

This file includes brief description of tables and measures used in Stores report and relation between them.

Relationship among tables

Table 1	Table 2	Relationship	Joined on Column (Table 1)	Joined on Column (Table 2)
Closing Stock	Stock	Many to One	Item	Item
Item Age	Closing Stock	Many to One	Item Code	Item Code
Item Age	Days in Store	Many to One	Days in Store	Days in Store
Item Age	Stock	Many to One	Item	Item
Item Age	Stocked Issued	Many to One	Item Code	Item Code
MIN Report	Date	Many to One	Indent Issue Date	Date
MIN Report	Stock	Many to One	Item	Item
MRN Report	Date	Many to One	GRN Date	Date
MRN Report	Stock	Many to One	Item	Item
Stock Purchased	Stock	Many to One	Item	Item
Stock Purchased	Stock Issued	One to One	Item Code	Item Code
Stock	Stock Issued	One to One	Item Code	Item Code
Indents	Indents-Item	One to Many	Issue ID	Issue ID

Database: aravind_mms_new

Table Description

1. **MIN Report (View_MIN_view)** - This table contains information related to indent issue.

- a) **Issue Slip Number** - Represents issue slip number.
- b) **Issue ID** - Contains issue id.
- c) **Item Code** - Represents unique code of item.
- d) **Item** - Contains name of item.
- e) **Category** - Tells about category of each item.
- f) **Department** - Represents department for which indent is issued.
- g) **Department Group** – Represents department groupings
- h) **Indent Raise Date** - Contains date on which indent is raised.
- i) **Indent Issue Date** - Date on which indent is issued.
- j) **Indent Issue Date and Time** - Represents date and time on which indent is issued.
- k) **Quantity Indented** - Contains total quantity indented.
- l) **Quantity Issued** - Contains total quantity issued.
- m) **FIFO Price** - Tells FIFO price of item.
- n) **Selling Price** - Contains selling price of item.
- o) **Total Value** - Represents total cost of quantity issued.
- p) **Cost MIN (In Crores) (measure)** - Represents 'Total Value' in Crores.

- q) **Cost MIN (Indian Format) (measure)** - Represents 'Total Value' in Indian Numbering System.
- r) **Time Period MIN (measure)** - The period for which report is shown.
Time Period MIN = if (HASONEVALUE('Date'[Month]), SELECTEDVALUE('Date'[Month]), YEAR(FIRSTDATE('MIN Report'[Indent Issue Date])))

2. **MRN Report (VIEW_MR_N_VIEW)** - This table contains information of items purchased.

- a) **PO Number** - Represents purchase order number.
- b) **PO Date** - Represents purchase order date.
- c) **GRN Date** - Represents date on which order is received.
- d) **GRN Number** - Represents 'Goods Received Note' number.
- e) **Invoice Number** - Contains invoice number.
- f) **Invoice Date** - Contains invoice date.
- g) **Supplier Name** - Contains name of supplier.
- h) **Item** - Contains name of item.
- i) **Item Code** - Represents unique code of item.
- j) **Category** - Tells about category of each item issued.
- k) **Quantity Purchased** - Contains total quantity purchased for each item.
- l) **Quantity Issued** - Contains the quantity issued for each item for that PO.
- m) **Unit Price** - Represents unit price of item.
- n) **Purchase Cost** - Contains total cost of each purchased item.
- o) **FIFO Price** - Tells FIFO price of item.
- p) **Supply Delay (calculated column)** - Tells the time (in days) taken for an item to reach the store.
Supply Delay = If('MRN Report'[PO Date], DATEDIFF('MRN Report'[PO Date], 'MRN Report'[GRN Date], DAY), DATEDIFF('MRN Report'[Invoice Date], 'MRN Report'[GRN Date], DAY))
- q) **Cost MRN (In Crores) (measure)** - Represents 'Purchase Cost' in Crores.
- r) **Cost MRN (Indian Format) (measure)** - Represents 'Purchase Cost' in Indian Numbering System.
- s) **Time Period MRN (measure)** - The period for which report is shown.
Time Period MRN = if (HASONEVALUE('Date'[Month]), SELECTEDVALUE('Date'[Month]), YEAR(FIRSTDATE('MRN Report'[GRN Date])))

3. **Stock Issued (View_MIN_view)**- This table provides detail about the quantity of items issued and their cost.

