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## **Introduction to Data Management PROJECT REPORT**

(Project Semester August-December 2020)

PROJECT REPORT ON

Revenue Analysis Excel Dashboard

Submitted by:

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Programme: Bachelor of Technology [CSE]

Section: KM081

Course Code: INT217

Under the Guidance of

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## DECLARATION

I, Amritansh Thakur, student of Computer Science & Engineering under CSE/IT Discipline at, Lovely Professional University, Punjab, hereby declare that all the information furnished in this project report is based on my own intensive work and is genuine.

Date: 17-11-2022

Amritansh Thakur

Registration No: 12016755

## ACKNOWLEDGEMENT

Primarily I'd thank God for being able to complete my project with success. Then I'd like to thank my mentor Dr. Mukesh Kumar, whose valuable guidance has been the ones that helped me patch this project and make it full proof success in contribution towards the completion of this project. Finally, I'd rather thanks to Lovely Professional University, and my parent's inspiration, who gave me this golden opportunity to learn many new things, to learn another aspect of life.

Amritansh Thakur

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## INTRODUCTION

- Microsoft Excel is often used as a simple project management tool by project managers working on small- or mid-sized projects to help visualize, plan, and monitor progress.
- Data management is important because the data your organization creates is a very valuable resource.
- The last thing you want to do is spend time and resources collecting data and business intelligence, only to lose or misplace that information.
- In that case, you would then have to spend time and resources again to get that same business intelligence you already had. And on that data analysis is carried out which show visualization of our problems in efficient way.
- Data Analysis is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision- making.
- This project is based on such data analysis on Total amount of Revenue generated.

## OBJECTIVE/SCOPE OF ANALYSIS

After analysis of the dataset, the aim of this project is to give answer of given objectives in easy way:

- Total Revenue by Year and Region
- Total Revenue and total cost
- Total Revenue by Order Priority
- Total Revenue by Countries
- Total Revenue by Item

## SOURCE OF DATASET

[https://www.youtube.com/redirect?event=video\\_description&redir\\_token=QUFFLUhqa1RjS3M2M19Qb3Npek84RURIOUxVSGJETi1Td3xBQ3Jtc0ttYUgyVIFVeUYzNUU2OXZuQ3JFeFR1OHZYVmh3U1VUS3lUMUZsdEluYVpiNFIsWGkwSEIOR3A5a3l3Qlh1V2tCakx4cXIETTNfN1lSdjdDQXFOX0l4UGd5aHpmeTRRdIRYOHdBc3RDSINpRIJQVS1INA&q=https%3A%2F%2Fdrive.google.com%2Fdrive%2Ffolders%2F1Kt8BlkAzPLROd4XaIK2NRqPVUIAjmLTq&v=OiMMxHpRWY](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqa1RjS3M2M19Qb3Npek84RURIOUxVSGJETi1Td3xBQ3Jtc0ttYUgyVIFVeUYzNUU2OXZuQ3JFeFR1OHZYVmh3U1VUS3lUMUZsdEluYVpiNFIsWGkwSEIOR3A5a3l3Qlh1V2tCakx4cXIETTNfN1lSdjdDQXFOX0l4UGd5aHpmeTRRdIRYOHdBc3RDSINpRIJQVS1INA&q=https%3A%2F%2Fdrive.google.com%2Fdrive%2Ffolders%2F1Kt8BlkAzPLROd4XaIK2NRqPVUIAjmLTq&v=OiMMxHpRWY)

The dataset is based on the total amount of revenue generated.

The columns included in the dataset used in project are given below:

- Region
- Country
- Item type
- Rep Name
- Sales Chart
- Total Revenue
- Order Year
- Order Month

