

ECOMMERCE-DASHBOARD ANALYSIS

Data size: 7 Features & 541910 Records



Ecommerce.pvt.ltd



Prepared by
MAHAM WASEEM

Email ID: mahamwaseem316@gmail.com

DASHBOARD

ECOMMERCE SALES VISUALIZATION

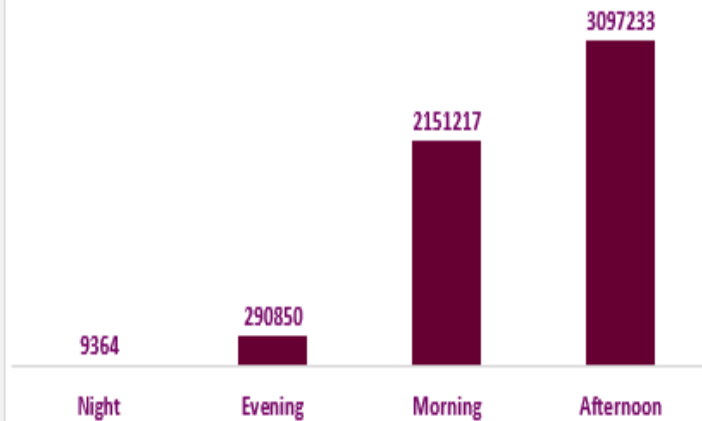


HIGHEST CATEGORY SOLD
OVERALL: HOME DECOR &
ACCESSORIES

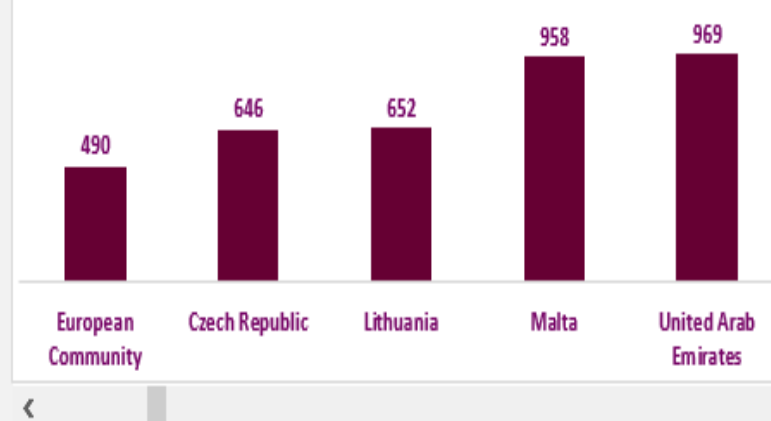


MOST FREQUENT SLOT FOR
SHOPPING IS AFTERNOON

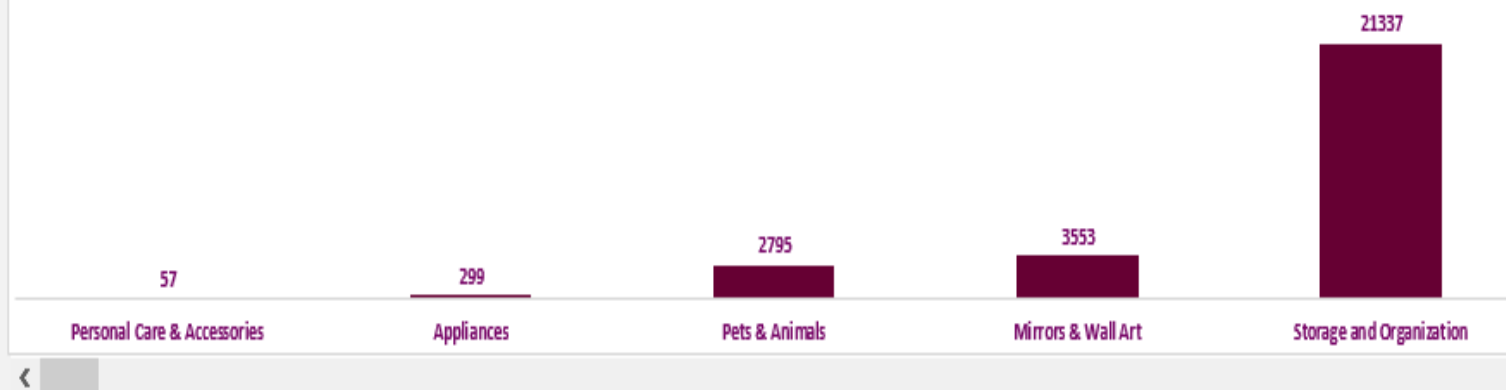
TimeWise Sales



RegionWise Sales



Category Wise Sales



Year

2010

2011

TimeWindow

Afternoon

Evening

Morning

Night

Month Name

January

February

March

Categories

Appliances

Art & Collectibles

Country

Bahrain

Belgium

Brazil

RAW DATASET

Online Retail.xlsx - Excel (Product Activation Failed)							
<div> <div>FILE</div> <div>HOME</div> <div>INSERT</div> <div>PAGE LAYOUT</div> <div>FORMULAS</div> <div>DATA</div> <div>Developer</div> <div>REVIEW</div> <div>VIEW</div> <div>POWER QUERY</div> </div>							
<div> <div> <div>Cut</div> <div>Copy</div> <div>Paste</div> <div>Format Painter</div> </div> <div> <div>Clipboard</div> </div> <div> <div> <div>Calibri</div> <div>11</div> <div>A</div> <div>A</div> </div> <div> <div>B</div> <div>I</div> <div>U</div> <div></div> <div></div> <div>A</div> </div> <div> <div>Font</div> </div> </div> <div> <div> <div></div> <div></div> <div></div> </div> <div> <div>Wrap Text</div> <div>Merge & Center</div> </div> <div> <div>Alignment</div> </div> </div> <div> <div> <div>General</div> <div>\$</div> <div>%</div> <div></div> <div></div> </div> <div> <div>Number</div> </div> </div> <div> <div> <div>Conditional Formatting</div> <div>Format as Table</div> <div>Cell Styles</div> </div> <div> <div>Styles</div> </div> </div> <div> <div> <div>Insert</div> <div>Delete</div> <div>Format</div> </div> <div> <div>Cells</div> </div> </div> </div>							
<div> <div>I21</div> <div>✕</div> <div>✓</div> <div>fx</div> </div>							
	A	B	C	D	E	F	G
1	InvoiceNo	StockCode	Description	Quantity	InvoiceDate	CustomerID	Country