- a) **Item Code** - Represents unique code of item.
- b) **Item** - Contains name of issued item.
- c) **Category** - Tells about category of each item issued.
- d) **Quantity Issued** - Contains total quantity issued for each item.
- e) **Issue Cost** - Contains cost of each issued item.

4. **Stock Purchased (VIEW_MR_N_VIEW)** - This table provides detail about the quantity of items purchased and their cost.

- a) **Item Code** - Represents unique code of item.
- b) **Item** - Contains name of purchased item.
- c) **Category** - Tells about category of each item purchased.
- d) **Quantity Purchased** - Contains total quantity purchased for each item.
- e) **Purchase Cost** - Contains cost of each purchased item.
- f) **Supply Delay** - Tells the average time (in days) taken for an item to reach the store.

5. **Closing Stock (VIEW_CLOSING_STOCK)**- This table provides detail related to closing stock.

- a) **Item Code** - Represents unique code of item.
- b) **Item** - Contains name of purchased item.
- c) **Closing Stock** - Represent stock as on December 31, 2019.
- d) **Closing Value** - Represent total cost of 'Closing Stock'.

6. **Stock (Inner join between Stock Issued and Stock Purchased on Item Code)**- This table contains information related to stock and its cost.

- a) **Item Code** - Represents unique code for item.
- b) **Item** - Contains name of purchased item.
- c) **Category** - Tells about category of each item purchased.
- d) **Quantity Purchased** - Contains total quantity purchased.
- e) **Purchase Cost** - Contains cost of each purchased item.
- f) **Supply Delay** - Tells the average time (in days) taken for an item to reach the store.
- g) **Quantity Issued** - Contains total quantity issued for each item.
- h) **Issue Cost** - Contains cost of each issued item.
- i) **Closing Stock** - Represent stock as on December 31, 2019.
- j) **Closing Value** - Represent total cost of 'Closing Stock'.
- k) **IsDeficit (measure)** - Tells whether there is shortage of stock or not.

$$IsDeficit = \text{if } (SUM(Stock[Stock Level]) \leq [Minimum Order Level], 0, 1)$$
- l) **Issue Cost (Indian Format) (measure)** - Represents 'Issue Cost' in Indian Numbering System.
- m) **Maximum Order Level (measure)** - Calculates maximum quantity that can be in store.

$$Maximum Order Level = (SUM (Stock[Quantity Issued]) / [Total Weeks]) * 15$$
- n) **Minimum Order Level (measure)** - Calculates minimum quantity that should be in store.

$$Minimum Order Level = (SUM (Stock[Stock Level]) / [Total Weeks]) * 3$$
- o) **Purchase Cost (Indian Format) (measure)** - Represents 'Purchase Cost' in Indian Numbering System.
- p) **Reorder Level (measure)** - Calculates the stock level at which item should be reordered.

$$Reorder Level = SUM (Stock[Quantity Issued]) * sum('Stock'[Supply Delay]) / [Total Weeks] + [Minimum Order Level]$$
- q) **Stock Deficit (measure)** - Provides the quantity by which their is shortage of item.

$$Stock Deficit = \text{if } ([Minimum Order Level] - SUM (Stock[Stock Level]) \leq 0, 0, [Minimum Order Level] - SUM(Stock[Stock Level]))$$
- r) **Stock Level (calculated column)** - Contains present stock quantity in store.

$$Stock Level = Stock [Quantity Purchased] - Stock[Quantity Issued] + Stock[Closing Stock]$$
- s) **Total Weeks (measure)** - Represents the number of weeks between the first GRN date and last issue date.

7. **Item Age** (Created from query) – This table provide information about items present in the store (Closing stock is not considered).

