

KARPAGA VINAYAGA
COLLEGE OF ENGINEERING AND TECHNOLOGY

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DEPARTMENT OF
ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

CCW331
BUSINESS ANALYTICS LABORATORY

NAME	:	_____
REGISTER NO :	_____	_____
BRANCH	:	_____
SEM/YEAR	:	_____

SYLLABUS
CCW3311-BUSINESS ANALYTICS
LABORATORY

OBJECTIVES:

- To understand the Analytics Life Cycle.
- To comprehend the process of acquiring Business Intelligence
- To understand various types of analytics for Business Forecasting
- To model the supply chain management for Analytics.
- To apply analytics for different functions of a business

LIST OF EXPERIMENTS:

Use MS-Excel and Power-BI to perform the following experiments using a Business data set, and make presentations.

Students may be encouraged to bring their own real-time socially relevant data set.

I Cycle – MS Excel

1. Explore the features of Ms-Excel.
2. (i) Get the input from user and perform numerical operations (MAX, MIN, AVG, SUM, SQRT, ROUND)
ii) Perform data import/export operations for different file formats.
3. Perform statistical operations - Mean, Median, Mode and Standard deviation, Variance, Skewness, Kurtosis
4. Perform Z-test, T-test & ANOVA
5. Perform data pre-processing operations i) Handling Missing data ii) Normalization

6. Perform dimensionality reduction operation using PCA, KPCA & SVD
7. Perform bivariate and multivariate analysis on the dataset.
8. Apply and explore various plotting functions on the data set.

II Cycle – Power BI Desktop

9. Explore the features of Power BI Desktop
10. Prepare & Load data
11. Develop the data model
12. Perform DAX calculations
13. Design a report
14. Create a dashboard and perform data analysis
15. Presentation of a case study

OUTCOMES:

On completion of the course, the students

will be able to:

CO1: Explain the real world business problems and model with analytical solutions.

CO2: Identify the business processes for extracting Business Intelligence

CO3 : Apply predictive analytics for business fore-casting

CO4: Apply analytics for supply chain and logistics management

CO5: Use analytics for marketing and sales.

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I Cycle – MS Excel

EX.NO	DATE	NAME OF THE EXPERIMENT	PAGE	MARK	STAFF SIGN
1		Explore the features of Ms-Excel.			
2		(i) Get the input from user and perform numerical operations (MAX, MIN, AVG, SUM, SQRT, ROUND) ii) Perform data import/export operations for different file formats.			
3		Perform statistical operations - Mean, Median, Mode and Standard deviation, Variance			
4		Perform Z-test, T-test & ANOVA			
5		Perform data pre-processing operations i) Handling Missing data ii) Normalization			
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8		Apply and explore various plotting functions on the data set.			

II Cycle – POWERBI DESKTOP

EX.NO	DATE	NAME OF THE EXPERIMENT	PAGE	MARK	STAFF SIGN
9		Explore the features of Power BI Desktop			
10		Prepare & Load data			
11		Develop the data model			
12		Perform DAX calculations			
13		Design a report			
14		Create a dashboard and perform data analysis			
15		Presentation of a case study			

EX NO: 1

Explore the features of MS-EXCEL

AIM:

To explore the features of MS-EXCEL

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office

Step 2: Enter text or a number in a cell

Step 3: Change the width of a column

Step 4: Enter And Edit Formula in Excel

Step 5: Wrap text in a cell

Step 6: Enter And Edit Formula in Excel

Step 7: Perform Auto fill and custom fill In Excel

Step 8: Save the file in desired location

Step 9: Close the Ms Excel application

Features of MS-EXCEL

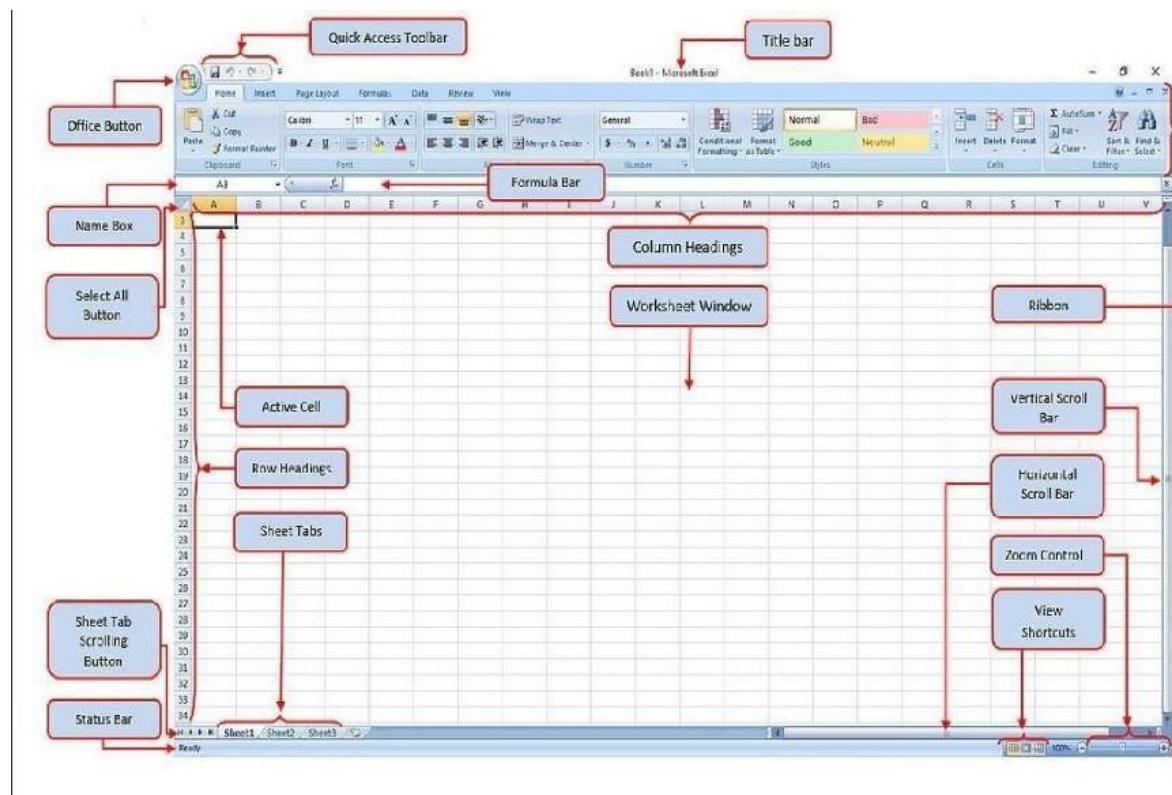
What is Excel? Excel Definition

Microsoft's Excel spreadsheet programme is a part of the Office family of business software programmes. Users of Microsoft Excel can format, arrange, and compute data in a spreadsheet.

By organising data using tools like Excel, Data Analysts or other users can make information easier to examine when data is added or altered. The Microsoft Office and Office 365 suites include Excel, which works with the other Office programmes. The spreadsheet application can

be used on Windows, macOS, Android, and iOS devices.

Parts of MS-Excel window:



Quick Access Toolbar – Collection of buttons that provide one click access to commonly used

commands such as Save, Undo or Redo. You can also customize this according to your preference.

Title Bar – A bar that displays the name of active workbook

Ribbon – The main set of commands and controls organized into Tabs and groups, you can also customize the ribbon according to your preference.