2	536365	85123A	WHITE HANGING HEART T-LIGHT HOLDER	6	12/1/2010 8:26	17850	United Kingdom
3	536365	71053	WHITE METAL LANTERN	6	12/1/2010 8:26	17850	United Kingdom
4	536365	84406B	CREAM CUPID HEARTS COAT HANGER	8	12/1/2010 8:26	17850	United Kingdom
5	536365	84029G	KNITTED UNION FLAG HOT WATER BOTTLE	6	12/1/2010 8:26	17850	United Kingdom
6	536365	84029E	RED WOOLLY HOTTIE WHITE HEART.	6	12/1/2010 8:26	17850	United Kingdom
7	536365	22752	SET 7 BABUSHKA NESTING BOXES	2	12/1/2010 8:26	17850	United Kingdom
8	536365	21730	GLASS STAR FROSTED T-LIGHT HOLDER	6	12/1/2010 8:26	17850	United Kingdom
9	536366	22633	HAND WARMER UNION JACK	6	12/1/2010 8:28	17850	United Kingdom
10	536366	22632	HAND WARMER RED POLKA DOT	6	12/1/2010 8:28	17850	United Kingdom
11	536367	84879	ASSORTED COLOUR BIRD ORNAMENT	32	12/1/2010 8:34	13047	United Kingdom
12	536367	22745	POPPY'S PLAYHOUSE BEDROOM	6	12/1/2010 8:34	13047	United Kingdom
13	536367	22748	POPPY'S PLAYHOUSE KITCHEN	6	12/1/2010 8:34	13047	United Kingdom
14	536367	22749	FELTCRAFT PRINCESS CHARLOTTE DOLL	8	12/1/2010 8:34	13047	United Kingdom
15	536367	22310	IVORY KNITTED MUG COSY	6	12/1/2010 8:34	13047	United Kingdom
16	536367	84969	BOX OF 6 ASSORTED COLOUR TEASPOONS	6	12/1/2010 8:34	13047	United Kingdom
17	536367	22623	BOX OF VINTAGE JIGSAW BLOCKS	3	12/1/2010 8:34	13047	United Kingdom
18	536367	22622	BOX OF VINTAGE ALPHABET BLOCKS	2	12/1/2010 8:34	13047	United Kingdom
19	536367	21754	HOME BUILDING BLOCK WORD	3	12/1/2010 8:34	13047	United Kingdom
20	536367	21755	LOVE BUILDING BLOCK WORD	3	12/1/2010 8:34	13047	United Kingdom
21	536367	21777	RECIPE BOX WITH METAL HEART	4	12/1/2010 8:34	13047	United Kingdom
22	536367	48187	DOORMAT NEW ENGLAND	4	12/1/2010 8:34	13047	United Kingdom
23	536368	22960	JAM MAKING SET WITH JARS	6	12/1/2010 8:34	13047	United Kingdom
24	536368	22913	RED COAT RACK PARIS FASHION	3	12/1/2010 8:34	13047	United Kingdom
25	536368	22912	YELLOW COAT RACK PARIS FASHION	3	12/1/2010 8:34	13047	United Kingdom