- a) **Query Details** - select ITEM_CODE, DESCRIPTION, LEVEL1_DESC, DATE, QTY, ISSUE_QTY, UNIT_PRICE, RECEIVED_VALUE from VIEW_MR_N_VIEW
- b) **Item Code** - Represents unique code of item.
- c) **Item** - Contains name of item.
- d) **Category** - Tells about category of item.
- e) **GRN Date** - Contains date on which order is received.
- f) **Quantity Purchased** - Represents total quantity purchased.
- g) **Quantity Issued** - Represents total quantity issued.
- h) **Unit Price** - Contains price of each item.
- i) **Purchase Cost** - Contains cost of total quantity purchased.
- j) **Days in Store (calculated column)** - Number of days item is in store.
Days in Store = DATEDIFF ('Item Age'[GRN Date], TODAY(), DAY)
- k) **Quantity Left (calculated column)** - Total quantity left in store.
Quantity Left = 'Item Age'[Quantity Purchased] - 'Item Age'[Quantity Issued]
- l) **Value Stuck (calculated column)** - Represents total cost of quantity left in store.
*Value Stuck = 'Item Age'[Quantity Left] * 'Item Age'[Unit Price]*
- m) **Value Stuck (In Crores) (measure)** - Represents 'Value Stuck' in Crores.
- n) **Value Stuck (Indian Format) (measure)** - Represents 'Value Stuck' in Indian Numbering System.

8. **Indents-Item** (Created from query)- This table contains information related to items of an indent.

- a) **Query Details** - select ISSUE_ID as [Issue ID], ITEM as Item, MAX(INDENT_ISSUE_DATE) as [Indent Issued Date], MIN(INDENT_RAISE_DATE) as [Indent Rasied Date], MAX(QTY_INDENTED) as [Quantity Indented], SUM(QTY_ISSUED) as [Quantity Issued] from VIEW_MIN_VIEW group by ISSUE_ID, ITEM
- b) **Issue ID** - Represents unique issue id for each order.
- c) **Quantity Indented** - Contains total quantity ordered.
- d) **Quantity Issued** - Contains total quantity issued.
- e) **Indent Raised Date** - Represents date on which indent is placed.
- f) **Indent Issued Date** - Represent date on which indent is issued.
- g) **Item** – Represent the item name
- h) **Quantity Remaining (Calculated Column)** – Quantity remaining to be indented.
Quantity Remaining = 'Indents-Item'[Quantity Indented] - 'Indents-Item'[Quantity Issued]

9. **Indents** (Created from query)- This table contains information related to indents.

- i) **Query Details** - select ISSUE_ID, ITEM_CODE, MAX(INDENT_ISSUE_DATE) as issued_date, MIN(INDENT_RAISE_DATE) as rasied_date, MAX(QTY_INDENTED) as qty_indented, SUM(QTY_ISSUED) as qty_issued from VIEW_MIN_VIEW group by ISSUE_ID, ITEM_CODE
- j) **Issue ID** - Represents unique issue id for each order.
- k) **Quantity Indented** - Contains total quantity ordered.
- l) **Quantity Issued** - Contains total quantity issued.

- m) **Indent Raised Date** - Represents date on which indent is placed.
- n) **Indent Issued Date** - Represent date on which indent is issued.
- o) **Items Indented** - Contains total number of items indented.
- p) **Items Realised** - Contains total number of items which are completely issued.
- q) **Difference Between Date (In hours) (calculated column)** - Calculates the time (in hours) taken to complete the indent.

$$\text{Difference Between Date (In Hours)} = \text{DATEDIFF}(\text{Indents}[\text{Indent Raised Date}], \text{Indents}[\text{Indent Issued Date}], \text{HOUR})$$
- r) **Difference Between Date (In hours) (Groups)** - Divides 'Difference Between Date (In hours)' in 5 groups. The groups are '<= 6 hours', '6 - 12 hours', '12 - 18 hours', '18 - 24 hours', '> 24 hours'.
- s) **Indent Fulfilment Percentage by Item (calculated column)** - Represents the % of items (in number) that are issued from the indent.

$$\text{Indent Fulfilment Percentage by Item} = \text{SWITCH}(\text{TRUE}(), \text{'Indents'}[\text{Items Realised}]/\text{Indents}[\text{Items Indented}] >= 1, 1, \text{'Indents'}[\text{Items Realised}]/\text{Indents}[\text{Items Indented}])$$
- t) **Indent Fulfilment Percentage by Item (Groups)** - Divides 'Indent Fulfilment Percentage by Item' in 4 groups. The groups are '<= 25%', '25% - 50%', '50% - 75%', '75% - 99%'.
- u) **Indent Fulfilment Percentage by Quantity (calculated column)** - Represents % of items (in quantity) that are issued from the indent.