Column Headings – The letters that appear along the top of the worksheet to identify the different columns in the worksheet.

Worksheet Window – A window that displays an Excel worksheet, basically this is where you work all the tasks.

Vertical Scroll Bar – Scroll bar to use when you want to scroll vertically through the Worksheet window.

Horizontal Scroll Bar – Scroll bar to use when you want to scroll horizontally through the worksheet window.

Zoom Controls – Used for magnifying and shrinking of the active worksheet.

View Shortcuts – Buttons used to change how the worksheet content is displayed. Normal, Page Layout or Page Break Preview.

Sheet Tabs – Tabs that display the name of the worksheet in the workbook, by default its name

sheet 1, sheet 2, etc. You can rename this to any name that best represents your sheet.

Sheet Tab Scrolling Buttons – Buttons to scroll the sheet tabs in the workbook

Row Headings – The number that appears on the left of the worksheet window to identify the Different rows.

Select All Button – A button that selects all the cells in the active worksheet

Active Cell – The cell selected in the active worksheet

Name Box – A box that displays the cell reference of the active cell

Formula Bar – A bar that displays the value or formula entered in the active cell

Office Button/File Tab – It provides access to workbook level features and program settings. You will notice that in Excel 2007 there is a circle

Features of Ms-Excel

Microsoft Excel is an integrated electronic spread sheet program developed by Microsoft corporation. It includes the following features.

Autocalc: This feature is very useful to sum a group of numbers if selected them. Their sum will automatically appear in the status area.

Auto complete: Excel now has intelligence to anticipate what you are going to type! Based upon entries you've already made, AutoComplete will try to figure out what you intended to type,

once you've entered few letters.

Autocorrect: Excel can support automatically correct mistakes.

Better Drag-and-Drop: Do you want to move a group of cells? Excel's drag and drop feature

lets

you reposition selected portion of your spreadsheet by simply dragging them with your mouse.

Cell tips and Scroll Tips: To help you get around better with mouse, Excel now includes scroll

tips. When you click and drag a scroll bar, a small window tells you what row or column you are

heading for.

Number Formatting: It's easy to format numbers with excel's new number formatting feature.

Select your numbers and choose cells command from format menu.

Templates and Template wizard: Excel's template facility has been greatly enhanced. You can

choose from a variety of elegantly designed templates for your home or business. You can even

have a template wizard link your worksheets to a database.

Shared Lists: you can now have worksheets that are shared simultaneously over a network.

Conditional Formatting: Conditional formatting helps users to quickly focus on important aspects of a spreadsheet or to highlight errors and to identify important patterns in data.

Sorting and Filtering: Excel spreadsheets help us make sense of large amounts of data. To make it easier to find what you need, you can reorder the data or pick out just the data you need,

based on parameters you set within Excel. Sorting and filtering your data will save you time and make your spreadsheet more effective.

Excel Charts: Excel charts help you communicate insights & information with ease. By choosing your charts wisely and formatting them cleanly, you can convey a lot.

ENTERING AND EDITING DATA IN WORKSHEET

You have several options when you want to enter data manually in Excel. You can enter data in

one cell, in several cells at the same time, or on more than one worksheet at the same time. The

data that you enter can be numbers, text, dates, or times. You can format the data in a variety of

ways. And, there are several settings that you can adjust to make data entry easier for you.

Enter text or a number in a cell

1. On the worksheet, click a cell.
2. Type the numbers or text that you want to enter, and then press Enter or Tab.

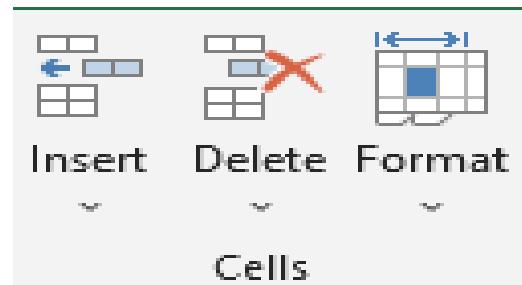
To enter data on a new line within a cell, enter a line break by pressing

Alt+Enter Editing text or a number in a cell

1. Double click the cell containing the data you want to edit.
2. Make any changes to the cell contents.
3. Press enter key. The change will accept. To cancel your changes, press Esc key.

Change the width of a column

- a. Click the cell for which you want to change the column width.
- b. On the Home tab, in the Cells group, click Format



- c. Under Cell Size, do one of the following:

To fit all text in the cell, click AutoFit Column Width.

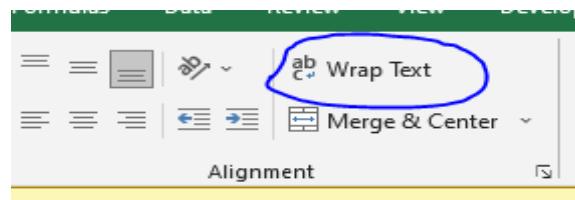
To specify a larger column width, click Column Width, and then type the width that you want in the Column width box.

If there are multiple lines of text in a cell, some of the text might not be displayed the way that

you want. You can display multiple lines of text inside a cell by wrapping the text.

Wrap text in a cell

- a. Click the cell in which you want to wrap the text.
- b. On the Home tab, in the Alignment group, click Wrap Text.



Enter And Edit Formula In Excel

A formula performs calculations or other actions on the data in your worksheet. A formula always

starts with an equal sign (=), which can be followed by numbers, math operators (like a + or - sign

for addition or subtraction), and built-in Excel functions, which can really expand the power of a Formula.

A screenshot of Microsoft Excel. The formula bar shows the formula =B5+C5+D5. The cell E5 contains the value 60. The cells B5, C5, and D5 also contain the values 10, 20, and 30 respectively. The Excel ribbon is visible at the top, showing the Home tab is selected. The formula bar shows the formula =B5+C5+D5.

For Example, in the above worksheet, the formula = B5+C5+D+ adds the contents 10+20+30and produce the results. One can enter and edit formula in two ways.

1. Directly into cell by double clicking where the formula wants.
2. At formula bar after selection of required cell.

To edit an existing formula

Click on the cell which contains the formula or results

Click in formula bar make necessary changes.

Press enter key or click on check mark.

Number Formatting in excel

It is very common to enter various types of numbers for various applications. In Excel, you can

use

number formats to change the appearance of numbers, including dates and times, without changing the number behind the appearance. The number format does not affect the actual cell

value, it changes the appearance only.