## ➔ Sample of dataset

Region	Country	Item Type	Rep Name	Sales Chan	Order Pri	Order Date	Order ID	Ship Date	Units Sold	Unit Price	Unit Cost	Total Revenue	Total Cost	Total Profit	Order_Yea	Order_Month
Middle East and North Africa	Libya	Cosmetics	Lauren Marst	Offline	M	18-10-2014	6.9E+08	31-10-2014	8446	437.2	263.33	36925912	2224085	1468506	2014	10
North America	Canada	Vegetables	Evan Vaughn	Online	M	07-11-2011	1.9E+08	08-12-2011	3018	154.06	90.93	464953.08	274427	190526.3	2011	11
Middle East and North Africa	Libya	Baby Food	Sean Glover	Offline	C	31-10-2016	2.5E+08	09-12-2016	1517	255.28	159.42	387259.76	241840	145419.6	2016	10
Asia	Japan	Cereal	Amy Hemmir	Offline	C	10-04-2010	1.6E+08	12-05-2010	3322	205.7	117.11	683335.4	389039	294296	2010	4
Sub-Saharan Africa	Chad	Fruits	Jack MacLec	Offline	H	16-08-2011	6.5E+08	31-08-2011	9845	9.33	6.92	91853.85	68127.4	23726.45	2011	8
Europe	Armenia	Cereal	Piers MacLe	Online	H	24-11-2014	6.8E+08	28-12-2014	9528	205.7	117.11	1959909.6	1115824	844085.5	2014	11
Sub-Saharan Africa	Eritrea	Cereal	Diana Black	Online	H	04-03-2015	6.8E+08	17-04-2015	2844	205.7	117.11	585010.8	333061	251950	2015	3
Europe	Montenegro	Clothes	Liam Wilkins	Offline	M	17-05-2012	2.1E+08	28-06-2012	7299	109.28	35.84	797634.72	261596	536038.6	2012	5
Central America and the Caribbean	Jamaica	Vegetables	Justin Scott	Online	H	29-01-2015	2.7E+08	07-03-2015	2428	154.06	90.93	374057.68	220778	153279.6	2015	1
Australia and Oceania	Fiji	Vegetables	Trevor Hemm	Offline	H	24-12-2013	1.2E+08	19-01-2014	4800	154.06	90.93	739488	436464	303024	2013	12
Sub-Saharan Africa	Togo	Clothes	Sam King	Online	M	29-12-2015	6.8E+08	19-01-2016	3012	109.28	35.84	329151.36	107950	221201.3	2015	12
Europe	Montenegro	Snacks	Karen Clark	Offline	M	27-02-2010	2.2E+08	18-03-2010	2694	152.58	97.44	411050.52	262503	148547.2	2010	2
Europe	Greece	Household	Molly Jacksc	Online	C	17-11-2016	7E+08	22-12-2016	1508	668.27	502.54	1007751.16	757830	249920.8	2016	11
Sub-Saharan Africa	Sudan	Cosmetics	Irene Hill	Online	C	20-12-2015	5.4E+08	05-01-2016	4146	437.2	263.33	18126312	1091766	720865	2015	12
Asia	Maldives	Fruits	Katherine Soci	Offline	L	08-01-2011	7.1E+08	06-02-2011	7332	9.33	6.92	68407.56	50737.4	17670.12	2011	1
Europe	Montenegro	Clothes	Robert Davie	Offline	H	28-06-2010	4.5E+08	22-07-2010	4820	109.28	35.84	526729.6	172749	353980.8	2010	6
Europe	Estonia	Office Suppl	Nicholas Mol	Online	H	25-04-2016	4.1E+08	12-05-2016	2397	651.21	524.96	1560950.37	1259329	302621.3	2016	4
North America	Greenland	Beverages	Victor Reid	Online	M	27-07-2012	4.1E+08	07-08-2012	2880	47.45	31.79	136656	91555.2	45100.8	2012	7
Sub-Saharan Africa	Cape Verde	Clothes	Jan Dyer	Online	C	08-09-2014	8.2E+08	03-10-2014	1117	109.28	35.84	122065.76	40033.3	82032.48	2014	9
Sub-Saharan Africa	Senegal	Household	Jan Johnstor	Offline	L	27-08-2012	2.5E+08	08-09-2012	8989	668.27	502.54	6007079.03	4517332	1489747	2012	8
Australia and Oceania	Federated State	Snacks	Gavin Gill	Online	C	03-09-2012	5.3E+08	15-10-2012	407	152.58	97.44	62100.06	39658.1	22441.98	2012	9
Europe	Bulgaria	Clothes	Rose Paige	Online	L	27-08-2010	8.8E+08	16-09-2010	6313	109.28	35.84	699884.64	226258	463626.7	2010	8
Middle East and North Africa	Algeria	Personal Ca	Christian Shc	Online	H	20-02-2011	1.3E+08	09-03-2011	9681	81.73	56.67	791228.13	549622	242605.9	2011	2
Asia	Mongolia	Clothes	Hannah Lamt	Online	L	12-12-2015	7.7E+08	24-01-2016	515	109.28	35.84	56279.2	18457.6	37821.6	2015	12
Central America and the Caribbean	Grenada	Cereal	Connor Terry	Online	H	28-10-2012	4.3E+08	13-11-2012	852	205.7	117.11	175256.4	99777.7	75478.68	2012	10
Central America and the Caribbean	Grenada	Beverages	Penelope Tu	Online	M	30-01-2017	4E+08	20-03-2017	9759	47.45	31.79	463064.55	310239	152825.9	2017	1
Sub-Saharan Africa	Senegal	Beverages	Peter Pullma	Offline	M	22-10-2014	6.8E+08	04-11-2014	8334	47.45	31.79	395448.3	264938	130510.4	2014	10
North America	Greenland	Fruits	Jessica Pool	Offline	M	31-01-2012	4.7E+08	22-02-2012	4709	9.33	6.92	43934.97	32586.3	11348.69	2012	1
Sub-Saharan Africa	Chad	Meat	Amelia Black	Offline	H	20-01-2016	3.6E+08	09-03-2016	9043	421.89	364.69	3815151.27	3297892	517259.6	2016	1
Sub-Saharan Africa	Mauritius	Personal Ca	Claire Clark	Online	C	01-01-2016	1.2E+08	07-01-2016	8529	81.73	56.67	697075.17	483338	213736.7	2016	1
Middle East and North Africa	Morocco	Beverages	Amy Alsop	Offline	C	01-06-2017	9.4E+08	23-06-2017	2391	47.45	31.79	113452.95	76009.9	37443.06	2017	6
Central America and the Caribbean	Honduras	Office Suppl	Steven Blake	Online	H	30-06-2015	5E+08	09-07-2015	6884	651.21	524.96	4482929.64	3613825	869105	2015	6
Sub-Saharan Africa	Benin	Fruits	Angela Velof	Online	L	28-01-2014	5.6E+08	16-03-2014	293	9.33	6.92	2733.69	2027.56	706.13	2014	1
Europe	Greece	Baby Food	Thomas Hill	Offline	M	08-04-2014	2.9E+08	08-04-2014	7937	255.28	159.42	2026157.36	1285317	768040.8	2014	4
Central America and the Caribbean	Jamaica	Beverages	Carolyn Arno	Offline	L	04-09-2010	2.6E+08	24-10-2010	7163	47.45	31.79	339884.35	227712	112172.6	2010	9
Sub-Saharan Africa	Equatorial Guine	Office Suppl	Joanne Walla	Online	M	02-05-2010	2.1E+08	14-05-2010	2352	651.21	524.96	1531645.92	1234706	296940	2010	5
Sub-Saharan Africa	Swaziland	Office Suppl	Tim Miller	Offline	H	03-10-2013	4.1E+08	22-10-2013	9915	651.21	524.96	6456747.15	5204978	1251769	2013	10