$$\text{Indent Fulfilment Percentage by Quantity} = \text{SWITCH}(\text{TRUE}(), \text{Indents}[\text{Quantity Issued}]/\text{Indents}[\text{Quantity Indented}] >= 1, 1, \text{Indents}[\text{Quantity Issued}]/\text{Indents}[\text{Quantity Indented}])$$
- v) **Indent Fulfilment Percentage by Quantity (Groups)** - Divides 'Indent Fulfilment Percentage by Quantity' in 5 groups. The groups are '<= 20%', '20% - 40%', '40% - 60%', '60% - 80%', '80% - 99%'.
- w) **Indent Realised (calculated column)** - Represents whether the indent is fully complete (1) or partially complete (0).

$$\text{Indent Realised} = \text{if}(\text{Indents}[\text{Items Realised}] >= \text{Indents}[\text{Items Indented}], 1, 0)$$
- x) **Day (calculated column)** - Calculates 'Indent Issued Date' in 'Month Day, Year' format.

$$\text{Day} = \text{FORMAT}(\text{Indents}[\text{Indent Issued Date}], "mmm") \& " " \& \text{Indents}[\text{Indent Issued Date}].[\text{Day}] \& ", " \& \text{Indents}[\text{Indent Issued Date}].[\text{Year}]$$
- y) **Month (calculated column)** - Extract month and year from 'Indent Issue Date'.

$$\text{Month} = \text{FORMAT}(\text{Indents}[\text{Indent Issued Date}], "mmm") \& ", " \& \text{Indents}[\text{Indent Issued Date}].[\text{Year}]$$
- z) **Monthy number (calculated column)** – Integer column used for sorting the months

$$\text{Monthy number} = \text{'Indents'}[\text{Year}] \& \text{FORMAT}(\text{'Indents'}[\text{Indents Issue Date}], "mm")$$
- aa) **Time Period Indents (measure)** - The period for which report is shown.
- bb) **Week (calculated column)** - Shows the week in which the indent is issued.
- cc) **Week End (calculated column)** - Contains date at end of the week for the week column.

$$\text{Week End} = \text{Indents}[\text{Indent Issued Date}] + 1 - \text{WEEKDAY}(\text{Indents}[\text{Indent Issued Date}]) + 7$$
- dd) **Week Start (Calculated Column)** - Contains date at start of week for the week column.

$$\text{Week Start} = \text{Indents}[\text{Indent Issued Date}] + 1 - \text{WEEKDAY}(\text{Indents}[\text{Indent Issued Date}])$$

10. **Date** - This table contains information related to date.

- a) **Date (calculated column)** - Creates calendar from first date to last date in the dataset.
Date = CALENDARAUTO()
- b) **Month (calculated column)** - Extract month and year from 'Date' column in specific format.
Month = FORMAT('Date'[Date], "mmm") & ", " & 'Date'[Date].[Year]
- c) **Day (calculated column)** - Extract month, day, and year from 'Date' column in specific format.
Day = FORMAT('Date'[Date], "mmm") & " " & 'Date'[Date].[Day] & ", " & 'Date'[Date].[Year]
- d) **Year (calculated column)** - Extract year from 'Date' column.
Year = 'Date'[Date].[Year]
- e) **Week (calculated column)** - Shows week in which 'Date' appear.
- f) **Week Start (calculated column)** - Contains date at the start of week for the week column.
Week Start = 'Date'[Date] + 1 - WEEKDAY('Date'[Date])
- g) **Week End (calculated column)** - Contains date at the end of the week for the week column.
Week End = 'Date'[Date] + 1 - WEEKDAY('Date'[Date]) + 7
- h) **Monthly number (calculated column)** - Integer column used for sorting the months
Monthly number = 'Date'[Year]&FORMAT('Date'[Date], "mm")
- i) **Time Period (measure)** - The period for which report is shown.

11. **Days in Store** - This table is used as a what if parameter (a text box to enter number of days). It filters the report with condition of greater than or equal to number of days entered.

- a) **Days in Store (calculated column)** - Contains list of number from 15 to 365 which represents as number of days.
Days in Store = GENERATESERIES(15, 365, 1)
- b) **Days in Store Value (measure)** - Returns value present in 'Days in Store' otherwise returns 30 as default value.
Days in Store Value = SELECTEDVALUE('Days in Store'[Days in Store], 30)