1. Select the cell or cells which contain numbers.

2. On the home tab, under Number group click on down arrow mark.

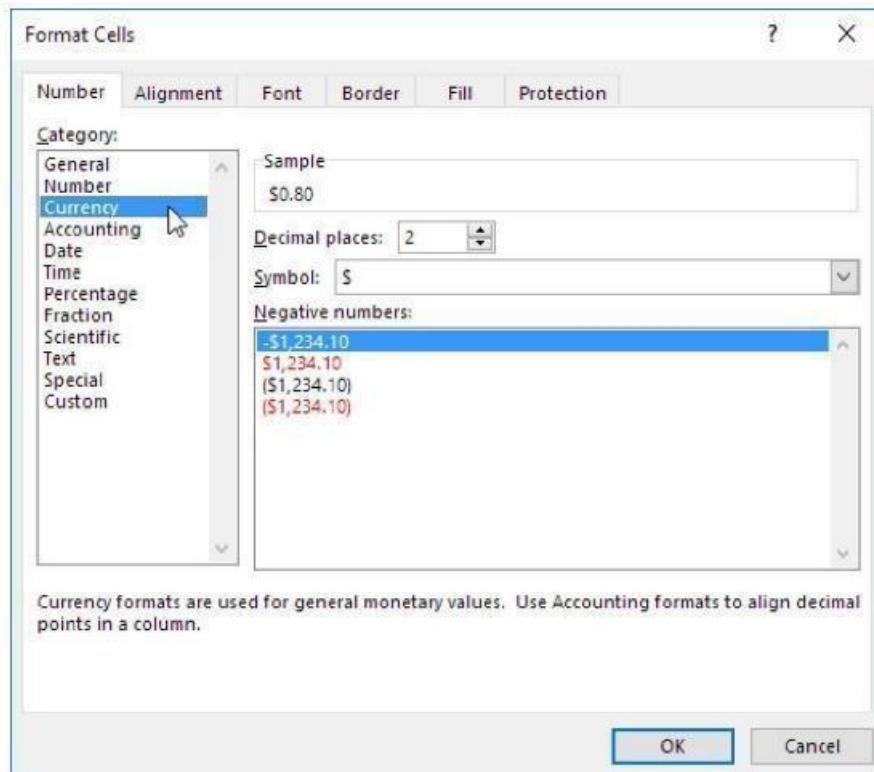
Right click your mouse; from the short hand menu select format cell option

3. It launches Formula cells window. Click on Number tab.

4. It lists all categories of number formatting like general, number, currency, accounting, date, time, and percentage.

5. Select the suitable format and its sub options, click ok button.

6. The numbers in the selected cells will display as per new format.



Auto fill and custom fill

Autofill is one of the feature present in the ms excel. When you're typing a day, month, year and number the automatic series will be appeared by dragging it. This feature is called

Autofill. For Example if you typed “Jan” and then dragged then it displays months from “Jan to dec” like.

The screenshot shows a Microsoft Excel spreadsheet titled "Book1 - Excel". The ribbon menu is visible at the top, with the "Home" tab selected. The formula bar shows the cell reference "F5" and the value "FEB". The main worksheet area contains a grid of cells. In row 4, columns A through E contain the days of the week: MONDAY, TUESDAY, WEDNESDAY, THURSDAY, and FRIDAY. In column F, starting from cell F4, the months are listed sequentially: JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, and NOV. A green selection box highlights the range from F4 to F14, indicating the area selected for dragging. The status bar at the bottom shows the text "Sheet1".

Result:

The features of MS-EXCEL explored successfully and displayed desired output in neat format.

EX NO: 2a**Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)****AIM:**

To implement numerical operations using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: Calculate the Maximum of the given marks using max function.

Step 4: Calculate the Minimum of the given marks using MIN function.

Step 5: Calculate the average of the given marks using average function.

Step 6: Calculate the sum of the given marks using sum function.

Step 7: Calculate the square root of the given mark using SQRT function

.

Step 8: Calculate the Round of the given mark using Roundup function.

Step 9: Display the desired output of all numerical operation in neat format.

Step 10: Save the excel file and Close the Ms Excel application

Finding Maximum of the given marks

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	=MAX(D6:D11)					
		MIN MARKS						
		AVERAGE MARKS						
		SUM OF THE MARKS						
		SQRT OF ANY						
		ROUND OF THE						
		MARKS						

Finding Minimum of the given marks

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	92	92	87	90	87	87
		MIN MARKS	=MIN(D6:D11)					
		AVERAGE MARKS						
		SUM OF THE MARKS						
		SQRT OF ANY						
		ROUND OF THE						
		MARKS						

Finding average of the given marks

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	92	92	87	90	87	87
		MIN MARKS	34	72	77	80	75	80
		AVGERAGE MARKS	=AVERAGE(D6:D11)					
		SUM OF THE MARKS						
		SQRT OF ANY						
		ROUND OF THE MARKS						

Finding sum of the given marks

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	92	92	87	90	87	87
		MIN MARKS	34	72	77	80	75	80
		AVGERAGE MARKS	74	83	82.2	84	81.2	83.5
		SUM OF THE MARKS	=SUM(D6:D11)					
		SQRT OF ANY						
		ROUND OF THE MARKS						

Finding SORT of the given marks

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	92	92	87	90	87	87
		MIN MARKS	34	72	77	80	75	80
		AVGERAGE MARKS	74	83	82.2	84	81.2	83.5
		SUM OF THE MARKS	444	498	411	504	406	501
		SQRT OF ANY	=SQRT(D6)					
		ROUND OF THE MARKS						

Finding Round of the given marks

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	92	92	87	90	87	87
		MIN MARKS	34	72	77	80	75	80
		AVGERAGE MARKS	74	83	82.2	84	81.2	83.5
		SUM OF THE MARKS	444	498	411	504	406	501
		SQRT OF ANY	9.591663047	9.32737905	8.94427	9.32738	9.16515	9.32738
		ROUND OF THE MARKS	=ROUNDUP(D16,2)					

OUTPUT:

Numerical Operations (MAX, MIN, AVG, SUM, SQRT, ROUND)								
Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	AB	80	AB	80
		MAX MARKS	92	92	87	90	87	87
		MIN MARKS	34	72	77	80	75	80
		AVGERAGE MARKS	74	83	82.2	84	81.2	83.5
		SUM OF THE MARKS	444	498	411	504	406	501
		SQRT OF ANY	9.591663047	9.32737905	8.94427	9.32738	9.16515	9.32738
		ROUND OF THE MARKS	9.6	9.33	8.95	9.33	9.17	9.33

Result:

The numerical operations were implemented using MS-EXCEL successfully and the desired output was displayed.

EX NO: 2b Perform data import/export operations for different file formats

AIM:

To perform data import/export operations for different file formats using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: Save the excel file.

Step 4: Export the file into CSV file using file menu and export option.

Step 5: Next, import CSV file using data menu and get data option.

Step 6: Display the desired output in neat format.

Step 7: Save the excel file and Close the Ms Excel application

DATA IMPORT/EXPORT OPERATIONS FOR DIFFERENT FILE FORMATS

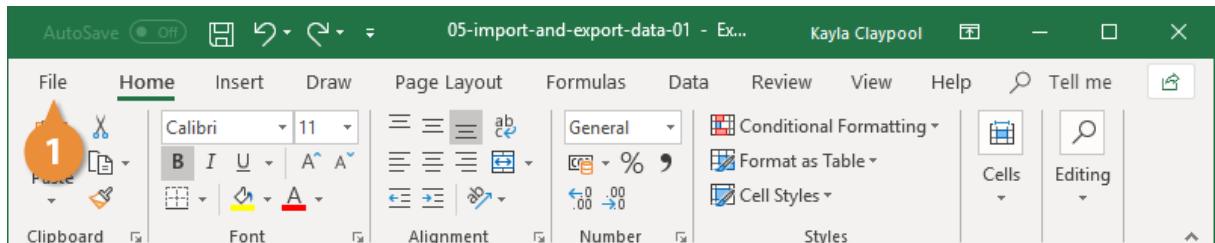
Data Import/Export Operations for Different File Formats

Excel can import and export many different file types aside from the standard .xlsx format. If your data is shared between other programs, like a database, you may need to save data as a different file type or bring in files of a different file type.

