND(AVG(profit), 2) AS AvgProfit, ROUND(AVG(activation), 2) AS
AvgActivation
FROM Campaign
GROUP BY type, DisFirst, DisSecond, DisCheck;
```

```

CREATE VIEW Discount AS
SELECT type, DisFirst, DisSecond, DisCheck, COUNT(*) AS
TotalOrders,
ROUND(AVG(profit), 2) AS AvgProfit, ROUND(AVG(activation), 2) AS
AvgActivation
FROM Campaign
GROUP BY type, DisFirst, DisSecond, DisCheck;
SELECT *
FROM Discount;

```

```

/* Task 9 */
SELECT 'DisFirst' AS 'Variable 1' , 'profit' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisFirst * profit) - SUM(DisFirst) *
SUM(profit)) /
SQRT((COUNT(*) * SUM(DisFirst * DisFirst) - POW(SUM(DisFirst),
2)) * (COUNT(*) *
SUM(profit * profit) - POW(SUM(profit), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisSecond' AS 'Variable 1' , 'profit' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisSecond * profit) - SUM(DisSecond) *
SUM(profit)) /
SQRT((COUNT(*) * SUM(DisSecond * DisSecond) - POW(SUM(DisSecond),
2)) * (COUNT(*) *
SUM(profit * profit) - POW(SUM(profit), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisCheck' AS 'Variable 1' , 'profit' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisCheck * profit) - SUM(DisCheck) *
SUM(profit)) /
SQRT((COUNT(*) * SUM(DisCheck * DisCheck) - POW(SUM(DisCheck),
2)) * (COUNT(*) *
SUM(profit * profit) - POW(SUM(profit), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisFirst' AS 'Variable 1' , 'Activation' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisFirst * Activation) - SUM(DisFirst) *
SUM(Activation)) /
SQRT((COUNT(*) * SUM(DisFirst * DisFirst) - POW(SUM(DisFirst),
2)) * (COUNT(*) *
SUM(Activation * Activation) - POW(SUM(Activation), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisSecond' AS 'Variable 1' , 'Activation' AS 'Variable
2',
ROUND((COUNT(*) * SUM(DisSecond * Activation) - SUM(DisSecond) *
SUM(Activation)) /
SQRT((COUNT(*) * SUM(DisSecond * DisSecond) - POW(SUM(DisSecond),
2)) * (COUNT(*) *

```

```

SUM(Activation * Activation) - POW(SUM(Activation), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisCheck' AS 'Variable 1' , 'Activation' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisCheck * Activation) - SUM(DisCheck) *
SUM(Activation)) /
SQRT((COUNT(*) * SUM(DisCheck * DisCheck) - POW(SUM(DisCheck),
2)) * (COUNT(*) *
SUM(Activation * Activation) - POW(SUM(Activation), 2))), 4) AS
correlation_coefficient
FROM campaign;
CREATE VIEW correlation AS
SELECT 'DisFirst' AS 'Variable 1' , 'profit' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisFirst * profit) - SUM(DisFirst) *
SUM(profit)) /
SQRT((COUNT(*) * SUM(DisFirst * DisFirst) - POW(SUM(DisFirst),
2)) * (COUNT(*) *
SUM(profit * profit) - POW(SUM(profit), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisSecond' AS 'Variable 1' , 'profit' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisSecond * profit) - SUM(DisSecond) *
SUM(profit)) /
SQRT((COUNT(*) * SUM(DisSecond * DisSecond) - POW(SUM(DisSecond),
2)) * (COUNT(*) *
SUM(profit * profit) - POW(SUM(profit), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisCheck' AS 'Variable 1' , 'profit' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisCheck * profit) - SUM(DisCheck) *
SUM(profit)) /
SQRT((COUNT(*) * SUM(DisCheck * DisCheck) - POW(SUM(DisCheck),
2)) * (COUNT(*) *
SUM(profit * profit) - POW(SUM(profit), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisFirst' AS 'Variable 1' , 'Activation' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisFirst * Activation) - SUM(DisFirst) *
SUM(Activation)) /
SQRT((COUNT(*) * SUM(DisFirst * DisFirst) - POW(SUM(DisFirst),
2)) * (COUNT(*) *
SUM(Activation * Activation) - POW(SUM(Activation), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisSecond' AS 'Variable 1' , 'Activation' AS 'Variable
2',
ROUND((COUNT(*) * SUM(DisSecond * Activation) - SUM(DisSecond) *
SUM(Activation)) /

```

