



Introduction to Data Management PROJECT REPORT

(Project Semester August-December 2021)

PROJECT REPORT

ON

Analysing Google Playstore Apps Data

Submitted by

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11910397

Programme: Bachelor of Technology

Section: KM005

Course Code: INT217

Under the Guidance of

Komal Arora : 17783

Discipline of CSE/IT

Lovely School of Computer Science & Engineering

Lovely Professional University, Phagwara

DECLARATION

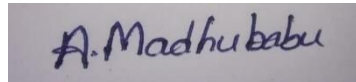
I, Angadala Madhubabu, student of Computer Science & Engineering under CSE/IT Discipline at, Lovely Professional University, Punjab, hereby declare that all the information furnished in this project report is based on my own intensive work and is genuine.

Date: 10/12/2021

Name: Angadala Madhubabu

Registration No: 11910397

Signature :

A rectangular box containing a handwritten signature in blue ink that reads "A. Madhubabu".

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude to my teacher **Komal Arora** who gave me the golden opportunity to do this wonderful project on the topic **Analysing Google PlayStore Apps Data**, which also helped me in doing a lot of Research and I came to know about so many new things I am really thankful to her .I would like to thank to **Lovely Professional University**, which gave me this golden opportunity to learn many new things, to learn another aspects of life.

Angadala Madhubabu

RegNo:11910397

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INTRODUCTION

- Data management is the practice of collecting, organizing, protecting, and storing an organization's data so it can be analyzed for business decisions
- 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 modeling data with the goal of discovering useful information, informing conclusions, and supporting decision- making.
- This project is based on such data analysis on Google Play Store Apps.
- In Google Play Store we have different types of Apps related to Finance, Entertainment, Medical, Business, Health and Fitness etc. we analyze apps the based on rating, number of the reviews given by people to the apps, number of people downloaded the apps and type of the app it is paid or free.
- This Google Play Store Apps dataset contains 13 data fields.

OBJECTIVES/SCOPE OF ANALYSIS

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

- Provide Data insights on App Rating (Analysis of Apps based on The Rating)
- Analysis of Content Rating(Usage of Apps based on Age)
- Top 5 reviewed Apps
- Top 5 installed Apps
- Total Paid and Free Apps
- Analysis of Apps based on Genres(Top 5 Genres)

SOURCE OF DATASET:

Source of dataset: <https://www.kaggle.com/lava18/google-play-store->

The dataset is based on Google Play store Apps

The columns included in the dataset are given below:

- App
 - App name
- Category
 - It tells about the app
- Rating
 - Rating of the App
- Reviews
 - The number of reviews given by the Users
- Size
 - The size of app
- Installs
 - The number of People installed the App
- Type
 - App is paid or Free
- Price
 - Price of the App

- Content Rating
 - Usage of the app based on Age
- Genres
 - App is developed on which category
- Last Updated
 - The App last Updated App
- Current Version
 - The current version of the App.

Sample of dataset with data fields is given below:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content R	Genres	Last Updat	Current Ve	Android Ver
2	Photo Edit	ART_AND_	4.1	159	19M	10,000+	Free	0	Everyone	Art & Desig	7-Jan-18	1.0.0	4.0.3 and up
3	Coloring b	ART_AND_	3.9	967	14M	500,000+	Free	0	Everyone	Art & Desig	15-Jan-18	2.0.0	4.0.3 and up
4	U Launche	ART_AND_	4.7	87510	8.7M	5,000,000+	Free	0	Everyone	Art & Desig	1-Aug-18	1.2.4	4.0.3 and up
5	Sketch - D	ART_AND_	4.5	215644	25M	50,000,000	Free	0	Teen	Art & Desig	8-Jun-18	Varies with	4.2 and up
6	Pixel Draw	ART_AND_	4.3	967	2.8M	100,000+	Free	0	Everyone	Art & Desig	20-Jun-18	1.1	4.4 and up
7	Paper flow	ART_AND_	4.4	167	5.6M	50,000+	Free	0	Everyone	Art & Desig	#####	1	2.3 and up
8	Smoke Eff	ART_AND_	3.8	178	19M	50,000+	Free	0	Everyone	Art & Desig	26-Apr-18	1.1	4.0.3 and up
9	Infinite Pai	ART_AND_	4.1	36815	29M	1,000,000+	Free	0	Everyone	Art & Desig	14-Jun-18	6.1.61.1	4.2 and up
10	Garden Co	ART_AND_	4.4	13791	33M	1,000,000+	Free	0	Everyone	Art & Desig	#####	2.9.2	3.0 and up
11	Kids Paint	ART_AND_	4.7	121	3.1M	10,000+	Free	0	Everyone	Art & Desig	3-Jul-18	2.8	4.0.3 and up
12	Text on Ph	ART_AND_	4.4	13880	28M	1,000,000+	Free	0	Everyone	Art & Desig	#####	1.0.4	4.1 and up
13	Name Art	ART_AND_	4.4	8788	12M	1,000,000+	Free	0	Everyone	Art & Desig	31-Jul-18	1.0.15	4.0 and up
14	Tattoo Na	ART_AND_	4.2	44829	20M	10,000,000	Free	0	Teen	Art & Desig	2-Apr-18	3.8	4.1 and up
15	Mandala C	ART_AND_	4.6	4326	21M	100,000+	Free	0	Everyone	Art & Desig	26-Jun-18	1.0.4	4.4 and up
16	3D Color P	ART_AND_	4.4	1518	37M	100,000+	Free	0	Everyone	Art & Desig	3-Aug-18	1.2.3	2.3 and up
17	Learn To C	ART_AND_	3.2	55	2.7M	5,000+	Free	0	Everyone	Art & Desig	6-Jun-18	NaN	4.2 and up
18	Photo Des	ART_AND_	4.7	3632	5.5M	500,000+	Free	0	Everyone	Art & Desig	31-Jul-18	3.1	4.1 and up
19	350 Diy Rc	ART_AND_	4.5	27	17M	10,000+	Free	0	Everyone	Art & Desig	7-Nov-17	1	2.3 and up
20	FlipaClip -	ART_AND_	4.3	194216	39M	5,000,000+	Free	0	Everyone	Art & Desig	3-Aug-18	2.2.5	4.0.3 and up
21	ibis Paint X	ART_AND_	4.6	224399	31M	10,000,000	Free	0	Everyone	Art & Desig	30-Jul-18	5.5.4	4.1 and up
22	Logo Make	ART_AND_	4	450	14M	100,000+	Free	0	Everyone	Art & Desig	20-Apr-18	4	4.1 and up
23	Boys Photo	ART_AND_	4.1	654	12M	100,000+	Free	0	Everyone	Art & Desig	#####	1.1	4.0.3 and up
24	Superhero	ART_AND_	4.7	7699	4.2M	500,000+	Free	0	Everyone	Art & Desig	12-Jul-18	2.2.6.2	4.0.3 and up
25	Mcqueen C	ART_AND_	NaN	61	7.0M	100,000+	Free	0	Everyone	Art & Desig	7-Mar-18	1.0.0	4.1 and up
26	HD Mickey	ART_AND_	4.7	118	23M	50,000+	Free	0	Everyone	Art & Desig	7-Jul-18	1.1.3	4.1 and up
27	Harley Qui	ART_AND_	4.8	192	6.0M	10,000+	Free	0	Everyone	Art & Desig	25-Apr-18	1.5	3.0 and up
28	Colorfit - F	ART_AND_	4.7	20260	25M	500,000+	Free	0	Everyone	Art & Desig	#####	1.0.8	4.0.3 and up