EXPORT DATA

When you have data that needs to be transferred to another system, export it from Excel in a format that can be interpreted by other programs, such as a text or CSV file.

1. Click the **File** tab.



2. At the left, click **Export**.

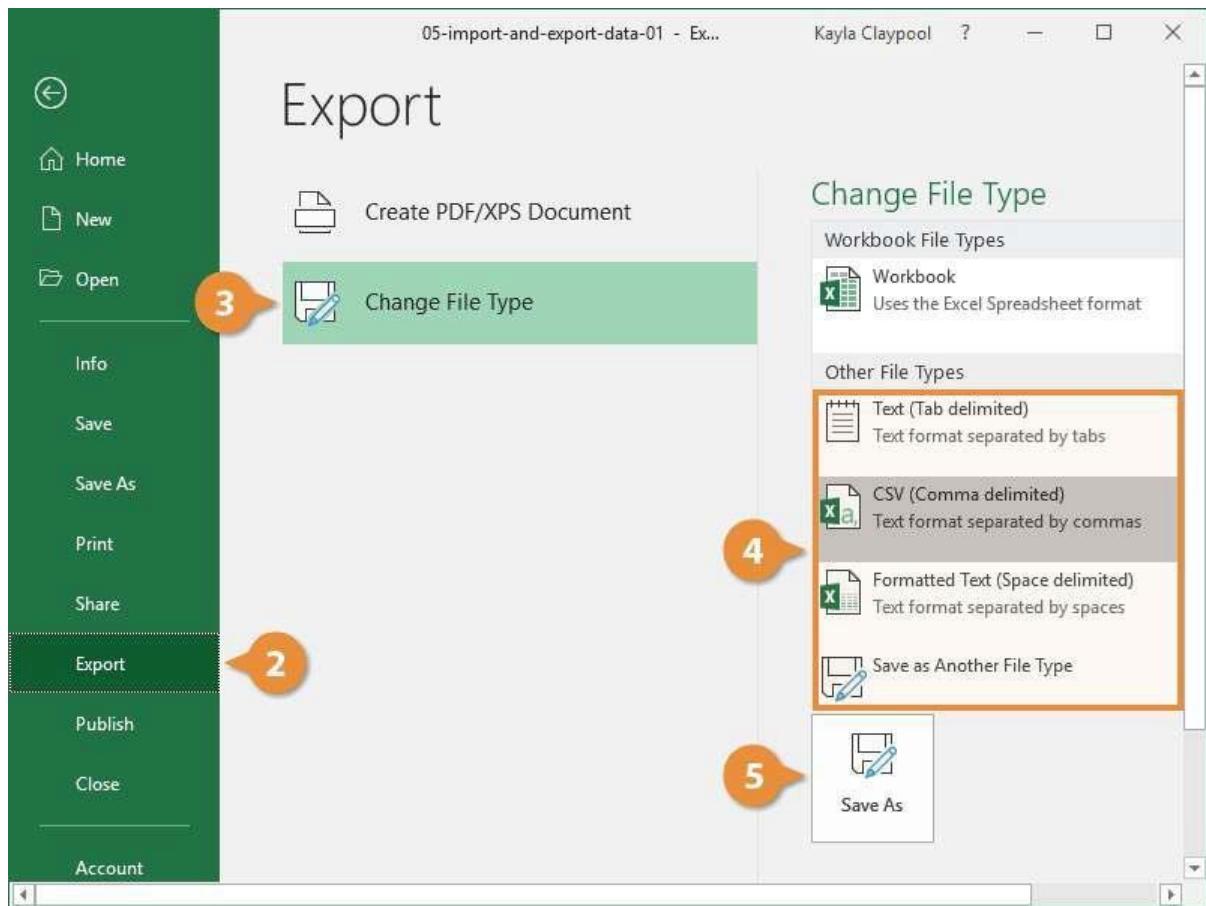
3. Click the **Change File Type**.

4. Under Other File Types, select a file type.

- o **Text (Tab delimited)**: The cell data will be separated by a tab.
- o **CSV (Comma delimited)**: The cell data will be separated by a comma.
- o **Formatted Text (space delimited)**: The cell data will be separated by a space.
- o **Save as Another File Type**: Select a different file type when the Save As dialog box appears.

The file type you select will depend on what type of file is required by the program that will consume the exported data.

5. Click **Save As**.

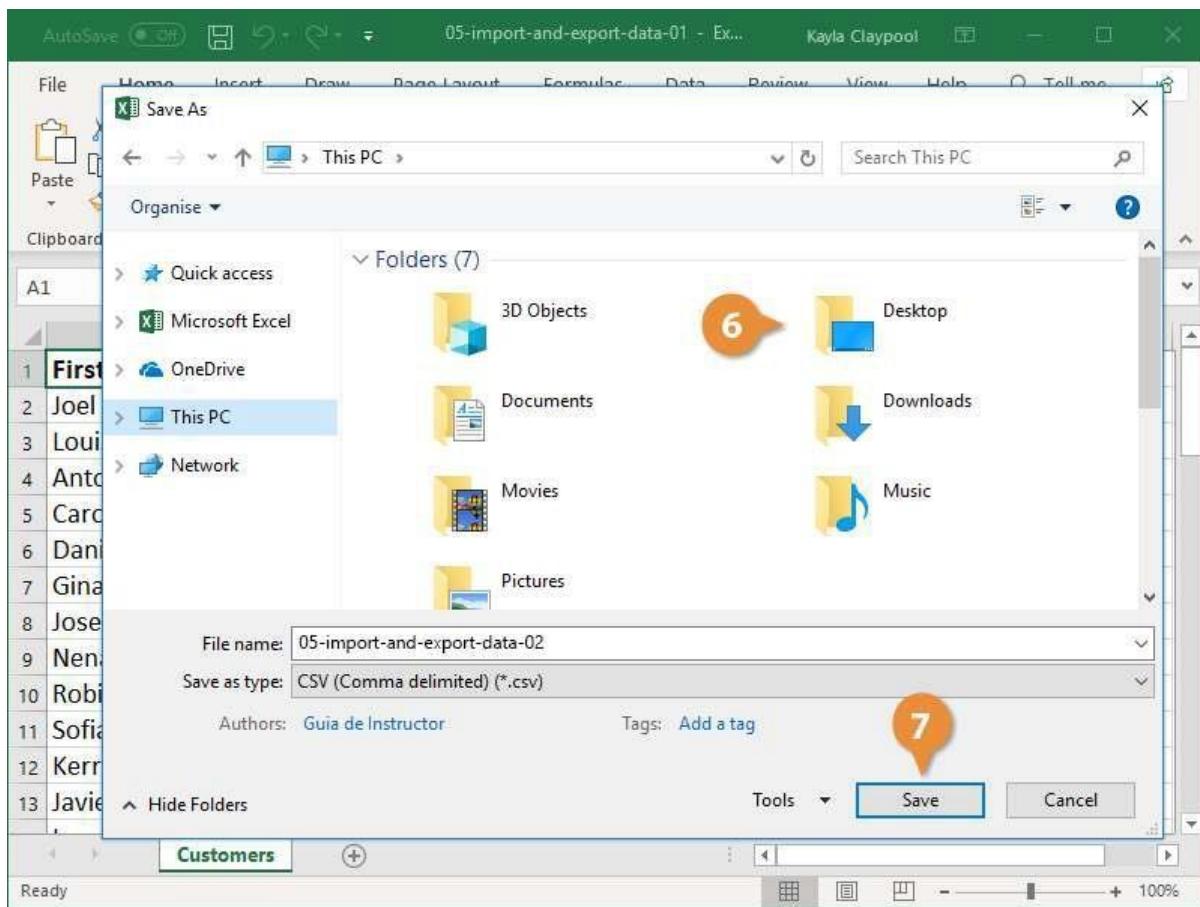


6. Specify where you want to save the file.
7. Click **Save**.

A dialog box appears stating that some of the workbook features may be lost.

