

Fetch Rewards

User Engagement and Sales Trends

A Data Analysis Report
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In this Presentation

Here's what we'll cover:

Highest Spender in August: User Analysis

Monthly Scanning Activity: User Engagement

Beyond the Numbers: Key Discoveries from Data
Analysis

Other Key Takeaways

Highest Spender in August: User Analysis

As of 2020 to 2022.

Most money spent by the users was evaluated
using Purchased Date, Total Spent Amount.

USER_ID	MOST_SPENT
609ab37f7a2e8f2f95ae968f	157739.140019178

Monthly Scanning Activity: User Engagement

As of 2021 to 2023.

The user scanned was evaluated using
Scanned Date and User ID.

	NO_OF_USERS_SCANNED_PER_MONTH	MONTHS
1	97	1
2	87	2
3	89	3
4	90	4
5	88	5
6	88	6
7	88	7
8	88	8
9	88	9
10	91	10
11	93	11
12	98	12

Beyond the Numbers: Key Discoveries from Data Analysis

Co-relation and quality of data

Missing Correlation: Brands & Receipt_Items

As per current data

The Recipt_Items table has missing values in Brand_code and Barcode, 205490 and 135369, respectively.

Let's take an example.

Let's take a user **61bfce5d6655417f803b6538** from USERS Tables

A	B	C	D	E	F	G	H
CREATED_DATE	BIRTH_DATE	GENDER	LAST_REWARDS_LOG	STATE	SIGN_UP_PLATFOR	SIGN_UP_SOURCE	ID
2021-12-20T00:29:17.118Z	1984-03-20T00:00:00Z	transgender	2023-01-04T16:32:15Z	FL		Apple	61bfce5d6655417f803b6538

Locating the user **61bfce5d6655417f803b6538** in RECEIPT Table -
We can see multiple receipts against the same user.

ID	STORE_NAME	PURCHASE_DATE	DATE_SCANNED	TOTAL_SPENT	REWARDS_R	USER_ID	USER_VIEWED
62ee9f8f0a725f806f091c0f	SAM'S CLUB	2022-08-06T00:00:00Z	2022-08-06T17:06:23.859Z	98.64	FINISHED	61bfce5d6655417f803b6538	TRUE
62fc24450a723e4a61012b93	WALMART	2022-08-16T00:00:00Z	2022-08-16T23:12:05.378Z	93.04	FINISHED	61bfce5d6655417f803b6538	TRUE
630e73a90a723e1bdd005b41	WALMART	2022-08-30T00:00:00Z	2022-08-30T20:31:37.921Z	81.9	FINISHED	61bfce5d6655417f803b6538	TRUE
62e9b3170a7233148e1d1cb7	WALMART	2022-08-02T00:00:00Z	2022-08-02T23:28:23.136Z	79.49	FINISHED	61bfce5d6655417f803b6538	TRUE
6307ecbf0a7235ee2e2634b5	WALMART	2022-08-25T00:00:00Z	2022-08-25T21:42:23.572Z	76.09	FINISHED	61bfce5d6655417f803b6538	TRUE
62e83b4d0a72433da0163af0	WALMART	2022-08-01T00:00:00Z	2022-08-01T20:45:01.583Z	65.16	FINISHED	61bfce5d6655417f803b6538	TRUE
62f1a4cf0a72468e6b01c22c	WALMART	2022-08-02T00:00:00Z	2022-08-09T00:05:35.413Z	58.56	FINISHED	61bfce5d6655417f803b6538	TRUE
6335d81a0a7254934f2d3c73	WALMART	2022-08-17T00:00:00Z	2022-09-29T17:38:34.425Z	51.64	REJECTED	61bfce5d6655417f803b6538	TRUE
62e951370a722daa2b1a4d18	CHURCH'S CHICKEN	2022-08-02T00:00:00Z	2022-08-02T16:30:47.851Z	46.88	FINISHED	61bfce5d6655417f803b6538	TRUE
62e901fc0a72501e4a1936a8	JERSEY MIKE'S SUBS	2022-08-02T00:00:00Z	2022-08-02T10:52:44.333Z	37.76	FINISHED	61bfce5d6655417f803b6538	TRUE
62ed8fbd0a722c07ae052567	WALMART	2022-08-04T00:00:00Z	2022-08-05T21:46:37.376Z	31.62	FINISHED	61bfce5d6655417f803b6538	TRUE
62e83b180a723ce3c1160c0b	WALMART	2022-08-01T00:00:00Z	2022-08-01T20:44:08.475Z	30.65	FINISHED	61bfce5d6655417f803b6538	TRUE
630bffde0a7250fa7837e522	SKECHERS	2022-08-28T00:00:00Z	2022-08-28T23:53:02.825Z	30	FINISHED	61bfce5d6655417f803b6538	TRUE
62ee9ede0a7249d9140915ef	WALMART	2022-08-06T00:00:00Z	2022-08-06T17:03:26.604Z	26.61	FINISHED	61bfce5d6655417f803b6538	TRUE
61c390d10a725c5b13097223	WALMART		2021-12-22T20:55:45.774Z	20.45	REJECTED	61bfce5d6655417f803b6538	TRUE
61c390e80a7249f2d8096bcc	WALMART	2021-12-22T00:00:00Z	2021-12-22T20:56:08.19Z	20.39	FINISHED	61bfce5d6655417f803b6538	TRUE
61c3adfa0a7254ab2d0a0ead	WALMART	2021-12-22T00:00:00Z	2021-12-22T23:00:10.312Z	36.89	FINISHED	61bfce5d6655417f803b6538	TRUE
61c44ed50a72468a2a0bf734	WALMART	2021-12-15T00:00:00Z	2021-12-23T10:26:29.711Z	14.27	FINISHED	61bfce5d6655417f803b6538	TRUE
61c44ee90a725f6e9a0443c4	WALMART	2021-12-15T00:00:00Z	2021-12-23T10:26:49.959Z	8.34	FINISHED	61bfce5d6655417f803b6538	TRUE
61c9ef6a0a725f6e9a12fed0	SAM'S CLUB	2021-12-27T00:00:00Z	2021-12-27T16:52:58.232Z	1.95	FINISHED	61bfce5d6655417f803b6538	TRUE