ETL PROCESS:

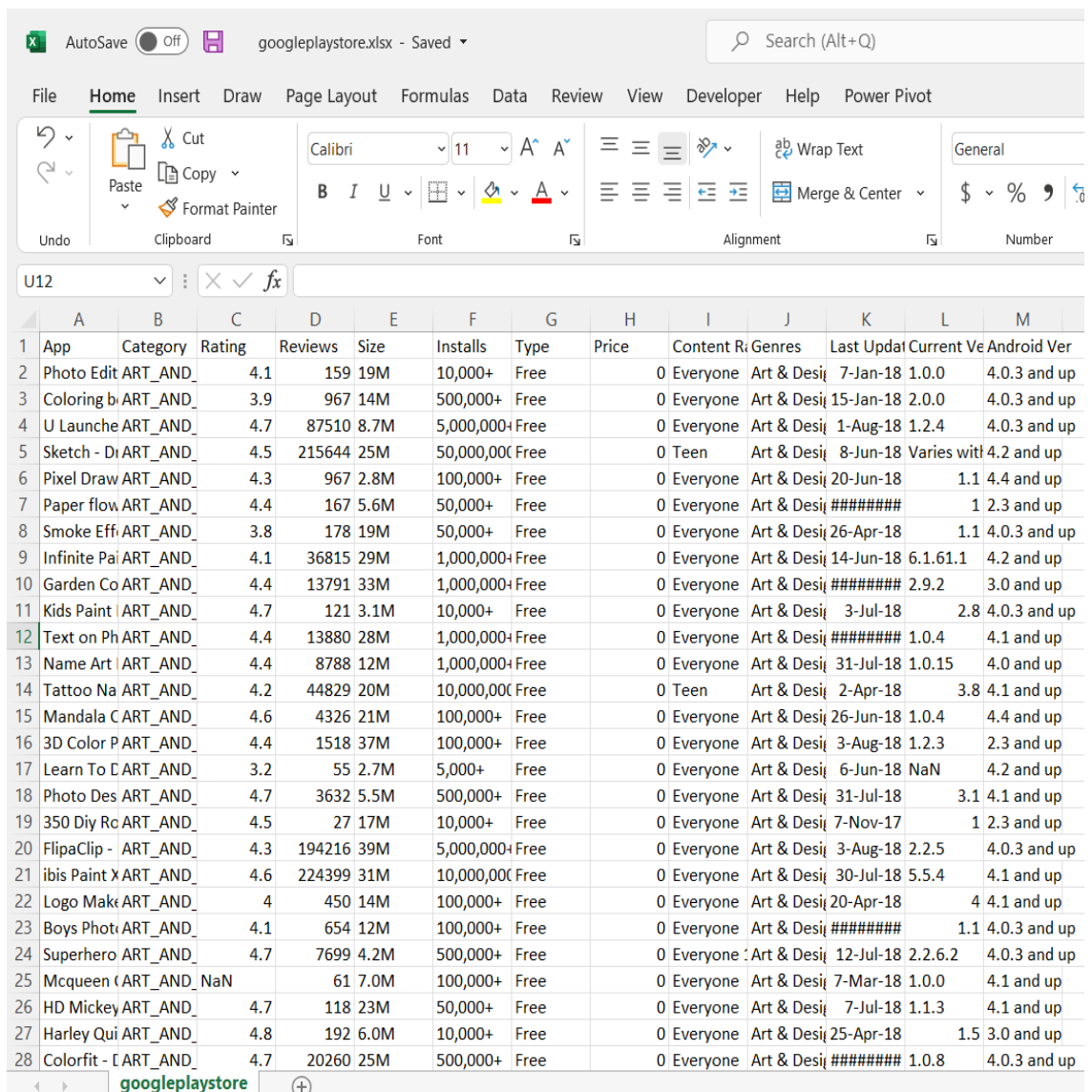
- **ETL** is a process that extracts the data from different source systems, then transforms the data (like applying calculations, concatenations, etc.) and finally loads the data into the Data Warehouse system.
- Full form of ETL is Extract, Transform and Load.
- The triple combination of ETL provides crucial functions that are many times combined into a single application or suite of tools that help in the following areas:
 - Enhances Business Intelligence solutions for decision making.
 - Allows verification of data transformation, aggregation and calculations rules.
 - Allows sample data comparison between source and target system.
 - Helps to improve productivity as it codifies and reuses without additional technical skills.
- Initially, the raw dataset was arranged as shown in given picture:

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content R	Genres	Last Updat	Current Ve	Android Ver	
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4	U Launche	ART_AND_	4.7	87510	8.7M	5,000,000+	Free		0	Everyone	Art & Desi	1-Aug-18	1.2.4	4.0.3 and up
5	Sketch - Di	ART_AND_	4.5	215644	25M	50,000,000	Free		0	Teen	Art & Desi	8-Jun-18	Varies with	4.2 and up
6	Pixel Draw	ART_AND_	4.3	967	2.8M	100,000+	Free		0	Everyone	Art & Desi	20-Jun-18	1.1	4.4 and up
7	Paper flow	ART_AND_	4.4	167	5.6M	50,000+	Free		0	Everyone	Art & Desi	#####	1	2.3 and up
8	Smoke Eff	ART_AND_	3.8	178	19M	50,000+	Free		0	Everyone	Art & Desi	26-Apr-18	1.1	4.0.3 and up
9	Infinite Pai	ART_AND_	4.1	36815	29M	1,000,000+	Free		0	Everyone	Art & Desi	14-Jun-18	6.1.61.1	4.2 and up
10	Garden Co	ART_AND_	4.4	13791	33M	1,000,000+	Free		0	Everyone	Art & Desi	#####	2.9.2	3.0 and up
11	Kids Paint	ART_AND_	4.7	121	3.1M	10,000+	Free		0	Everyone	Art & Desi	3-Jul-18	2.8	4.0.3 and up
12	Text on Ph	ART_AND_	4.4	13880	28M	1,000,000+	Free		0	Everyone	Art & Desi	#####	1.0.4	4.1 and up
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14	Tattoo Na	ART_AND_	4.2	44829	20M	10,000,000	Free		0	Teen	Art & Desi	2-Apr-18	3.8	4.1 and up
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Steps taken to clean dataset thorough ETL process

Step 1:

- Firstly, downloaded the .csv Data Set file from the Kaggle and save it as the .xlsx Date Set file.



	A	B	C	D	E	F	G	H	I	J	K	L	M
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28	Colorfit -	ART_AND_	4.7	20260	25M	500,000+	Free		0 Everyone	Art & Desi	#####	1.0.8	4.0.3 and up

Step 2:

- After saving the Dataset in to the .xlsx format cleaned all the null values from the Dataset.

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content R	Genres	Last Updat	Current Ve	Android Ver	
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3	Coloring book mc	ART_AND_DESIGN	3.9	967	14M	500,000+	Free		0	Everyone	Art & Desig	15-Jan-18	2.0.0	4.0.3 and up
4	U Launcher Lite à	ART_AND_DESIGN	4.7	87510	8.7M	5,000,000+	Free		0	Everyone	Art & Desig	1-Aug-18	1.2.4	4.0.3 and up
5	Sketch - Draw & F	ART_AND_DESIGN	4.5	215644	25M	50,000,000+	Free		0	Teen	Art & Desig	8-Jun-18	Varies with	4.2 and up
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7	Paper flowers ins	ART_AND_DESIGN	4.4	167	5.6M	50,000+	Free		0	Everyone	Art & Desig	#####	1	2.3 and up
8	Smoke Effect Phc	ART_AND_DESIGN	2.9	178	10M	50,000+	Free		0	Everyone	Art & Desig	26-Apr-18	1.1	4.0.3 and up
9	Infinite Painter	ART_AND_DESIGN									& Desig	14-Jun-18	6.1.61.1	4.2 and up
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13	Name Art Photo f	ART_AND_DESIGN									& Desig	31-Jul-18	1.0.15	4.0 and up
14	Tattoo Name On	ART_AND_DESIGN									& Desig	2-Apr-18	3.8	4.1 and up
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22	Logo Maker - Smi	ART_AND_DESIGN									& Desig	20-Apr-18	4	4.1 and up
23	Boys Photo Edito	ART_AND_DESIGN									& Desig	#####	1.1	4.0.3 and up
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26	HD Mickey Minnie	ART_AND_DESIGN									& Desig	7-Jul-18	1.1.3	4.1 and up
27	Harley Quinn wall	ART_AND_DESIGN	4.8	192	6.0M	10,000+	Free		0	Everyone	Art & Desig	25-Apr-18	1.5	3.0 and up
28	Colorfit - Drawing	ART_AND_DESIGN	4.7	20260	25M	500,000+	Free		0	Everyone	Art & Desig	#####	1.0.8	4.0.3 and up

Find and Replace

Find

Replace

Find what: NaN

No Format Set

Format...

Within: Sheet

☒ Match case

Search: By Rows

☒ Match entire cell contents

Look in: Formulas

Options <<

Find All

Find Next

Close

Book

Sheet

Name

Cell

Value

Formula

goog... goo...