Data Cleaning

1. Handling Missing Values & Duplicates

- Data cleaning was performed by identifying and addressing null or missing values in key columns.
- The missing columns, including Stock ID, Customer ID, and Description, were removed as they required confirmation from the relevant departments.

2. Handling Negative Values in the Quantity Column:

- Negative values in the Quantity column were removed as they were likely due to reversed orders or incorrect entries.
- These entries needed confirmation, so they were excluded from the dataset to ensure data accuracy.

3. Vague values in the Description Column:

- Such rows were removed.

Implementation

- The cleaning process was executed using SQL
- The work was conducted in SQLite Browser.

WORK APPROACH

ECOMMERCE DATA

DATA CLEANING & PROCESSING APPROACH



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Process

- Categories were generated based on the Description & time column using SQL.

The following SQL query (Sample) was used to assign categories:

UPDATE Book2
SET Categories = 'Accessories'
WHERE Description IN (
'ANT COPPER LIME BOUDICCA BRACELET',
'ANT COPPER PINK BOUDICCA BRACELET',
'ANT COPPER RED BOUDICCA BRACELET',
'ANT COPPER TURQ BOUDICCA BRACELET',
'ANT WHITE WIRE HEART SPIRAL',
'ANT SILVER FUSCHIA BOUDICCA RING',
'ANT SILVER LIME GREEN BOUDICCA RING',
'ANT SILVER TURQUOISE BOUDICCA RING',
'BAROQUE BUTTERFLY EARRINGS BLACK',
'BAROQUE BUTTERFLY EARRINGS CRYSTAL',
'BAROQUE BUTTERFLY EARRINGS MONTANA',
'BAROQUE BUTTERFLY EARRINGS PINK',
'BEADED PEARL HEART WHITE LARGE',
'BEADED PEARL HEART WHITE ON STICK',
'BICYCLE SAFETY WALL ART'

);