## ETL PROCESS

In computing, extract, transform, load (ETL) is a process to prepare data for analysis, especially in data warehousing. Data extraction involves extracting data from homogeneous or heterogeneous sources, while data transformation processes data by transforming them into a proper storage format/structure for the purposes of querying and analysis: finally, data loading describes the insertion of data into the final target location such as an operational data store, a data mart, or a data warehouse. A properly designed ETL system extracts data from the source systems, enforces data quality and consistency standards, conforms data so that separate sources can be used together, and finally delivers data in a presentation-ready format so that application developers can build applications and end users can make decisions. I have also performed many steps in the ETL process to prepare my data for analysis.

**EXTRACTION:** Extract is the process of fetching(reading) the information from the database. At this stage, data is collected from multiple or different types of sources.


The raw data has been taken from Kaggle and it looks like

exams.csv (71.77 kB)

Detail Compact Column 8 of 8 columns

**About this file**  
Marks secured by the students in various subjects

▲ race/ethnicity	▲ parental level of e...	▲ lunch	▲ test preparation c...	## math score	##
Race/Ethnicity	Parental Level	Lunch	Test Preparation	Math Score	Rev
group C	32%	some college	22%	standard	65%
group D	26%	associate's degree	20%	free/reduced	35%
Other (415)	42%	Other (575)	57%	completed	67%
group A		high school		completed	67
group D		some high school		free/reduced	48
group E		some college		free/reduced	59
group B		high school		standard	77
group E		associate's degree		standard	78
group D		high school		standard	63



I have first downloaded the CSV files manually from excel then imported it into excel using the get data feature.

Step 1 — Open a new excel workbook and use get data from csv.