\$L\$...

NaN

goog... goo...

\$C...

NaN

goog... goo...

\$C...

NaN

1484 cell(s) found

Find and Replace

Find Replace

Find what: NaN

No Format Set

Format...

Within: Sheet

Match case

Search: By Rows

Match entire cell contents

Look in: Formulas

Options <<

Find All

Find Next

Close

Book Sheet Name Cell Value Formula

goog... goog... \$L\$... NaN

goog... goog... \$C... NaN

goog... goog... \$C... NaN

1484 cell(s) found

Step 3:

- From the Data Set in the A, B, I, J columns removed all the Zeroes.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
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4	U Launcher Lite &	ART_AND_DESIGN	4.7	87510	8.7M	5,000,000+	Free		0	Everyone	Art & Desig	1-Aug-18	1.2.4	4.0.3 and up
5	Sketch - Draw & P	ART_AND_DESIGN	4.5	215644	25M	50,000,000+	Free		0	Teen	Art & Desig	8-Jun-18	Varies with	4.2 and up
6	Pixel Draw - Num	ART_AND_DESIGN	4.3	867,000	100,000	100,000	Free		0	Everyone	Art & Desig	20-Jun-18	1.1	4.4 and up
7	Paper flowers ins	ART_AND_DESIGN	4.4									26-Mar-17	1	2.3 and up
8	Smoke Effect Pho	ART_AND_DESIGN	3.8									26-Apr-18	1.1	4.0.3 and up
9	Infinite Painter	ART_AND_DESIGN	4.1									14-Jun-18	6.1.61.1	4.2 and up
10	Garden Coloring	ART_AND_DESIGN	4.4									20-Sep-17	2.9.2	3.0 and up
11	Kids Paint Free -	ART_AND_DESIGN	4.7									3-Jul-18	2.8	4.0.3 and up
12	Text on Photo - F	ART_AND_DESIGN	4.4									27-Oct-17	1.0.4	4.1 and up
13	Name Art Photo	ART_AND_DESIGN	4.4									31-Jul-18	1.0.15	4.0 and up
14	Tattoo Name On	ART_AND_DESIGN	4.2									2-Apr-18	3.8	4.1 and up
15	Mandala Coloring	ART_AND_DESIGN	4.6									26-Jun-18	1.0.4	4.4 and up
16	3D Color Pixel by	ART_AND_DESIGN	4.4									3-Aug-18	1.2.3	2.3 and up
17	Learn To Draw Ka	ART_AND_DESIGN	3.2									6-Jun-18	0	4.2 and up
18	Photo Designer -	ART_AND_DESIGN	4.7									31-Jul-18	3.1	4.1 and up
19	350 Diy Room De	ART_AND_DESIGN	4.5	27	17M	10,000+	Free		0	Everyone	Art & Desig	7-Nov-17	1	2.3 and up
20	FlipaClip - Carto	ART_AND_DESIGN	4.3	194216	39M	5,000,000+	Free		0	Everyone	Art & Desig	3-Aug-18	2.2.5	4.0.3 and up
21	ibis Paint X	ART_AND_DESIGN	4.6	224399	31M	10,000,000+	Free		0	Everyone	Art & Desig	30-Jul-18	5.5.4	4.1 and up
22	Logo Maker - Sm	ART_AND_DESIGN	4	450	14M	100,000+	Free		0	Everyone	Art & Desig	20-Apr-18	4	4.1 and up
23	Boys Photo Edito	ART_AND_DESIGN	4.1	654	12M	100,000+	Free		0	Everyone	Art & Desig	20-Mar-18	1.1	4.0.3 and up
24	Superheroes Wal	ART_AND_DESIGN	4.7	7699	4.2M	500,000+	Free		0	Everyone	Art & Desig	12-Jul-18	2.2.6.2	4.0.3 and up
25	Mcqueen Colorin	ART_AND_DESIGN	0	61	7.0M	100,000+	Free		0	Everyone	Art & Desig	7-Mar-18	1.0.0	4.1 and up
26	HD Mickey Minni	ART_AND_DESIGN	4.7	118	23M	50,000+	Free		0	Everyone	Art & Desig	7-Jul-18	1.1.3	4.1 and up
27	Harley Quinn wal	ART_AND_DESIGN	4.8	192	6.0M	10,000+	Free		0	Everyone	Art & Desig	25-Apr-18	1.5	3.0 and up
28	Colorfit - Drawin	ART_AND_DESIGN	4.7	20260	25M	500,000+	Free		0	Everyone	Art & Desig	11-Oct-17	1.0.8	4.0.3 and up

Find and Replace

Find Replace

Find what: 0 No Format Set Format...

Within: Sheet Match case

Search: By Rows Match entire cell contents

Look in: Formulas Options <<

Find All Find Next Close

Step 4:

- From the Installs Columns removed all the '+' Symbols which are not necessary.