Considering Receipt_ID from the RECEIPT table against the user:
62ee9f8f0a725f806f091c0f

Locating the user 62ee9f8f0a725f806f091c0f in RECEIPT_ITEMS Table - We can see multiple receipts_items against the same receipts.

	A	B	C	D	E	
	REWARDS_RECEIPT_ID	ITEM_IND	REWARDS_RECEIPT_ITEM_ID	DESCRIPTION	BARCODE	BRAND_CODE
8		0	70b95acf54726621c1f9025c3ce90ecf	CHOC. STRAWF	9900055882.00	
9	62ee9f8f0a725f806f091c0f	1	c7224e58f11864eba84ed17905b13862	Meow Mix Original Choice Dry Cat Food Heart Health And Or	829274219082.00	
0	62ee9f8f0a725f806f091c0f	2	d4e9adfb37fc8db8decbb72b1567c949	NUTRICIONALF	9475182.00	
1	62ee9f8f0a725f806f091c0f	3	eb2ca369d42aefb6d794afd86788fd95	CRMLCREAMERF	9803512635.00	
2	62ee9f8f0a725f806f091c0f	4	323fc58b2b2f465320ecf33a8a8ab852	ULTRA DISHWASHING LIQUID, original	37000914518.00	
3	62ee9f8f0a725f806f091c0f	5	745c66e1000b4ac65b3b7036734617a4	MMWATER 40PT	9803433374.00	
4	62ee9f8f0a725f806f091c0f	6	d747cb8ab96de833bfcacdf6c1d6ba54	MMWATER 40PF	9803433374.00	
5	62ee9f8f0a725f806f091c0f	7	7f648390023a1fd6bce15985af6a1400	PARABIEN BRF	9802999819.00	
6	62ee9f8f0a725f806f091c0f	8	452c8b95dd1c8be89d7241c9c627a652	COCA COLA	49000057942.00	

However, the Brand_code attribute is empty, and the Barcode attribute has values that start from "9".

Let's look closely at the Barcode values in the BRANDS tables.

	A	B	C
1	ID	BARCODE	BRAND_CODE
2	5a8c35dde4b0ccf165fac9e6	511111904175.00	PEPPERIDGE FARM
3	6234af8f4e09b6067c237adb	511111212997.00	CHEX MIX
4	5332f7d3e4b03c9a25efd14e	511111803393.00	
5	5d6412e9a3a018514994f426	511111304982.00	BETTER HOMES & GARDENS
6	621e777eacedc065cefa99a7	511111912859.00	TRUVIA
7	5887a051e4b02187f85cdad0	511111401209.00	BAKER'S
8	592486bee410d61fcea3d135	511111700746.00	PG TIPS
9	5887a0fde4b02187f85cdad1	511111801191.00	CAPRI SUN
10	5bd2011f90fa074576779a17	511111704652.00	HUGGIES
11	5332f6ede4b03c9a25efd0e5	511111603870.00	BLUE BUNNY
12	592486bde410d61fcea3d120	511111500940.00	AXE
13	57ebc026e4b0ac389136a338	511111502098.00	KNUDSEN
14	60abff099b6e385567eee851	511111709848.00	LESTOIL
15	5e7537244f392912df7c86d0	511111306672.00	VIZZY
16	604a430bac99f04b08c39a4a	511111508670.00	BABY DOVE
17	5332f756e4b03c9a25efd113	511111503743.00	MURRAY
18	61b25afd2e105238e19ad87b	511111811848.00	HUS KITCHEN

The Barcode column has no value that starts with "9" and, therefore, does NOT provide a relation with the RECEIPT_ITEMS table at all.

Since no other attribute(s) are shared between the BRAND's table and other tables, the Barcode and Brandcode can be used as a Composite Key to join with the RECEIPT_ITEMS table.

Therefore, Barcode and Brandcode have to be Non-null values.

Other Key Takeaways

- The Birthday attribute in the USERS entity has a timestamp datatype and can be changed to date to save space.
- PROCESSED_DATE in Receipts has only Null values.

Thank You