AutoSave OFF exams.csv Search (Alt+Q)

File Home Insert Page Layout Formulas Data Review View Automate Help Power Pivot

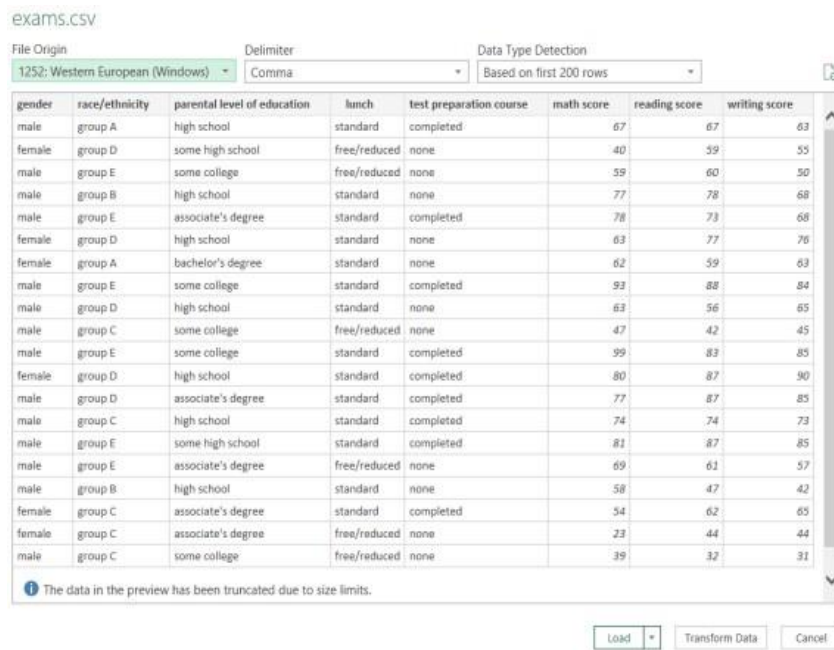
Get Data From Text/CSV From Web From Table/Range From Picture Recent Sources Existing Connections Queries & Connections Refresh All Properties Edit Links Stocks Currencies Data Types

**POSSIBLE DATA LOSS** Some features might be lost if you save this workbook in the comma-delimited (.csv) format. To preserve th

A1 gender

	A	B	C	D	E	F	G	H	I	J	K
1	gender	race/ethni	parental le	lunch	test prepa	math score	reading sc	writing score			
2	male	group A	high schoc	standard	completed	67	67	63			
3	female	group D	some high	free/reduc	none	40	59	55			
4	male	group E	some colle	free/reduc	none	59	60	50			
5	male	group B	high schoc	standard	none	77	78	68			
6	male	group E	associate's	standard	completed	78	73	68			
7	female	group D	high schoc	standard	none	63	77	76			
8	female	group A	bachelor's	standard	none	62	59	63			

## Step 2 — load into connections.



**LOAD:**  
After loading, the data will look like this

gender	race/ethnicity	parental level of education	lunch	test preparation course	math score	reading score	writing score
1	male	group A	high school	standard	completed	67	67
2	female	group D	some high school	free/reduced	none	40	59
3	male	group E	some college	free/reduced	none	59	60
4	male	group B	high school	standard	none	77	78
5	male	group E	associate's degree	standard	completed	78	73
6	female	group D	high school	standard	none	63	77
7	female	group A	bachelor's degree	standard	none	62	59
8	male	group E	some college	standard	completed	93	88
9	male	group D	high school	standard	none	63	56
10	male	group C	some college	free/reduced	none	47	42
11	male	group E	some college	standard	completed	99	83
12	female	group D	high school	standard	completed	80	87
13	male	group D	associate's degree	standard	completed	77	87
14	male	group B	high school	standard	completed	74	74
15	male	group E	some high school	standard	completed	81	87
16	male	group E	associate's degree	free/reduced	none	69	61
17	male	group B	high school	standard	none	58	47
18	female	group C	associate's degree	standard	completed	54	62
19	female	group C	associate's degree	free/reduced	none	23	44
20	male	group C	some college	free/reduced	none	39	32
21	male	group E	some college	standard	completed	99	83
22	female	group D	high school	standard	completed	80	87
23	male	group D	associate's degree	standard	completed	77	87

We can also prevent data loss and use more features of excel by changing extension from .csv to .xlsx