	A	B	C	D	E	F	G	H	I
1	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating
2	Photo Editor & Cam	ART_AND_DESIGN	4.1	159	19M	10,000+	Free		0 Everyone
3	Coloring book maker	ART_AND_DESIGN	3.9	967	14M	500,000+	Free		0 Everyone
4	U Launcher Lite & Themes	ART_AND_DESIGN	4.7	87510	8.7M	5,000,000+	Free		0 Everyone
5	Sketch - Draw & Paint	ART_AND_DESIGN	4.5	215644	25M	50,000,000+	Free		0 Teen
6	Pixel Draw - Num	ART_AND_DESIGN	4.3	967	2.8M	100,000+	Free		0 Everyone
7	Paper flowers ins	ART_AND_DESIGN							one
8	Smoke Effect Photo	ART_AND_DESIGN							one
9	Infinite Painter	ART_AND_DESIGN							one
10	Garden Coloring Book	ART_AND_DESIGN							one
11	Kids Paint Free - Drawing	ART_AND_DESIGN							one
12	Text on Photo - Free	ART_AND_DESIGN							one
13	Name Art Photo	ART_AND_DESIGN							one
14	Tattoo Name On	ART_AND_DESIGN							one
15	Mandala Coloring	ART_AND_DESIGN							one
16	3D Color Pixel by	ART_AND_DESIGN							one
17	Learn To Draw Kids	ART_AND_DESIGN							one
18	Photo Designer -	ART_AND_DESIGN							one
19	350 Diy Room Decor	ART_AND_DESIGN							one
20	FlipaClip - Cartoon	ART_AND_DESIGN	4.3	194216	39M	5,000,000+	Free		0 Everyone
21	ibis Paint X	ART_AND_DESIGN	4.6	224399	31M	10,000,000+	Free		0 Everyone
22	Logo Maker - Simple	ART_AND_DESIGN	4	450	14M	100,000+	Free		0 Everyone
23	Boys Photo Editor	ART_AND_DESIGN	4.1	654	12M	100,000+	Free		0 Everyone
24	Superheroes Wall	ART_AND_DESIGN	4.7	7699	4.2M	500,000+	Free		0 Everyone 10+
25	Mcqueen Coloring	ART_AND_DESIGN	0	61	7.0M	100,000+	Free		0 Everyone
26	HD Mickey Minnie	ART_AND_DESIGN	4.7	118	23M	50,000+	Free		0 Everyone
27	Harley Quinn wall	ART_AND_DESIGN	4.8	192	6.0M	10,000+	Free		0 Everyone
28	Colorfit - Drawing	ART_AND_DESIGN	4.7	20260	25M	500,000+	Free		0 Everyone

Find and Replace

Find Replace

Find what: +

Replace with:

No Format Set

Format...

No Format Set

Format...

Within: Sheet

Match case

Search: By Rows

Match entire cell contents

Look in: Formulas

Options <<

Replace All

Replace

Find All

Find Next

Close

Step 5:

- Removed unnecessary Columns which are not in the part of Analysis of Data.

AutoSave Off googleplaystore.xlsx Search (Alt+Q) madhu yadav

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

Undo Clipboard Font Alignment Number Styles

B1 Category

	A	B	C	D	E	F	G	H	I	J
	App	Category	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres
1	Photo Editor & Candy Camera & Grid & Scrapbook	ART_AND_DESIGN	4.1	159	19M	10,000+	Free		0 Everyone	Art & Design
3	Coloring book moana	ART_AND_DESIGN	3.9	967	14M	500,000+	Free		0 Everyone	Art & Design;Pretend Play
4	U Launcher Lite æ™ FREE Live Cool Themes, HD Backgrounds	ART_AND_DESIGN	4.7	87510	8.7M	5,000,000+	Free		0 Everyone	Art & Design
5	Sketch - Draw & Paint	ART_AND_DESIGN	4.5	215644	25M	50,000,000+	Free		0 Teen	Art & Design
6	Pixel Draw - Number Art Coloring Book	ART_AND_DESIGN	4.3	967	2.8M	100,000+	Free		0 Everyone	Art & Design;Creativity
7	Paper flowers instructions	ART_AND_DESIGN	4.4	167	5.6M	50,000+	Free		0 Everyone	Art & Design
8	Smoke Effect Photo Maker - Smoke Editor	ART_AND_DESIGN	3.8	178	19M	50,000+	Free		0 Everyone	Art & Design
9	Infinite Painter	ART_AND_DESIGN	4.1	36815	29M	1,000,000+	Free		0 Everyone	Art & Design
10	Garden Coloring Book	ART_AND_DESIGN	4.4	13791	33M	1,000,000+	Free		0 Everyone	Art & Design
11	Kids Paint Free - Drawing Fun	ART_AND_DESIGN	4.7	121	3.1M	10,000+	Free		0 Everyone	Art & Design;Creativity
12	Text on Photo - Fontee	ART_AND_DESIGN	4.4	13880	28M	1,000,000+	Free		0 Everyone	Art & Design
13	Name Art Photo Editor - Focus n Filters	ART_AND_DESIGN	4.4	8788	12M	1,000,000+	Free		0 Everyone	Art & Design
14	Tattoo Name On My Photo Editor	ART_AND_DESIGN	4.2	44829	20M	10,000,000+	Free		0 Teen	Art & Design
15	Mandala Coloring Book	ART_AND_DESIGN	4.6	4326	21M	100,000+	Free		0 Everyone	Art & Design
16	3D Color Pixel by Number - Sandbox Art Color by Number	ART_AND_DESIGN	4.4	1518	37M	100,000+	Free		0 Everyone	Art & Design
17	Learn To Draw Kawaii Characters	ART_AND_DESIGN	3.2	55	2.7M	5,000+	Free		0 Everyone	Art & Design
18	Photo Designer - Write your name with shapes	ART_AND_DESIGN	4.7	3632	5.5M	500,000+	Free		0 Everyone	Art & Design
19	350 Diy Room Decor Ideas	ART_AND_DESIGN	4.5	27	17M	10,000+	Free		0 Everyone	Art & Design
20	FlipaClip - Cartoon animation	ART_AND_DESIGN	4.3	194216	39M	5,000,000+	Free		0 Everyone	Art & Design
21	ibis Paint X	ART_AND_DESIGN	4.6	224399	31M	10,000,000+	Free		0 Everyone	Art & Design
22	Logo Maker - Small Business	ART_AND_DESIGN	4	450	14M	100,000+	Free		0 Everyone	Art & Design
23	Boys Photo Editor - Six Pack & Men's Suit	ART_AND_DESIGN	4.1	654	12M	100,000+	Free		0 Everyone	Art & Design
24	Superheroes Wallpapers 4K Backgrounds	ART_AND_DESIGN	4.7	7699	4.2M	500,000+	Free		0 Everyone 10+	Art & Design
25	Mcqueen Coloring pages	ART_AND_DESIGN	0	61	7.0M	100,000+	Free		0 Everyone	Art & Design;Action & Adventure
26	HD Mickey Minnie Wallpapers	ART_AND_DESIGN	4.7	118	23M	50,000+	Free		0 Everyone	Art & Design
27	Harley Quinn wallpapers HD	ART_AND_DESIGN	4.8	192	6.0M	10,000+	Free		0 Everyone	Art & Design
28	Colorfit - Drawing & Coloring	ART_AND_DESIGN	4.7	20260	25M	500,000+	Free		0 Everyone	Art & Design;Creativity

