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| **Description:**  *Paytm is an Indian multinational financial technology company. It specializes in digital payment system, e-commerce and financial services. Paytm wallet is a secure and RBI (Reserve Bank of India)-approved digital/mobile wallet that provides a myriad of financial features to fulfill every consumer’s payment needs. Paytm wallet can be topped up through UPI (Unified Payments Interface), internet banking, or credit/debit cards. Users can also transfer money from a Paytm wallet to recipient’s bank account or their own Paytm wallet.*  Below is a small database of payment transactions from 2019 to 2020 of Paytm Wallet. The database includes 6 tables:   * **fact\_transaction**: Store information of all types of transactions: Payments, Top-up, Transfers, Withdrawals * **dim\_scenario**: Detailed description of transaction types * **dim\_payment\_channel**: Detailed description of payment methods * **dim\_platform**: Detailed description of payment devices * **dim\_status**: Detailed description of the results of the transaction |

# Task 1: Retrieve an overview report of payment types

## Paytm has a wide variety of transaction types in its business. Your manager wants to know the contribution (by percentage) of each transaction type to total transactions. Retrieve a report that includes the following information: transaction type, number of transaction and proportion of each type in total. These transactions must meet the following conditions:

* Were created in 2019
* Were paid successfully

Show only the results of the top 5 types with the highest percentage of the total.

-- Your code here

**Table

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## After your manager looks at the results of these top 5 types, he wants to deep dive more to gain more insights.

Retrieve a more detailed reportwith following information: **transaction type, category, number of transaction and proportion of each category in the total of that transaction type**. These transactions must meet the following conditions:

* Were created in 2019
* Were paid successfully

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# Task 2: Retrieve an overview report of customer’s payment behaviors

## Paytm has acquired a lot of customers. Retrieve a report that includes the following information: the number of transactions, the number of payment scenarios, the number of payment category and the total of charged amount of each customer.

* Were created in 2019
* Had status description is successful
* Had transaction type is payment
* Only show Top 10 highest customers by the number of transactions

Following is the desired outcome:

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## After looking at the above metrics of customer’s payment behaviors, we want to analyze the distribution of each metric. Before calculating and plotting the distribution to check the frequency of values in each metric, we need to group the observations into range.

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Based on the result of 2.1, retrieve a report that includes the following columns: **metric, minimum value, maximum value and average value of these metrics: *(Hard)***

* The total charged amount
* The number of transactions
* The number of payment scenarios
* The number of payment categories

Following is the desired outcome:

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## Calculate the frequency of each field in each metric (from 2.1 result)

**Metric 1: The number of payment categories**

Following is the desired outcome:

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**Metric 2: The number of payment scenarios**

Following is the desired outcome:

Table

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-- Your code here

**Metric 3: The total charged amount**

Following is the desired outcome: ***(Hard)***

Table

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