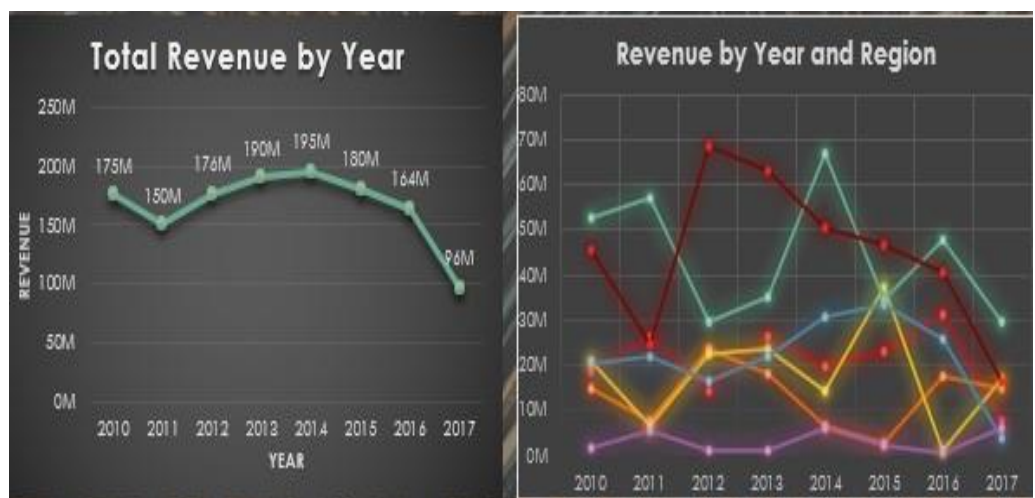


gender	race/ethnicity	parental level of education	lunch	test preparation course	math score	reading score	writing score
1	male	group A	high school	standard	completed	67	67
2	female	group D	some high school	free/reduced	none	40	59
3	male	group E	some college	free/reduced	none	59	60
4	male	group B	high school	standard	none	77	78
5	male	group E	associate's degree	standard	completed	78	73
6	female	group D	high school	standard	none	63	77
7	female	group A	bachelor's degree	standard	none	62	59
8	male	group E	some college	standard	completed	93	88
9	male	group D	high school	standard	none	63	56
10	male	group C	some college	free/reduced	none	47	42
11	male	group E	some college	standard	completed	99	83
12	female	group D	high school	standard	completed	80	87
13	male	group D	associate's degree	standard	completed	77	87
14	male	group B	high school	standard	completed	74	74
15	male	group E	some high school	standard	completed	81	87
16	male	group E	associate's degree	free/reduced	none	69	61
17	male	group C	associate's degree	standard	completed	54	62
18	female	group C	associate's degree	free/reduced	none	23	44
19	male	group C	some college	free/reduced	none	39	32

