**1. Renamed a column of table:- retail to make it more meaningful**

EXEC sp\_rename 'retail.quantiy', 'quantity', 'COLUMN';

**2. Checked for Null values in all the Columns**

select \* from retail

where

transactions\_id is null

or sale\_date is null

or sale\_time is null

or customer\_id is null

or gender is null

or age is null

or category is null

or quantity is null

or price\_per\_unit is null

or cogs is null

or total\_sale is null;

**3. Deleted Null values recrords from all the columns.**

delete from retail where

transactions\_id is null

or sale\_date is null

or sale\_time is null

or customer\_id is null

or gender is null

or age is null

or category is null

or quantity is null

or price\_per\_unit is null

or cogs is null

or total\_sale is null;

**4. Earlier total records were 2000, after deleting Null records, total records are**

select count(\*) from retail; - 1987

The table had 13 records having null values

**5. Unique customers in Retail transaction.**

select count(distinct(customer\_id)) from retail; 155

**6. Unique Categories in Retail transaction.**

select count(distinct(category)) from retail; 3

**7. Count of Gender classified by Male vs Female**

select gender, count(gender)

from retail group by gender;

|  |  |
| --- | --- |
| **Gender** | **Total** |
| Male | 975 |
| Female | 1012 |

**8. Total Amount spent by both gender on purchasing.**

select gender, SUM(total\_sale) total\_sales

from retail

group by gender;

O/p:-

|  |  |
| --- | --- |
| **Gender** | **Amount** |
| Male | 445120 |
| Female | 463110 |

**9. Total Amount spent by both gender on different categories on purchasing.**

|  |  |  |
| --- | --- | --- |
| **Gender** | **Category** | **Amount** |
| Female | Clothing | 162460 |
| Female | Beauty | 149470 |
| Female | Electronics | 151180 |
| Male | Beauty | 137320 |
| Male | Clothing | 147535 |
| Male | Electronics | 160265 |

**10. Different days on which sales has been made.**

select count(distinct(sale\_date))

from retail;

O/p:- 644

**11. Total Revenue generated by the sales.**

select sum(total\_sale) Total\_Revenue

from retail;

O/p : - 908230

**12. Total Products, Total Revenue generate by different gender versus category on first\_day and Last\_day.**

select sale\_date "First & Last Day", gender Gender, Category, count(category) Total\_Products\_Sold, sum(total\_sale) Revenue\_Generated

from retail

where sale\_date = (select max(sale\_date) from retail)

group by gender, category, sale\_date

Union

select Sale\_date "First & Last Day", gender, category, count(category) Total\_Products\_Sold, sum(total\_sale) Revenue\_Generated

from retail

where sale\_date = (select min(sale\_date) from retail)

group by gender, category, sale\_date

;

O/p:-

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **First & Last Day** | **Gender** | **Category** | **Total Products Sold** | **Revenue Generated** |
| 01-01-2022 | Male | Clothing | 2 | 2100 |
| 01-01-2022 | Male | Electronics | 1 | 50 |
| 31-12-2023 | Female | Electronics | 1 | 300 |
| 31-12-2023 | Male | Clothing | 1 | 120 |
| 31-12-2023 | Male | Electronics | 1 | 1200 |

**13. Which Category were generating how much of Total and AverageRevenue?**

select

category,

sum(total\_sale) Revenue\_Generated,

sum(quantity) Quantity,

floor(avg(total\_sale)) Average\_Revenue

from retail

group by category;

O/p:-

|  |  |  |  |
| --- | --- | --- | --- |
| **Category** | **Total Revenue** | **Quantity** | **Avg. Revenue** |
| Clothing | 309995 | 1780 | 444 |
| Electronics | 311445 | 1682 | 459 |
| Beauty | 286790 | 1533 | 469 |

**14. Average age of Customer by Product Category.**

select category, floor(avg(age))

from retail

group by category;

O/p:-

|  |  |
| --- | --- |
| **Category** | **Avg. Age** |
| Clothing | 41 |
| Electronics | 41 |
| Beauty | 40 |

**15. Revenue generated Month-on-Month for the given time-period.**

select datepart(Month, sale\_date) Month\_No,

FORMAT(sale\_date, 'MMM') Month\_of\_Sale,

sum(total\_sale) Revenue\_Generated

from retail

group by FORMAT(sale\_date, 'MMM'), datepart(Month, sale\_date)

order by datepart(Month, sale\_date);

O/p:-

|  |  |  |
| --- | --- | --- |
| **Month No** | **Month of Sales** | **Revenue Generated** |
| 1 | Jan | 46425 |
| 2 | Feb | 41280 |
| 3 | Mar | 43985 |
| 4 | Apr | 50460 |
| 5 | May | 51490 |
| 6 | Jun | 45255 |
| 7 | Jul | 58120 |
| 8 | Aug | 49345 |
| 9 | Sep | 129180 |
| 10 | Oct | 125615 |
| 11 | Nov | 126050 |
| 12 | Dec | 141025 |

**16. Who are High Ticket value customers, whose purchase amount was more thaan 1500? How many time customer purchaed more than 1500 amount?**

select count(customer\_id)

from retail

where total\_sale > 1500;

O/p:- 98

select distinct(customer\_id)

from retail

where total\_sale > 1500; -- These are high ticket customers.

O/p:-

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Customer\_ID** | **Customer\_ID** | **Customer\_ID** | **Customer\_ID** | **Customer\_ID** | **Customer\_ID** | **Customer\_ID** |
| 1 | 29 | 55 | 71 | 86 | 111 | 134 |
| 2 | 30 | 56 | 75 | 87 | 113 | 137 |
| 3 | 32 | 57 | 76 | 90 | 114 | 138 |
| 4 | 34 | 61 | 77 | 94 | 115 | 141 |
| 5 | 36 | 63 | 80 | 98 | 117 | 142 |
| 16 | 37 | 65 | 81 | 99 | 120 | 144 |
| 18 | 45 | 66 | 83 | 106 | 126 | 145 |
| 19 | 46 | 67 | 84 | 108 | 130 | 148 |
| 28 | 47 | 68 | 85 | 109 | 131 | 153 |

**17. Best selling month for each year and how much sale was made?**

**https://www.youtube.com/watch?v=ChIQjGBI3AM&list=PLF2u7Zn-dIxbeais0AkBxUqdWM1hnSJDS**