PRODUCTS CATEGORIES CREATION FROM PRODUCT DESCRIPTION

Description	Categories
WHITE HANGING HEART T-LIGHT HOLDER	Lighting & Electrical
WHITE METAL LANTERN	Home Decor and Accessories
CREAM CUPID HEARTS COAT HANGER	Home Decor and Accessories
KNITTED UNION FLAG HOT WATER BOTTLE	Home Decor and Accessories
SET 7 BABUSHKA NESTING BOXES	Home Decor and Accessories
GLASS STAR FROSTED T-LIGHT HOLDER	Cutlery
HAND WARMER UNION JACK	Gifts
HAND WARMER RED POLKA DOT	Gifts
ASSORTED COLOUR BIRD ORNAMENT	Home Decor and Accessories
POPPY'S PLAYHOUSE BEDROOM	Toys & Kids
POPPY'S PLAYHOUSE KITCHEN	Toys & Kids
FELTCRAFT PRINCESS CHARLOTTE DOLL	Gifts
IVORY KNITTED MUG COSY	Home Decor and Accessories
BOX OF 6 ASSORTED COLOUR TEASPOONS	Cutlery
BOX OF VINTAGE JIGSAW BLOCKS	Toys & Kids
BOX OF VINTAGE ALPHABET BLOCKS	Seasonal Displays
HOME BUILDING BLOCK WOOD	Home Decor and Accessories

TIME STAMP SEPARATION IN POWER QUERY; SEPARATE DATE, YEAR, MONTH, AND TIME WINDOW

[illegible]

TRANSFORMED DATASET

DATA IS TRANSFORMED AND NEW MEANING FUL COLUMNS ARE CREATED

Dashboard_Online_Retail.xlsx - Excel (Product Activation Failed)											
FILE HOME INSERT PAGE LAYOUT FORMULAS DATA Developer REVIEW VIEW POWER QUERY											
Clipboard Font Alignment Number Styles Cells Editing											
G19 8:34:00 AM											
	A	B	C	D	E	F	G	H	I	J	K
1	Invoice_No	Description	Categories	Quantity	Country	Date	Time	Year	Month Name	AM/PM	TimeWindow
2	536365	WHITE HANGING HEART T-LIGHT HOLDER	Lighting & Electrical	6	United Kingdom	12/1/2010	8:26:00	2010	December	AM	Morning
3	536365	WHITE METAL LANTERN	Home Decor and Accessories	6	United Kingdom	12/1/2010	8:26:00	2010	December	AM	Morning
4	536365	CREAM CUPID HEARTS COAT HANGER	Home Decor and Accessories	8	United Kingdom	12/1/2010	8:26:00	2010	December	AM	Morning
5	536365	KNITTED UNION FLAG HOT WATER BOTTLE	Home Decor and Accessories	6	United Kingdom	12/1/2010	8:26:00	2010	December	AM	Morning
6	536365	SET 7 BABUSHKA NESTING BOXES	Home Decor and Accessories	2	United Kingdom	12/1/2010	8:26:00	2010	December	AM	Morning
7	536365	GLASS STAR FROSTED T-LIGHT HOLDER	Cutlery	6	United Kingdom	12/1/2010	8:26:00	2010	December	AM	Morning
8	536366	HAND WARMER UNION JACK	Gifts	6	United Kingdom	12/1/2010	8:28:00	2010	December	AM	Morning
9	536366	HAND WARMER RED POLKA DOT	Gifts	6	United Kingdom	12/1/2010	8:28:00	2010	December	AM	Morning
10	536367	ASSORTED COLOUR BIRD ORNAMENT	Home Decor and Accessories	32	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
11	536367	POPPY'S PLAYHOUSE BEDROOM	Toys & Kids	6	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
12	536367	POPPY'S PLAYHOUSE KITCHEN	Toys & Kids	6	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
13	536367	FELTCRAFT PRINCESS CHARLOTTE DOLL	Gifts	8	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
14	536367	IVORY KNITTED MUG COSY	Home Decor and Accessories	6	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
15	536367	BOX OF 6 ASSORTED COLOUR TEASPOONS	Cutlery	6	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
16	536367	BOX OF VINTAGE JIGSAW BLOCKS	Toys & Kids	3	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
17	536367	BOX OF VINTAGE ALPHABET BLOCKS	Seasonal Decor	2	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
18	536367	HOME BUILDING BLOCK WORD	Home Decor and Accessories	3	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
19	536367	LOVE BUILDING BLOCK WORD	Miscellaneous	3	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
20	536367	RECIPE BOX WITH METAL HEART	Gifts	4	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
21	536367	DOORMAT NEW ENGLAND	Home Decor and Accessories	4	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
22	536368	JAM MAKING SET WITH JARS	Cutlery	6	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
23	536368	RED COAT RACK PARIS FASHION	Home Decor and Accessories	3	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
24	536368	YELLOW COAT RACK PARIS FASHION	Home Decor and Accessories	3	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
25	536368	BLUE COAT RACK PARIS FASHION	Home Decor and Accessories	3	United Kingdom	12/1/2010	8:34:00	2010	December	AM	Morning
26	536369	BATH BUILDING BLOCK WORD	Home Decor and Accessories	3	United Kingdom	12/1/2010	8:35:00	2010	December	AM	Morning