## ANALYSIS OF DATASET

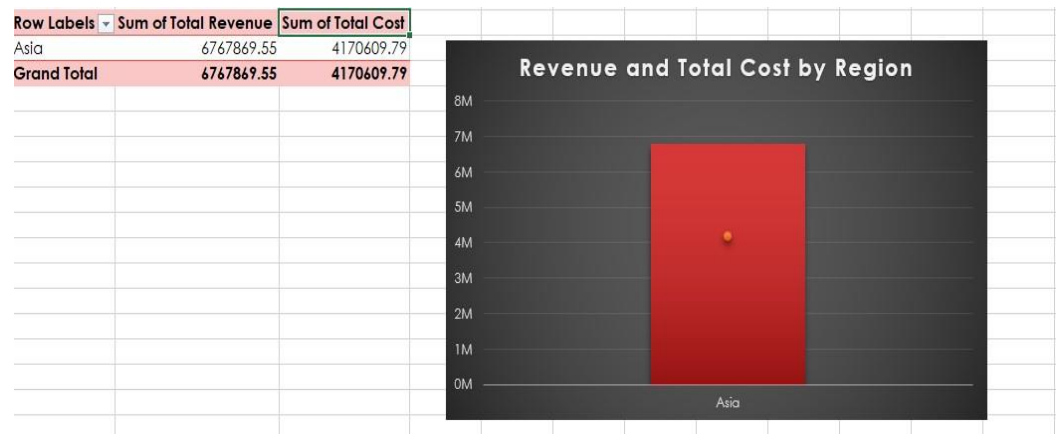
### OBJECTIVE 1-

- Total amount of Revenue generated by year



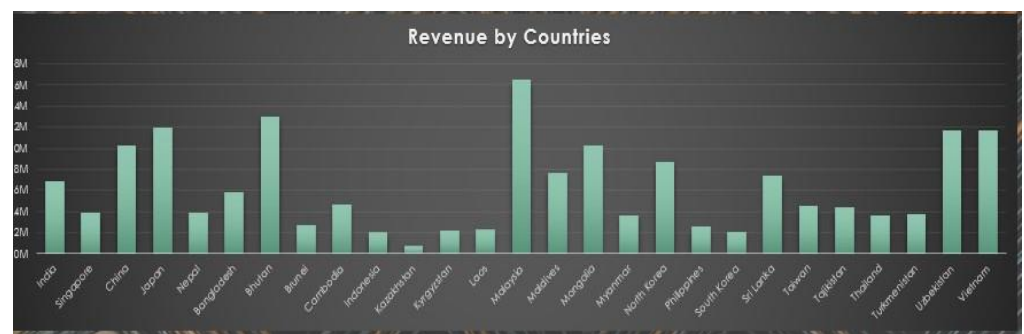