8. Click **Yes**.

OUTPUT FOR EXPORTING THE FILE



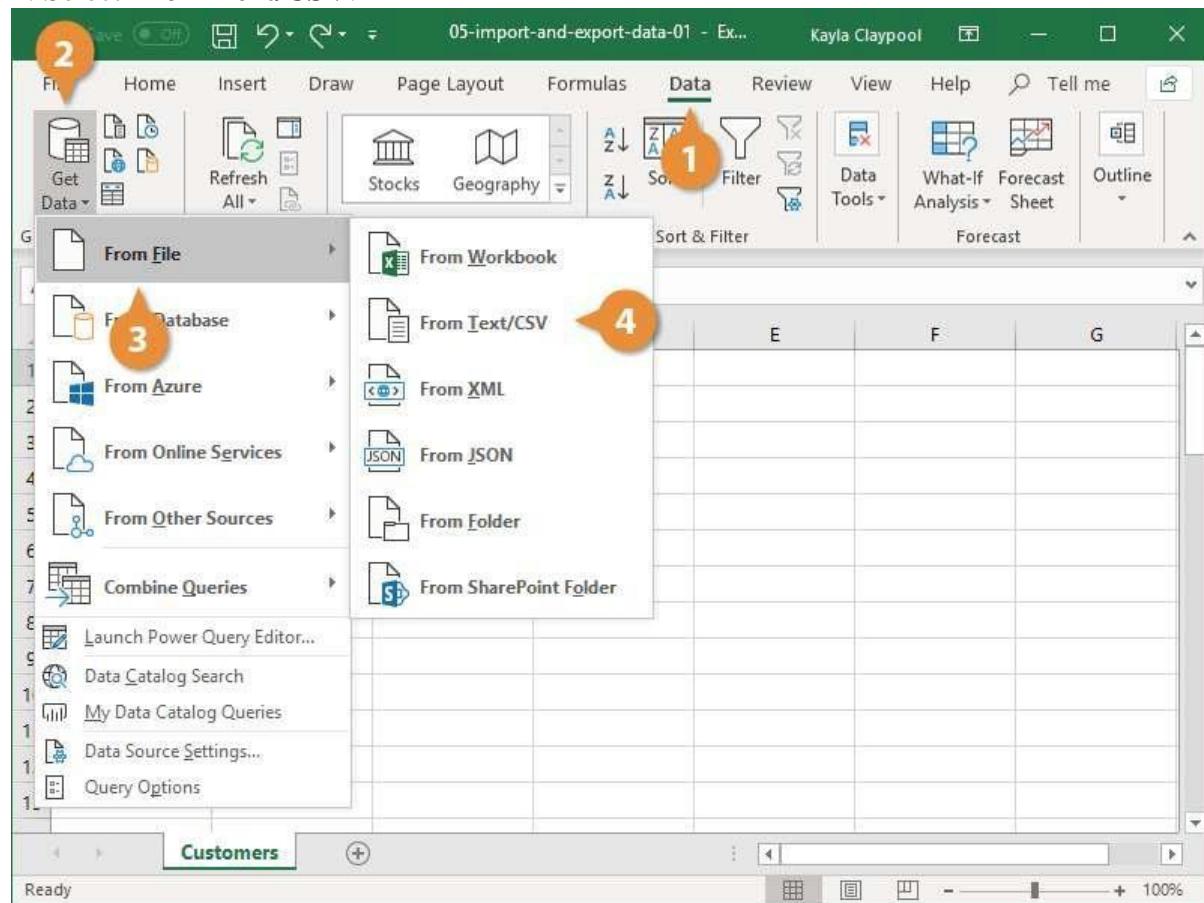
Import Data

Excel can import data from external data sources including other files, databases, or web pages.

1. Click the **Data** tab on the Ribbon..
2. Click the **Get Data** button.

Some data sources may require special security access, and the connection process can often be very complex. Enlist the help of your organization's technical support staff for assistance.

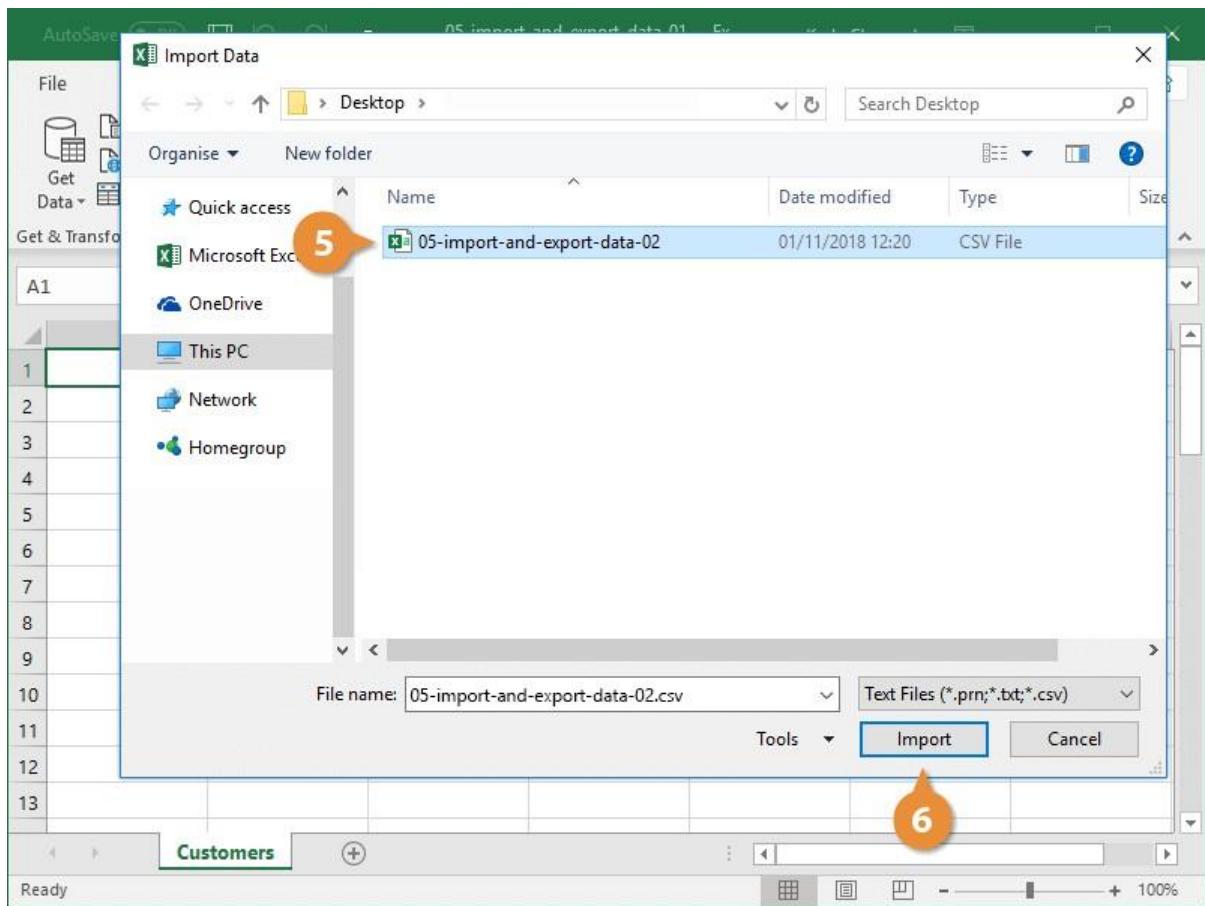
3. Select **From File**.
4. Select **From Text/CSV**.