Delete Cells...
Delete Sheet Rows
Delete Sheet Columns
Delete Sheet

Step 6:

➤ Now Changed the Data Set in to the Table Format.

1	App	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres
2	Photo Editor & Candy Camera & Grid & Scrap	4.1	159	19M	10,000+	Free		0 Everyone	Art & Design
3	Coloring book moana	3.9	967	14M	500,000+	Free		0 Everyone	Art & Design;Pretend Play
4	U Launcher Lite à€ FREE Live Cool Themes, L	4.7	87510	8.7M	5,000,000+	Free		0 Everyone	Art & Design
5	Sketch - Draw & Paint	4.5	215644	25M	50,000,000+	Free		0 Teen	Art & Design
6	Pixel Draw - Number Art Coloring Book	4.3	967	2.8M	100,000+	Free		0 Everyone	Art & Design;Creativity
7	Paper flowers instructions				100,000+	Free		0 Everyone	Art & Design
8	Smoke Effect Photo Maker - Smoke Editor				100,000+	Free		0 Everyone	Art & Design
9	Infinite Painter				100,000+	Free		0 Everyone	Art & Design
10	Garden Coloring Book				100,000+	Free		0 Everyone	Art & Design
11	Kids Paint Free - Drawing Fun				100,000+	Free		0 Everyone	Art & Design;Creativity
12	Text on Photo - Fontee				100,000+	Free		0 Everyone	Art & Design
13	Name Art Photo Editor - Focus n Filters				100,000+	Free		0 Everyone	Art & Design
14	Tattoo Name On My Photo Editor	4.2	44829	20M	10,000,000+	Free		0 Teen	Art & Design
15	Mandala Coloring Book	4.6	4326	21M	100,000+	Free		0 Everyone	Art & Design
16	3D Color Pixel by Number - Sandbox Art Color	4.4	1518	37M	100,000+	Free		0 Everyone	Art & Design
17	Learn To Draw Kawaii Characters	3.2	55	2.7M	5,000+	Free		0 Everyone	Art & Design
18	Photo Designer - Write your name with shape	4.7	3632	5.5M	500,000+	Free		0 Everyone	Art & Design
19	350 Diy Room Decor Ideas	4.5	27	17M	10,000+	Free		0 Everyone	Art & Design
20	FlipaClip - Cartoon animation	4.3	194216	39M	5,000,000+	Free		0 Everyone	Art & Design
21	ibis Paint X	4.6	224399	31M	10,000,000+	Free		0 Everyone	Art & Design
22	Logo Maker - Small Business	4	450	14M	100,000+	Free		0 Everyone	Art & Design
23	Boys Photo Editor - Six Pack & Men's Suit	4.1	654	12M	100,000+	Free		0 Everyone	Art & Design
24	Superheroes Wallpapers 4K Backgrounds	4.7	7699	4.2M	500,000+	Free		0 Everyone 10+	Art & Design
25	Mcqueen Coloring pages	0	61	7.0M	100,000+	Free		0 Everyone	Art & Design;Action & Adv
26	HD Mickey Minnie Wallpapers	4.7	118	23M	50,000+	Free		0 Everyone	Art & Design
27	Harley Quinn wallpapers HD	4.8	192	6.0M	10,000+	Free		0 Everyone	Art & Design
28	Colorfit - Drawing & Coloring	4.7	20260	25M	500,000+	Free		0 Everyone	Art & Design;Creativity

Finally, after cleaning the data, the final dataset sample is shown below:

App	Rating	Reviews	Size	Installs	Type	Price	Content Rating	Genres
Photo Editor & Candy Camera & Grid & ScrapBook	4.1	159	19M	10,000	Free	0	Everyone	Art & Design
Coloring book moana	3.9	967	14M	500,000	Free	0	Everyone	Art & Design;Pretend Play
U Launcher Lite â€” FREE Live Cool Themes, Hide Apps	4.7	87510	8.7M	5,000,000	Free	0	Everyone	Art & Design
Sketch - Draw & Paint	4.5	215644	25M	50,000,000	Free	0	Teen	Art & Design
Pixel Draw - Number Art Coloring Book	4.3	967	2.8M	100,000	Free	0	Everyone	Art & Design;Creativity
Paper flowers instructions	4.4	167	5.6M	50,000	Free	0	Everyone	Art & Design;Creativity
Smoke Effect Photo Maker - Smoke Editor	3.8	178	19M	50,000	Free	0	Everyone	Art & Design
Infinite Painter	4.1	36815	29M	1,000,000	Free	0	Everyone	Art & Design
Garden Coloring Book	4.4	13791	33M	1,000,000	Free	0	Everyone	Art & Design
Kids Paint Free - Drawing Fun	4.7	121	3.1M	10,000	Free	0	Everyone	Art & Design;Creativity
Text on Photo - Fontee	4.4	13880	28M	1,000,000	Free	0	Everyone	Art & Design
Name Art Photo Editor - Focus n Filters	4.4	8788	12M	1,000,000	Free	0	Everyone	Art & Design
Tattoo Name On My Photo Editor	4.2	44829	20M	10,000,000	Free	0	Teen	Art & Design
Mandala Coloring Book	4.6	4326	21M	100,000	Free	0	Everyone	Art & Design
3D Color Pixel by Number - Sandbox Art Coloring	4.4	3632	37M	100,000	Free	0	Everyone	Art & Design
Learn To Draw Kawaii Characters	3.2	55	2.7M	5,000	Free	0	Everyone	Art & Design
Photo Designer - Write your name with shapes	4.7	3632	5.5M	500,000	Free	0	Everyone	Art & Design
350 Diy Room Decor Ideas	4.5	27	17M	10,000	Free	0	Everyone	Art & Design
FlipaClip - Cartoon animation	4.3	194216	39M	5,000,000	Free	0	Everyone	Art & Design
ibis Paint X	4.6	224399	31M	10,000,000	Free	0	Everyone	Art & Design
Logo Maker - Small Business	4	450	14M	100,000	Free	0	Everyone	Art & Design
Boys Photo Editor - Six Pack & Men's Suit	4.1	654	12M	100,000	Free	0	Everyone	Art & Design
Superheroes Wallpapers 4K Backgrounds	4.7	7699	4.2M	500,000	Free	0	Everyone 10+	Art & Design
Mcqueen Coloring pages	4	61	7.0M	100,000	Free	0	Everyone	Art & Design;Action & Adventure
HD Mickey Minnie Wallpapers	4.7	118	23M	50,000	Free	0	Everyone	Art & Design
Harley Quinn wallpapers HD	4.8	192	6.0M	10,000	Free	0	Everyone	Art & Design
Colorfit - Drawing & Coloring	4.7	20260	25M	500,000	Free	0	Everyone	Art & Design;Creativity

Analysis on Dataset

1. Provides Data insights on App Rating

(Analysis of Apps based on Rating)

Introduction

- By performing this Analysis we get know the number of Apps according to Rating.

Description

- The analysis is based on the Rating and App of the Data Set.

Specific requirements, functions and formulas

- The Pivot Table is used for the Analysis
- The count function is used in Pivot Table To find the count of the Apps.

Analysis results

3	Row Labels	Count of App
4	1	16
5	1.2	1
6	1.4	3
7	1.5	3
8	1.6	4
9	1.7	8
10	1.8	8
11	1.9	14
12	2	12
13	2.1	8
14	2.2	14
15	2.3	20
16	2.4	19
17	2.5	21
18	2.6	25
19	2.7	25
20	2.8	42
21	2.9	45
22	3	83
23	3.1	69
24	3.2	64
25	3.3	102
26	3.4	128
27	3.5	163
28	3.6	174
29	3.7	239
30	3.8	303

Visualization:



2. Analysis of Content Rating(Usage of Apps based on Age)

Introduction

- By Performing this Analysis we will get the count of Apps for the every Age Group.

Description

- The Analysis based on the Content Rating of the Data Set.

Specific requirements, functions and formulas

- The Pivot Table is used for the Analysis.
- The count function is used in the Pivot Table.

Analysis results

Row Labels	Count of Content Rating
Adults only 18+	3
Everyone	8715
Everyone 10+	412
Mature 17+	499
Teen	1208
Unrated	2
Grand Total	10839

Visualization



3. Top 5 reviewed Apps

Introduction

- By Performing this Analysis, we will get top 5 reviewed Apps by the People.

Description

- The analysis based on the App and Reviews of the Data Set.

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Sum function is used in pivot table to find the sum of the Apps.

Analysis results

Row Labels	Sum of Reviews
Clash of Clans	179558781
Instagram	266241989
Messenger "Text and Video Chat for Free"	169932272
Subway Surfers	166331958
WhatsApp Messenger	207348304
Grand Total	989413304

Visualization



4. Top 5 installed Apps

Introduction

- By performing this analysis, we will get Top 5 installed/downloaded Apps by the People.


Description

- The Analysis is based on the App and installs of the Data Set.

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Sum function is used in pivot table to find the sum of apps.
- Used filter in the Pivot table to find the top 5 Apps.

Analysis results

Row Labels 	Sum of Installs
Google Drive	4000000000
Google News	4000000000
Google Photos	4000000000
Hangouts	4000000000
Instagram	4000000000
Subway Surfers	6000000000
Grand Total	26000000000

Visualization



5. Total Paid and Free Apps

Introduction

- By performing this analysis, we will get the Total number of Paid and Free Apps

Description

- The analysis is based on Type of the dataset

Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Count function is used in pivot table to find the count of the Paid and Free Apps.

Analysis results

Row Labels	Count of Type
Free	10039
Paid	800
Grand Total	10839

Visualization



6. Analysis of Apps based on Genres(Top 5 Genres)

Introduction

- By performing this analysis, we will get Top 5 Genres with the Apps.