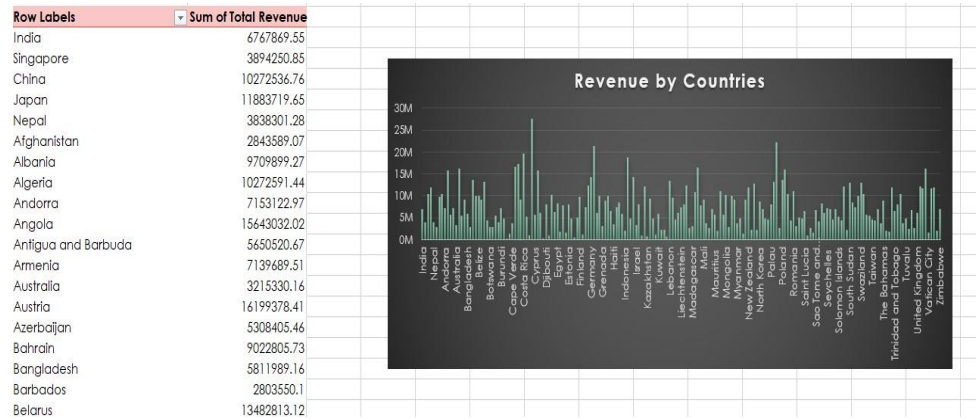
## OBJECTIVE 2-

- Total amount of Revenue and total cost



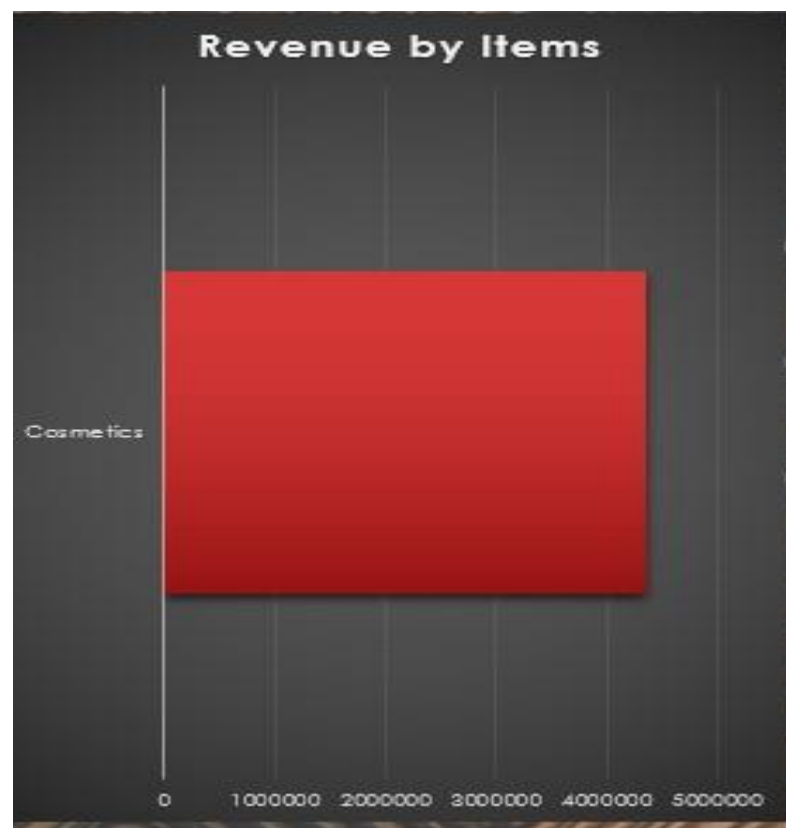
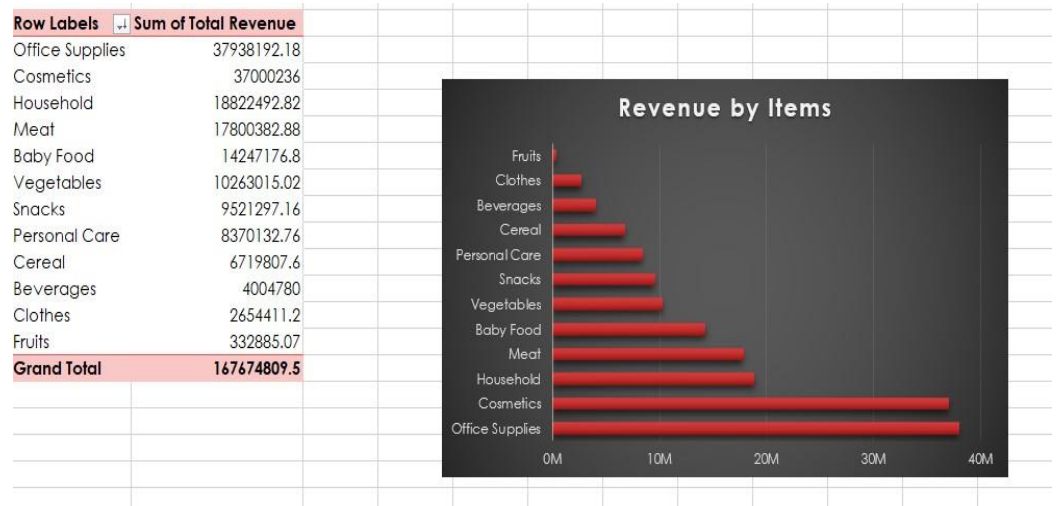
## OBJECTIVE 3-