```

SQRT((COUNT(*) * SUM(DisSecond * DisSecond) - POW(SUM(DisSecond),
2)) * (COUNT(*) *
SUM(Activation * Activation) - POW(SUM(Activation), 2))), 4) AS
correlation_coefficient
FROM campaign
UNION ALL
SELECT 'DisCheck' AS 'Variable 1' , 'Activation' AS 'Variable 2',
ROUND((COUNT(*) * SUM(DisCheck * Activation) - SUM(DisCheck) *
SUM(Activation)) /
SQRT((COUNT(*) * SUM(DisCheck * DisCheck) - POW(SUM(DisCheck),
2)) * (COUNT(*) *
SUM(Activation * Activation) - POW(SUM(Activation), 2))), 4) AS
correlation_coefficient
FROM campaign;

```

```

/* Task 10 */
ALTER TABLE campaign
RENAME COLUMN `req#Items` to req_items;
/* Task 11 */
ALTER TABLE campaign
RENAME COLUMN `reqReduced+OrdinaryPrices` TO
reqReduced_OrdinaryPrices;

```

```

/* Task 12 */
DELETE FROM Campaign
WHERE type IN (
SELECT type FROM (
SELECT type
FROM Campaign
GROUP BY type
HAVING COUNT(*) < 50
) AS subquery
);

```

```

/* Task 13 */
DELETE FROM Campaign
WHERE
(type = 'all order' AND DisFirst = 0)
OR (type = '1:st & 2:nd line' AND DisFirst = 0)
OR (type = '1:st line' AND DisFirst = 0)
OR (type = 'check' AND DisFirst > 0)
OR (type = 'check' AND DisSecond > 0)
OR (type = 'kombination' AND DisSecond = 0)
OR (type = 'kombination' AND DisFirst = 0)
OR (type = 'all order' AND DisFirst = 0 AND DisSecond = 0 AND
type = 'check')

```

```
-- Komplettering --
```

```
OR (type = '1:st line' AND DisSecond > 0);
```

### Komplettering:

- After task 13: the correct number of rows or orders are 9825.
  - ~~Just nu 9834. 9 rader skall bort.~~

```
/* Task 14 */
```

```
ALTER TABLE Campaign  
ADD COLUMN Category VARCHAR(10);  
UPDATE Campaign  
SET Category = CASE  
WHEN activation <= 0.09 AND profit <= 0.2 THEN 'Bad'  
ELSE 'Good'  
END;
```

```
/* Task 15 */
```

```
-- Campaign types with average profit based on YEAR --  
SELECT type, COUNT(*) as totalOrders, year, AVG(profit) as  
averageProfit  
FROM campaign  
WHERE type = 'check' OR type = '1:st line' OR type = '1:st & 2:nd  
line' OR type = `kombination` OR type = 'all order' OR type =  
'ladder' OR type = 'threeForTwo'  
GROUP BY type, year  
ORDER BY averageProfit DESC;
```

```
-- Campaign types with average profit based on MONTH --  
SELECT type, COUNT(*) as totalOrders, month, AVG(profit) as  
averageProfit  
FROM campaign  
WHERE type = 'check' OR type = '1:st line' OR type = '1:st & 2:nd  
line' OR type = `kombination` OR type = 'all order' OR type =  
'ladder' OR type = 'threeForTwo'  
GROUP BY type, month  
ORDER BY averageProfit DESC;
```

```
-- Campaign types with average profit based on WEEKLY --  
SELECT type, COUNT(*) as totalOrders, `Day of week`, AVG(profit)  
as averageProfit  
FROM campaign  
WHERE type = 'check' OR type = '1:st line' OR type = '1:st & 2:nd  
line' OR type = `kombination` OR type = 'all order' OR type =  
'ladder' OR type = 'threeForTwo'  
GROUP BY type, `Day of week`  
ORDER BY averageProfit DESC;
```