If you have data to import from Access, the web, or another source, select one of those options in the Get External Data group instead.

5. Select the file you want to import.
6. Click **Import**.

If, while importing external data, a security notice appears saying that it is connecting to an external source that may not be safe, click **OK**.



7. Verify the preview looks correct.

Because we've specified the data is separated by commas, the delimiter is already set. If you need to change it, it can be done from this menu.

8. Click **Load**.

OUTPUT FOR IMPORT THE FILE:

The screenshot shows the Microsoft Excel 'Import Data' dialog box. At the top, it displays 'File Origin' set to '1252: Western European (Windows)', 'Delimiter' set to 'Comma', and 'Data Type Detection' set to 'Based on first 200 rows'. Below this is a preview grid containing 15 rows of data from 'Worksheet.csv'. The columns are labeled 'First', 'Last', 'Company', 'City', 'Packages', and 'Sales'. The data includes entries like 'Joel Nelson Nincom Soup Minneapolis 6 6602' and 'Louis Hay Video Doctor Mexico City 7 8246'. At the bottom right of the dialog are buttons for 'Load' (highlighted with a large orange callout bubble containing the number 8), 'Edit', and 'Cancel'. The main Excel window below the dialog shows a 'Customers' sheet with some data and a status bar indicating 'Ready'.

First	Last	Company	City	Packages	Sales
Joel	Nelson	Nincom Soup	Minneapolis	6	6602
Louis	Hay	Video Doctor	Mexico City	7	8246
Anton	Baril	Nincom Soup	Minneapolis	11	13683
Caroline	Jolie	Safrasoft	Paris	12	14108
Daniel	Ruiz	Idéal Base	Paris	6	7367
Gina	Cuellar	SocialU	Minneapolis	6	7456
Joseph	Voyer	Video Doctor	Mexico City	7	8320
Nena	Moran	Hôtel Soleil	Paris	4	4369
Robin	Banks	Nincom Soup	Minneapolis	4	4497
Sofia	Valles	Luna Sea	Mexico City	1	1211
Kerry	Oki	Luna Sea	Mexico City	10	12045
Javier	Solis	Hôtel Soleil	Paris	5	5951
Lucy	Gramm	SocialU	Minneapolis	1	1200
Rachel	Lyons	Hôtel Soleil	Paris	8	9052
Saulo	Diaz	SocialU	Minneapolis	9	10821

Result:

The data import/export operations for different file formats were preformed successfully using MS-EXCEL.

EX NO: 3**PERFORM STATISTICAL OPERATIONS**

[Mean, Median, Mode and Standard Deviation, Variance, Skewness, Kurtosis]

AIM:

To Perform statistical operations using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **Analysis ToolPak** , Click the **Microsoft Office button**, then click on the **Excel Options** , and then select **Add-Ins** , Click **Go**, check the **Analysis ToolPak box**, and click **Ok**

Step 4: Select **Data tab**, then click on **the Data Analysis option**, then selects **Descriptive Statistics** from the list and Click **Ok**. [**Data tab >> Data Analysis >> Descriptive Statistics**]

Step 5: In the **Input Range** we **select the data**, and then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Check **Summary Statistics** and **Confidence Level for Mean options**. By default the confidence level is 95%. You can change the level as per the hypothesis standard of study.

Step 7: **When you click Ok, you will see the result in the selected output range.**

Step 8: Save the excel file and Close the Ms Excel application.

PERFORM STATISTICAL OPERATIONS

Screenshot of Microsoft Excel showing a student marksheets spreadsheet. The Data tab is selected, and the Analysis ToolPak add-in is being installed.

Student Marksheets - Excel

Data Tab Options:

- Get & Transform Data
- Queries & Connections
- Sort & Filter
- Advanced
- Add-ins

Add-ins Available:

- Analysis ToolPak
- Analysis ToolPak - VBA
- Euro Currency Tools
- Solver Add-in

Analysis ToolPak Description:

Provides data analysis tools for statistical and engineering analysis

Table Data:

Sno	Regno	Name of the Student	MAB551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	QMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI N	32	87	80	87	84	87
2	212619104002	DAIBY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH G	80	87	87	80	80	80
5	212619104005	JAIGANESH K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI T	71	92	80	80	75	80

Screenshot of Microsoft Excel showing the same student marksheets spreadsheet after the Analysis ToolPak add-in has been successfully installed.

Data Tab Options:

- Get & Transform Data
- Queries & Connections
- Sort & Filter
- Data Tools
- Analysis

Analysis ToolPak Installed:

The Analysis ToolPak icon is visible in the Data Tools section of the ribbon.

Table Data:

Sno	Regno	Name of the Student	MAB551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	QMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI N	32	87	80	87	84	87
2	212619104002	DAIBY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH G	80	87	87	80	80	80
5	212619104005	JAIGANESH K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI T	71	92	80	80	75	80

student marksheet - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh All Edit Links Get & Transform Data Queries & Connections Sort Advanced Filter What-If Forecast Analysis Sheet Group Ungroup Subtotal Outline Data Tools Forecast Data Analysis

M15 A B C D E F G H I J K L M N O P Q R S T U V W

Sno	Regno	Name of the Student	MAB551 Algebra and Number Theory	CS8591 Computer Networks	EC8631 Microprocessor and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD51 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI N	32	87	80	87	84	87
2	212619104002	DAIBY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAGANESHW.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Data Analysis

Analysis Tools

- Anova: Single Factor
- Anova: Two-Factor With Replication
- Anova: Two-Factor Without Replication
- Correlation
- Curve Fit
- Descriptive Statistics
- Exponential Smoothing
- F-Test Two-Sample for Variances
- Fourier Analysis
- Histogram

OK Cancel Help

Sheet1

Ready Accessibility: Good to go

Type here to search

Windows 11 84°F ENG 24-07-2023

student marksheet - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh All Edit Links Get & Transform Data Queries & Connections Sort & Filter Data Tools Forecast Outline Analysis

D4 A B C D E F G H I J K L M N O P Q R S T U V W

Sno	Regno	Name of the Student	MAB551 Algebra and Number Theory	CS8591 Computer Networks	EC8631 Microprocessor and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD51 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI N	32	87	80	87	84	87
2	212619104002	DAIBY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAGANESHW.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Descriptive Statistics

Input

Input Range: \$D\$4:\$D\$9

Grouped By: Columns

Labels in First Row

Output options

Output Range: \$T\$4:\$V\$9

New Worksheet Ply:

New Workbook

Summary statistics

Confidence Level for Mean: 95 %

Kth Largest: 1

Kth Smallest: 1

OK Cancel Help

Sheet1

Point Accessibility: Good to go

Type here to search

Windows 11 84°F ENG 24-07-2023

student marksheets - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh Properties All Edit Links Sort Filter Advanced