Description

- The analysis is based on Genres of the Data Set.
- Filter is used to show top 5 Genres

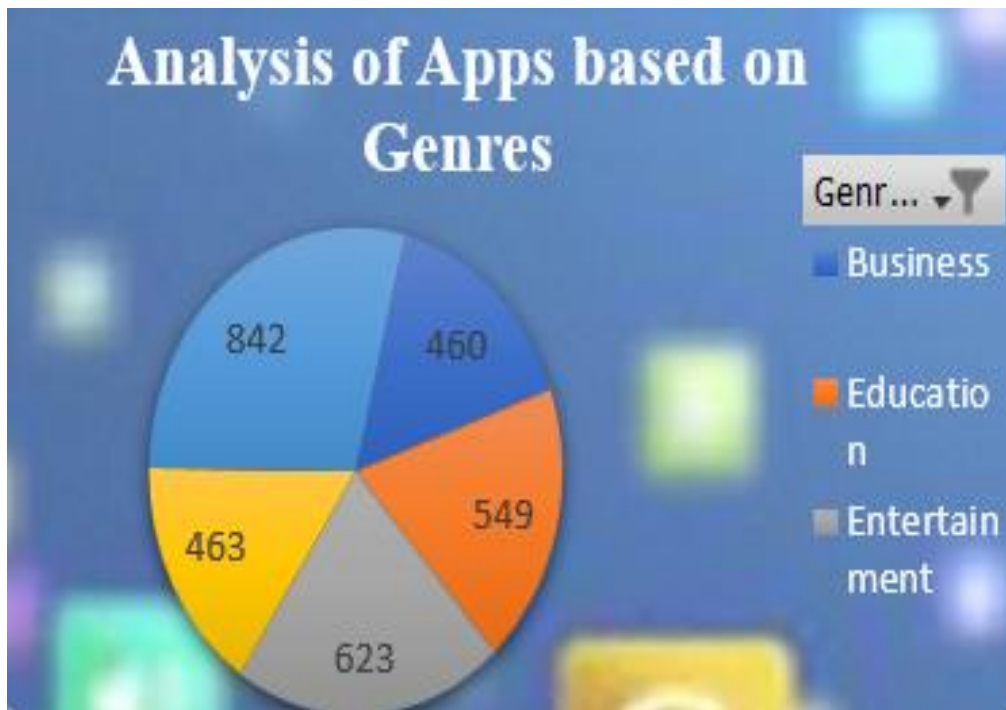
Specific requirements, functions and formulas

- Pivot table is used for the analysis.
- Count function is used in pivot table to find Genres with the Apps

Analysis results

Row Labels	Count of Genres
Business	460
Education	549
Entertainment	623
Medical	463
Tools	842
Grand Total	2937

Visualization



List of Analysis with results

1. Provide data insights on App Rating (Analysis of Apps based on The Rating)

- By performing this Analysis we get the total number of Apps for each Rating from the Data Set.



2. Analysis of Content Rating(Usage of Apps based on Age)

- By performing this Analysis we know total number of Apps based on the Age Group of the People.



3. Top 5 reviewed Apps

- By performing this Analysis we get the top 5 reviewed Apps.



4. Top 5 installed Apps

- By performing this Analysis we get the top 5 installed App by the People



5. Total Paid and Free Apps

- By Performing this Analysis we get the Total Paid and Free Apps.

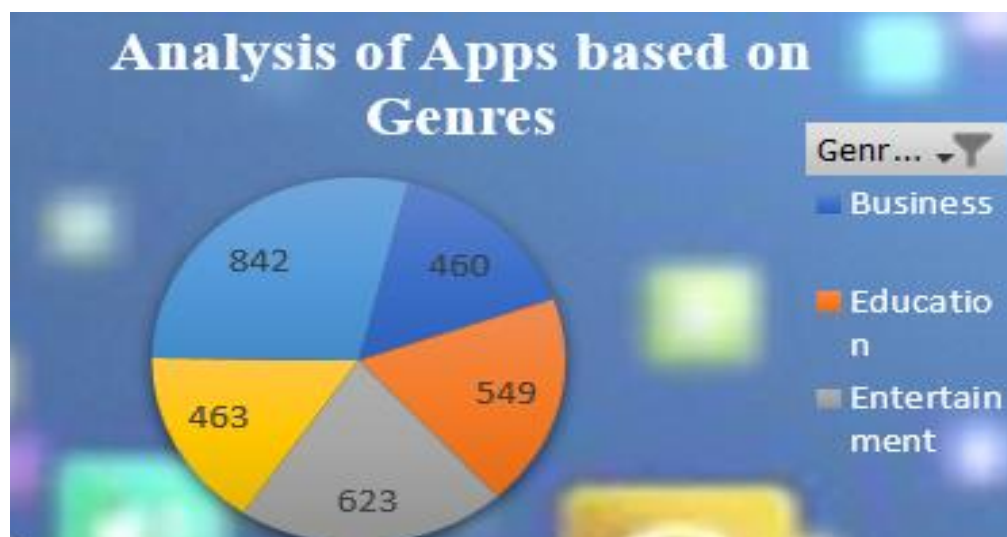
Paid Apps = 800

Free Apps = 10039



6. Analyzing the Apps based on the Genres(Top 5 Genres)

- By performing this Analysis we get top 5 Genres with Apps.



FINAL DASHBOARD:



References:

- Dataset source:

<https://www.kaggle.com/lava18/google-play-store->

- Dashboard Background Image:

<https://elements.envato.com/smartphone-app-marketplace-background-2QJ4MYR>