- Total amount of Revenue by Countries



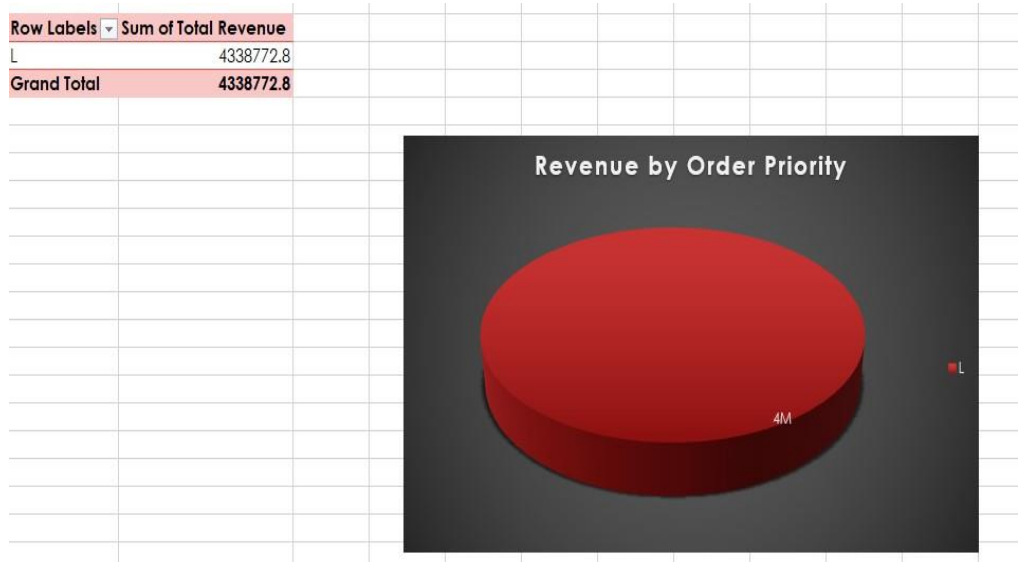
## OBJECTIVE 4-

- Total amount of Revenue generated by items



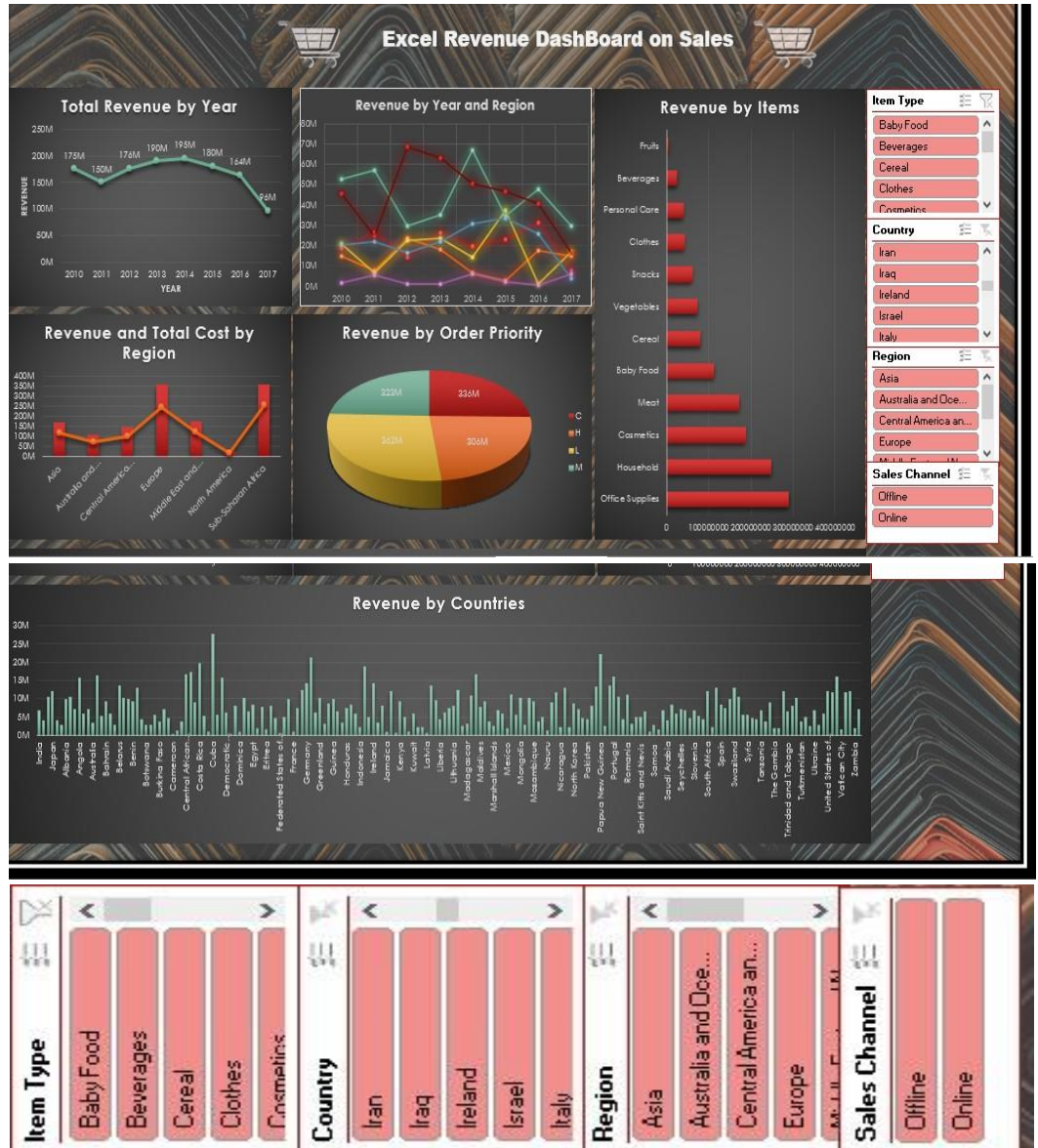
## OBJECTIVE 5-

- Total amount of Revenue by Order Priority





# FINAL DASHBOARD



## BIBLIOGRAPHY

➤ Data Source link:

[https://www.youtube.com/redirect?event=video\\_description&redir\\_token=QUFFLUhqa1RjS3M2M19Qb3Npek84RURlOUxVSGJETi1Td3xBQ3Jtc0ttYUgyVIFVeUYzNUU2OXZuQ3JFeFR1OHZYVmh3U1VUS3lUMUZsdEluYVpiNFIsWGkwSElOR3A5a3l3Qlh1V2tCakx4cXIETTNfN1lSdjdDQXFOX0l4UGd5aHpmeTRRdIRYOHdBc3RDSINpRIJQVS1INA&q=https%3A%2F%2Fdrive.google.com%2Fdrive%2Ffolders%2F1Kt8BlkAzPLROd4XaIK2NRqPVUIAjmLTq&v=OiMMxHpRWY](https://www.youtube.com/redirect?event=video_description&redir_token=QUFFLUhqa1RjS3M2M19Qb3Npek84RURlOUxVSGJETi1Td3xBQ3Jtc0ttYUgyVIFVeUYzNUU2OXZuQ3JFeFR1OHZYVmh3U1VUS3lUMUZsdEluYVpiNFIsWGkwSElOR3A5a3l3Qlh1V2tCakx4cXIETTNfN1lSdjdDQXFOX0l4UGd5aHpmeTRRdIRYOHdBc3RDSINpRIJQVS1INA&q=https%3A%2F%2Fdrive.google.com%2Fdrive%2Ffolders%2F1Kt8BlkAzPLROd4XaIK2NRqPVUIAjmLTq&v=OiMMxHpRWY)

➤ Desktop background image:

[//unsplash.com/photos/lkA6qT\\_aGds](https://unsplash.com/photos/lkA6qT_aGds)

# **Thankyou!!**