Get From Table/Range Get & Transform Data Queries & Connections Sort & Filter Data Tools Forecast Outline Analysis

C12 A B C D E F G H I J K L U T V W

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessor and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation	
4	1	212619104001	ABIRAMIN	92	87	80	87	84	87
5	2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
6	3	212619104003	DEEPAK.S	80	72	77	87	80	87
7	4	212619104004	HARISH.G	80	87	87	80	80	80
8	5	212619104005	JAGANESH.K	34	80	80	90	75	87
9	6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Sheet1 Ready Accessibility: Good to go Type here to search 84°F ENG 11:11 24-07-2023

student marksheets - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh Properties All Edit Links Sort Filter Advanced

Get From Table/Range Get & Transform Data Queries & Connections Sort & Filter Data Tools Forecast Outline Analysis

M15 A B C D E F G H I J K L U T V W

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessor and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation	
4	1	212619104001	ABIRAMIN	92	87	80	87	84	87
5	2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
6	3	212619104003	DEEPAK.S	80	72	77	87	80	87
7	4	212619104004	HARISH.G	80	87	87	80	80	80
8	5	212619104005	JAGANESH.K	34	80	80	90	75	87
9	6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Sheet1 Ready Accessibility: Good to go Type here to search 84°F ENG 11:14 24-07-2023

OUTPUT:

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	82	80	80	75	80

Column1	
Mean	74
Standard Error	8.512735557
Median	80
Mode	80
Standard Deviation	20.85185843
Sample Variance	434.8
Kurtosis	3.733266953
Skewness	-1.838637384
Range	58
Minimum	34
Maximum	92
Sum	444
Count	6

Result:

The statistical operations were performed successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 4A**Perform Z-test****AIM:**

To Perform Z-test operations using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **Analysis ToolPak** , Click the **Microsoft Office button**, then click on the **Excel Options** , and then select **Add-Ins** , Click **Go**, check the **Analysis ToolPak box**, and click **Ok**

Step 4: Select **Data tab**, then click on the **Data Analysis option**, then selects **Descriptive Statistics** from the list and Click **Ok**. [**Data tab >> Data Analysis >>z-test two sample means**]

Step 5: In the **Input Range** we **select range of the data for** variable 1 and variable 2 and Give variable 1 and variable 2 value as 0.5. then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 7: When you click Ok, you will see the result in the selected output range.

Step 8: Save the excel file and Close the Ms Excel application.

Screenshot of Microsoft Excel showing the Data Analysis dialog box open over a student marksheets worksheet.

Data Analysis Tools:

- t-Test: Paired Two Sample for Means
- t-Test: Two-Sample Assuming Equal Variances
- t-Test: Two-Sample Assuming Unequal Variances
- z-Test: Two Sample for Means

Worksheet Data:

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMI Basic Biomechanics
1	212619104001	ABIRAMIN	92	87	80	87	84	81
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	81
3	212619104003	DEEPAK.S	80	72	77	87	80	81
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Screenshot of Microsoft Excel showing the z-Test: Two Sample for Means dialog box open over a student marksheets worksheet.

z-Test: Two Sample for Means Dialog Box:

- Input:
 - Variable 1 Range: \$D\$4:\$D\$9
 - Variable 2 Range: \$E\$4:\$E\$9
- Hypothesized Mean Difference: 0.5
- Variable 1 Variance (Known): 0.5
- Variable 2 Variance (Known): 0.5
- Alpha: 0.05
- Output options:
 - Output Range: \$I\$11
 - New Worksheet Ply: (unchecked)
 - New Workbook: (unchecked)

Worksheet Data:

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design
1	212619104001	ABIRAMIN	92	87	80	87	84
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87
3	212619104003	DEEPAK.S	80	72	77	87	80
4	212619104004	HARISH.G	80	87	87	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75

OUTPUT:

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI. T	71	92	80	80	75	80

z-Test: Two Sample for Means		
	Variable 1	Variable 2
Mean	74	83
Known Variance	0.5	0.5
Observations	6	6
Hypothesized Mean D	0	
z	-22.045408	
P(Z<=z) one-tail	0	
z Critical one-tail	1.64485363	
P(Z<=z) two-tail	0	
z Critical two-tail	1.95996398	

Result:

The Z-test operation was performed successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 4B

Perform T-test

AIM:

To Perform T-test operations using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **Analysis ToolPak** , Click the **Microsoft Office button**, then click on the **Excel Options** , and then select **Add-Ins** , Click **Go**, check the **Analysis ToolPak box**, and click **Ok**

Step 4: Select **Data tab**, then click on the **Data Analysis option**, then selects **Descriptive Statistics** from the list and Click **Ok**. [**Data tab >> Data Analysis >> T-test Paired two sample for means**]

Step 5: In the **Input Range** we **select range of the data for** variable 1 and variable 2 and Give alpha value as 0.05. then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 7: When you click Ok, you will see the result in the selected output range.

Step 8: Save the excel file and Close the Ms Excel application.

student marksheets - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh All Edit Links Get & Transform Data Queries & Connections Sort Filter Advanced Sort & Filter Text to Columns What-If Forecast Analysis Sheet Group Ungroup Subtotal Outline Data Tools Forecast Analysis

Data Analysis

OK Cancel Help

Analysis Tools

- Histogram
- Moving Average
- Random Number Generation
- Descriptive Statistics
- Percentile
- Regression
- Sampling
- t-Test: Paired Two Sample for Means
- t-Test: Two-Sample Assuming Equal Variances
- t-Test: Two-Sample Assuming Unequal Variances
- t-Test: Two Sample for Means

Sno Regno Name of the Student MA8551 Algebra and Number Theory CS8531 Computer Networks EC8831 Microprocessor and Microcontroller CS8501 Theory of Computation CS8532 Object Oriented Analysis and Design OM8551 Basic of Biomedical Instrumentation

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8531 Computer Networks	EC8831 Microprocessor and Microcontroller	CS8501 Theory of Computation	CS8532 Object Oriented Analysis and Design	OM8551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA N	87	80	87	80	87	80
3	212619104003	DEEPAK S	80	72	77	87	80	87
4	212619104004	HARISH G	80	87	87	80	80	80
5	212619104005	JAIAGNEESH K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI T	71	92	80	80	75	80

Sheet1

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student marksheets - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh All Edit Links Get & Transform Data Queries & Connections Sort & Filter Data Tools Forecast Analysis

t-Test: Paired Two Sample for Means

OK Cancel Help

Input: Variable 1 Range: \$D\$4:\$D\$9
Variable 2 Range: \$E\$4:\$E\$9

Hypothesized Mean Difference:

Labels
Alpha: 0.05

Output options:
 Output Range: \$B\$12
 New Worksheet By:
 New Workbook

B12

Sno Regno Name of the Student MA8551 Algebra and Number Theory CS8531 Computer Networks EC8831 Microprocessor and Microcontroller CS8501 Theory of Computation CS8532 Object Oriented Analysis and Design OM8551 Basic of Biomedical Instrumentation

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8531 Computer Networks	EC8831 Microprocessor and Microcontroller	CS8501 Theory of Computation	CS8532 Object Oriented Analysis and Design	OM8551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA N	87	80	87	80	87	80
3	212619104003	DEEPAK S	80	72	77	87	80	87
4	212619104004	HARISH G	80	87	87	80	80	80
5	212619104005	JAIAGNEESH K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI T	71	92	80	80	75	80