STATISTICAL ANALYSIS

ECOMMERCE DATA

TOOL USED: DB Browser (SQLite)



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TRANSACTIONS ANALYSIS

SQL CODE:

```
SELECT
COUNT(*) AS Total_Transactions,
SUM(Quantity) AS Total_Quantity,
AVG(Quantity) AS Average_Quantity,
MAX(Quantity) AS Max_Quantity,
MIN(Quantity) AS Min_Quantity
FROM Online_Retail;
```

	Total_Transactions	Total_Quantity	Average_Quantity	Max_Quantity	Min_Quantity
1	516653	5551907	10.745910698283	80995	1

ANALYSIS:

Maximum Quantities sold are 80995

REGIONWISE ANALYSIS

SQL CODE:

```
SELECT
Country,
COUNT(*) AS Number_of_Transactions,
SUM(Quantity) AS Total_Quantity
FROM Online_Retail
GROUP BY Country
ORDER BY Total_Quantity DESC;
```

	Country	Number_of_Transactions	Total_Quantity
1	United Kingdom	473571	4644464
2	Netherlands	2283	195922
3	EIRE	7796	146302
4	Germany	8454	115708
5	France	7953	109613
6	Australia	1166	83073
7	Sweden	417	35054
8	Switzerland	1893	29795
9	Spain	2368	27087

ANALYSIS:

The most profitable area is United Kingdom

STATISTICAL ANALYSIS

ECOMMERCE DATA

TOOL USED: DB Browser (SQLite)



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TIME BASED CATEGORY ANALYSIS

SQL CODE:

```
SELECT
  TimeWindow,
  COUNT(*) AS Number_of_Transactions,
  SUM(Quantity) AS Total_Quantity
FROM Online_Retail
GROUP BY TimeWindow
ORDER BY Number_of_Transactions DESC;
```

	TimeWindow	Number_of_Transactions	Total_Quantity
1	Afternoon	334505	3099909
2	Morning	143378	2151784
3	Evening	38006	290850
4	Night	764	9364

ANALYSIS:

Most sales are done in the Afternoon

CATEGORY ANALYSIS

SQL CODE:

```
SELECT
  Categories,
  COUNT(*) AS Number_of_Transactions,
  SUM(Quantity) AS Total_Quantity,
  AVG(Quantity) AS Average_Quantity
FROM Online_Retail
GROUP BY Categories
ORDER BY Total_Quantity DESC;
```

	Categories	Number_of_Transactions	Total_Quantity	Average_Quantity
1	Home Decor and Accessories	174357	1725867	9.89846693852269
2	Gifts	67084	807123	12.0315276369924
3	Seasonal Decor	45241	526190	11.6308215998762
4	Cutlery	45801	455812	9.95200978144582
5	Toys & Kids	41487	416181	10.0316002603225
6	Office & School Supplies	24819	380802	15.3431645110601
7	Miscellaneous	23329	275776	11.8211667881178
8	Bags and Accessories	16751	146159	8.72538952898334
9	Fashion & Accessories	10811	139499	12.9034316899454

ANALYSIS:

Maximum sold category is Home decor and accessories



THANK YOU

PREPARED BY: MAHAM WASEEM

GitHub Profile: <https://github.com/Mahamwaseem786>

Email ID: mahamwaseem316@gmail.com