

# SQL CASE STUDY

## Marketing Analysis (Challenge-6)

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DATA COACH



# CONTENTS

- ✓ 01 Overview
- ✓ 02 Tables
- ✓ 03 Questions & Answers





# 01

## Overview

As a Marketing Analyst at the 'Sustainable Clothing Co.' , we have been tasked to provide insights into whether running several marketing campaigns by the company have been successful or not. Analyse the following data and answer the questions to form my answer.







## 02

## Tables

**sustainable\_clothing**

Product ID	Product Name	Category	Size	Price
1	Organic Cotton T-Shirt	Tops	S	\$29.99
2	Recycled Denim Jeans	Bottoms	M	\$79.99
3	Hemp Crop Top	Tops	L	\$24.99
4	Bamboo Lounge Pants	Bottoms	XS	\$49.99
5	Eco-Friendly Hoodie	Outerwear	XL	\$59.99
6	Linen Button-Down Shirt	Tops	M	\$39.99
7	Organic Cotton Dress	Dresses	S	\$69.99
8	Sustainable Swim Shorts	Swimwear	L	\$34.99
9	Recycled Polyester Jacket	Outerwear	XL	\$89.99
10	Bamboo Yoga Leggings	Activewear	XS	\$54.99
11	Hemp Overalls	Bottoms	M	\$74.99
12	Organic Cotton Sweater	Tops	L	\$49.99
13	Cork Sandals	Footwear	S	\$39.99
14	Recycled Nylon Backpack	Accessories	One Size	\$59.99
15	Organic Cotton Skirt	Bottoms	XS	\$34.99
16	Hemp Baseball Cap	Accessories	One Size	\$24.99
17	Upcycled Denim Jacket	Outerwear	M	\$79.99
18	Linen jumpsuit	Dresses	L	\$69.99
19	Organic Cotton Socks	Accessories	M	\$9.99
20	Bamboo Bathrobe	Loungewear	XL	\$69.99

**marketing\_campaigns**

campaign_id	campaign_name	product_id	start_date	end_date
1	Summer Sale	2	2023-06-01	2023-06-30
2	New Collection Launch	10	2023-07-15	2023-08-15
3	Super Save	7	2023-08-20	2023-09-15

**transactions (first 10 shown)**

transaction_id	product_id	quantity	purchase_date
1	2	2	2023-06-02
1	14	1	2023-06-02
2	5	2	2023-06-05
3	2	1	2023-06-07
4	19	2	2023-06-10
5	2	1	2023-06-13
5	16	1	2023-06-13
6	10	2	2023-06-15
7	2	1	2023-06-18
8	4	1	2023-06-22
9	18	2	2023-06-26
10	2	1	2023-06-30
10	13	1	2023-06-30





03

## Questions and Answers





# 1. How many transactions were completed during each marketing campaign?

*SQL Statement and Output:*

```
2 • SELECT C.campaign_name, COUNT(T.transaction_id) AS Transaction
3 FROM datacoach.marketing_campaigns C
4 JOIN datacoach.transactions T ON C.product_id=T.product_id
5 WHERE T.purchase_date BETWEEN C.start_date AND C.end_date
6 group by C.campaign_name;
7
```

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Result Grid



Filter Rows:

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Wrap Cell Content:

	campaign_name	Transaction
▶	Summer Sale	5
	New Collection Launch	4
	Super Save	1

## 2. Which product had the highest sales quantity?

*SQL Statement and Output:*

```
9 • SELECT S.product_name, SUM(T.quantity) AS QuantitySale
10 FROM datacoach.sustainable_clothing S
11 JOIN datacoach.transactions T USING(PRODUCT_ID)
12 GROUP BY S.product_name
13 ORDER BY QuantitySale DESC LIMIT 1;
14
```

<

Result Grid



Filter Rows:

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Wrap Cell Content:







	product_name	QuantitySale
▶	Organic Cotton Sweater	9

### 3. What is the total revenue generated from each marketing campaign?

*SQL Statement and Output:*

```
16 • SELECT C.campaign_name, ROUND(SUM(T.quantity * S.price)) AS Revenue
17 FROM datacoach.marketing_campaigns C
18 JOIN datacoach.transactions T USING(product_id)
19 JOIN datacoach.sustainable_clothing S USING(product_id)
20 WHERE T.purchase_date BETWEEN C.start_date AND C.end_date
21 GROUP BY C.campaign_name;
```

<

Result Grid |   Filter Rows:  | Export:  | Wrap Cell Content: 

	campaign_name	Revenue
▶	Summer Sale	480
	New Collection Launch	220
	Super Save	70



## 4. What is the top-selling product category based on the total revenue generated?

*SQL Statement and Output:*

```
24 • SELECT S.category, ROUND(SUM(T.quantity * S.price)) AS Revenue
25 FROM datacoach.transactions T
26 JOIN datacoach.sustainable_clothing S USING(product_id)
27 GROUP BY S.category
28 ORDER BY Revenue DESC
29 LIMIT 1;
```

<

Result Grid |   Filter Rows:  | Export:  | Wrap Cell Content:  | Fetch

	category	Revenue
▶	Bottoms	1290

## 5. Which products had a higher quantity sold compared to the average quantity sold?

### SQL Statement and Output:

```
32 • SELECT S.product_id,S.product_name, SUM(T.quantity) AS Quantity
33 FROM datacoach.sustainable_clothing S
34 JOIN datacoach.transactions T USING(product_id)
35 GROUP BY S.product_id,S.product_name
36 HAVING Quantity > (SELECT AVG(A.quantity) FROM datacoach.transactions A);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	product_id	product_name	Quantity
▶	1	Organic Cotton T-Shirt	2
	2	Recycled Denim Jeans	8
	4	Bamboo Lounge Pants	5
	5	Eco-Friendly Hoodie	5
	6	Linen Button-Down Shirt	3
	7	Organic Cotton Dress	3
	8	Sustainable Swim Shorts	2
	9	Recycled Polyester Jacket	4
	10	Bamboo Yoga Leggings	8
	11	Hemp Overalls	3
	12	Organic Cotton Sweater	9
	13	Cork Sandals	4
	14	Recycled Nylon Backpack	2
	15	Organic Cotton Skirt	5
	16	Hemp Baseball Cap	5
	17	Upcycled Denim Jacket	3
	18	Linen Jumpsuit	7



## 6. What is the average revenue generated per day during the marketing campaigns?

*SQL Statement and Output:*

```
39 • SELECT C.campaign_name,T.purchase_date, ROUND(AVG(S.price*T.quantity)) AS Revenue
40 FROM datacoach.marketing_campaigns C
41 JOIN datacoach.transactions T USING(product_id)
42 JOIN datacoach.sustainable_clothing S USING(product_id)
43 WHERE T.purchase_date BETWEEN C.start_date AND C.end_date
44 GROUP BY C.campaign_name,T.purchase_date;
```

<

Result Grid |   Filter Rows:  | Export:  | Wrap Cell Content: 

	campaign_name	purchase_date	Revenue
▶	Summer Sale	2023-06-02	160
	Summer Sale	2023-06-07	80
	Summer Sale	2023-06-13	80
	Summer Sale	2023-06-18	80
	Summer Sale	2023-06-30	80
	New Collection Launch	2023-07-20	55
	New Collection Launch	2023-07-29	55
	New Collection Launch	2023-08-03	55
	New Collection Launch	2023-08-14	55
	Super Save	2023-09-05	70

## 7. What is the percentage contribution of each product to the total revenue?

### SQL Statement and Output:

```
47 WITH CTE1 AS (SELECT S.product_id , S.product_name,  
48 ROUND(SUM(S.price*T.quantity),2) AS Revenue_per_Product,  
49 SUM(ROUND(SUM(S.price*T.quantity),1)) OVER() AS TotalRevenue  
50 FROM datacoach.transactions T  
51 JOIN datacoach.sustainable_clothing S USING(product_id)  
52 GROUP BY S.product_id , S.product_name)  
53 SELECT CTE1.TotalRevenue,CTE1.product_name, CTE1.Revenue_per_Product,  
54 ROUND(Revenue_per_Product/TotalRevenue*100,2)AS Percentage_Contribution  
55 FROM CTE1;
```

<

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

	TotalRevenue	product_name	Revenue_per_Product	Percentage_Contribution
▶	4669.4	Organic Cotton T-Shirt	59.98	1.28
	4669.4	Recyded Denim Jeans	639.92	13.7
	4669.4	Hemp Crop Top	24.99	0.54
	4669.4	Bamboo Lounge Pants	249.95	5.35
	4669.4	Eco-Friendly Hoodie	299.95	6.42
	4669.4	Linen Button-Down Shirt	119.97	2.57
	4669.4	Organic Cotton Dress	209.97	4.5
	4669.4	Sustainable Swim Shorts	69.98	1.5
	4669.4	Recyded Polyester Jacket	359.96	7.71
	4669.4	Bamboo Yoga Leggings	439.92	9.42
	4669.4	Hemp Overalls	224.97	4.82
	4669.4	Organic Cotton Sweater	449.91	9.64
	4669.4	Organic Cotton T-Shirt	59.98	1.28



## 8. Compare the average quantity sold during marketing campaigns to outside the marketing campaigns

*SQL Statement and Output:*

```
59 • SELECT
60 CASE WHEN C.campaign_name IS NULL THEN 'Outside Campaign'
61 ELSE 'During Campaign' END AS MarketingType,
62 ROUND(AVG(T.quantity),1) AS AvgQuantity
63 FROM datacoach.transactions T
64 left JOIN datacoach.marketing_campaigns C USING(PRODUCT_ID)
65 GROUP BY MarketingType;
66
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 

	MarketingType	AvgQuantity
▶	During Campaign	1.2
	Outside Campaign	1.4

## 9. Compare the revenue generated by products inside the marketing campaigns to outside the campaigns

*SQL Statement and Output:*

```
68 • SELECT
69 CASE WHEN C.campaign_name IS NULL THEN 'Outside Campaign'
70 ELSE 'During Campaign' END AS MarketingType,
71 ROUND(SUM(T.quantity * S.PRICE),1) AS Revenue
72 FROM datacoach.transactions T
73 left JOIN datacoach.marketing_campaigns C USING(PRODUCT_ID)
74 JOIN datacoach.sustainable_clothing S USING(PRODUCT_ID)
75 GROUP BY MarketingType;
76
```

<	Result Grid			Filter Rows: <input type="text"/>	Export: 	Wrap Cell Content: 
	MarketingType	Revenue				
▶	Outside Campaign	3379.3				
	During Campaign	1289.8				







## 10. Rank the products by their average daily quantity sold.

### SQL Statement and Output:

```
78 • SELECT S.product_name,  
79      ROUND(AVG(T.quantity),2) AS AvgQuantity ,  
80      dense_rank() OVER(ORDER BY AVG(T.quantity) DESC) RN  
81      FROM datacoach.transactions T  
82      JOIN datacoach.sustainable_clothing S USING(PRODUCT_ID)  
83      GROUP BY S.product_name ;
```

<

Result Grid |   Filter Rows:  | Export:  | Wrap Cell Content: 

	product_name	AvgQuantity	RN
▶	Sustainable Swim Shorts	2.00	1
	Organic Cotton Sweater	1.80	2
	Organic Cotton Socks	1.75	3
	Linen Jumpsuit	1.75	3
	Eco-Friendly Hoodie	1.67	4
	Organic Cotton Skirt	1.67	4
	Linen Button-Down Shirt	1.50	5
	Hemp Overalls	1.50	5
	Upcycled Denim Jacket	1.50	5
	Bamboo Yoga Leggings	1.33	6
	Recycled Polyester Jacket	1.33	6
	Hemp Baseball Cap	1.25	7
	Bamboo Lounge Pants	1.25	7
	Recycled Denim Jeans	1.14	8
	Recycled Nylon Backpack	1.00	9



THANK YOU