Sheet1

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OUTPUT:

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8592 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMI.N	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAIGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

t-Test: Paired Two Sample for Means		
	Variable 1	Variable 2
Mean	74	83
Variance	434.8	50.4
Observations	6	6
Pearson Correlation	0.113487818	
Hypothesized Mean	0	
df	5	
t Stat	-1.037387876	
P(T<=t) one-tail	0.173548244	
t Critical one-tail	2.015048373	
P(T<=t) two-tail	0.347096488	
t Critical two-tail	2.570581836	

Result:

The T-test operation was performed successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 4C

Perform ANOVA operations

AIM:

To Perform ANOVA operations using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **Analysis ToolPak** , Click the **Microsoft Office button**, then click on the **Excel Options** , and then select **Add-Ins** , Click **Go**, check the **Analysis ToolPak box**, and click **Ok**

Step 4: Select **Data tab**, then click on the **Data Analysis option**, then selects **Descriptive Statistics** from the list and Click **Ok**. [**Data tab >> Data Analysis >> Anova : Single factor**]

Step 5: In the **Input Range** we **select range of the data** and Give alpha value as 0.05. then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 7: When you click Ok, you will see the result in the selected output range.

Step 8: Save the excel file and Close the Ms Excel application.

student marksheet - Excel

Vasugi M

Data Analysis

Anova: Single Factor

OK Cancel Help

Sno	Regno	Name of the Student	MAR551 Algebra and Number Theory	CS8531 Computer Networks	EC8631 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8532 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMIN	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Sheet2 Sheet1

Ready Accessibility: Investigate

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student marksheet - Excel

Vasugi M

Anova: Single Factor

OK Cancel Help

Sno	Regno	Name of the Student	MAR551 Algebra and Number Theory	CS8531 Computer Networks	EC8631 Microprocessors and Microcontrollers	CS8501 Theory of Computation	CS8532 Object Oriented Analysis and Design	OMD551 Basic of Biomedical Instrumentation
1	212619104001	ABIRAMIN	92	87	80	87	84	87
2	212619104002	DAISY DEEPIKA.N	87	80	87	80	87	80
3	212619104003	DEEPAK.S	80	72	77	87	80	87
4	212619104004	HARISH.G	80	87	87	80	80	80
5	212619104005	JAGANESH.K	34	80	80	90	75	87
6	212619104006	JAYA LAKSHMI.T	71	92	80	80	75	80

Sheet2 Sheet1

Point Accessibility: Investigate

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OUTPUT:

The screenshot shows a Microsoft Excel spreadsheet titled "student marksheets - Excel". The data is organized into two tables: "SUMMARY" and "ANOVA: Single Factor".

SUMMARY

Groups	Count	Sum	Average	Variance
92	5	352	70.4	446.3
87	5	411	82.2	58.2
80	5	411	82.2	20.7
87	5	417	83.4	22.8
84	5	397	79.4	24.3
87	5	414	82.8	14.7

ANOVA: Single Factor

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	607.8666667	5	121.5733333	1.242657581	0.320454766	2.620654148
Within Groups	2348	24	97.83333333			
Total	2955.8666667	29				

Result:

The ANOVA operations was performed successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 5A Perform data pre-processing operations – Handling Missing data

AIM:

To handle the missing data in data pre-processing operations on the dataset using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **PrimaXL Addin, install it.** Click the **PrimaXL tab** , choose missing

Step 4: In the **Input Range** we select marks of all subjects with missing values and select the **Choice** as "*filling of the missing data by taking average*" or "*filling of the missing data by random pick*".

Step 5: Then select Output Range where you want the output to be stored. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 7: When you click Ok, you will see the result in the selected output range.

Step 8: Save the excel file and Close the Ms Excel application.

student marksheet 3 - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do vanitha mani VM

Font Alignment Number Styles Cells Add-ins

Clipboard Font Alignment Number Styles Cells Add-ins

K6

A B C D E F G H I J K L M N O P

MA8551 Algebra and Number Theory CS8591 Computer and Networks Microcontrollers

EC8691 Microprocessors

CS8501 Theory of Computation

CS8592 Object Oriented Analysis and Design

OMD551 Basic of Biomedical Instrumentation

Sno Regno Name of the Student

1 212619104001 ABIRAMI.N

2 212619104002 DAISY DEEPIKA.N

3 212619104003 DEEPAK RAJ.S

4 212619104004 HARISH.G

5 212619104005 JAIGANESH.K

6 212619104006 JAYA LAKSHMI.T

9

10

11

12

13

14

15

16

17

student marksheet 3

Ready Accessibility: Good to go

31°C Sunny

Search

09-10-2023

student marksheet 3 - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

Filling of the Missing Data

Input and Specification

Data Range : 'student marksheet 3'!\$D\$3:\$I\$8
Choice : Average of the existing data samples

Output

Output to : 'student marksheet 3'!\$D\$10
Output to a new sheet : Show in red :

Run Exit Reset

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer and Networks	EC8691 Microprocessors	CS8501 Theory of Computation	D
3	1	212619104001 ABIRAMI.N	92	87	80	87	
4	2	212619104002 DAISY DEEPIKA.N	87	80	87	80	
5	3	212619104003 DEEPAK RAJ.S	80			87	
6	4	212619104004 HARISH.G	80	87	87	80	
7	5	212619104005 JAIGANESH.K	34	80		90	
8	6	212619104006 JAYA LAKSHMI.T	71	92	80		

student marksheet 3

Ready Accessibility: Good to go

31°C Sunny Search ENG IN 09:39 04-10-2023

student marksheet 3 - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

Filling of the Missing Data

Input and Specification

Data Range : 'student marksheet 3'!\$D\$3:\$I\$8
Choice : Random pick from the existing data samples

Output

Output to : 'student marksheet 3'!\$D\$19
Output to a new sheet : Show in red :

Run Exit Reset

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer and Networks	EC8691 Microprocessors	F
3	1	212619104001 ABIRAMI.N	92	87	80	
4	2	212619104002 DAISY DEEPIKA.N	87	80	87	
5	3	212619104003 DEEPAK RAJ.S	80			
6	4	212619104004 HARISH.G	80	87	87	
7	5	212619104005 JAIGANESH.K	34	80		
8	6	212619104006 JAYA LAKSHMI.T	71	92	80	

FILLING OF THE MISSING DATA BY TAKING AVERAGE

92	87	80	87	84	87
87	80	87	80	87	80
80	85.2	83.5	87	80	87

student marksheet 3

Ready Accessibility: Investigate

31°C Sunny Search ENG IN 09:46 04-10-2023

OUTPUT:

The screenshot shows a Microsoft Excel spreadsheet titled "student marksheets 3 - Excel". The ribbon menu is visible at the top, with the "PrimaXL" tab selected. The main content area displays three distinct datasets, each with a title and a table of student marks.

FILLING OF THE MISSING DATA BY RANDOM PICK

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7	5	212619104005	JAIGANESH,K	34	80		90	75	87							
8	6	212619104006	JAYA LAKSHMI,T	71	92	80		75	80							
9																

FILLING OF THE MISSING DATA BY TAKING AVERAGE

				D	E	F	G	H	I	J	K	L	M	N	O	P
11				92	87	80	87	84	87							
12				87	80	87	80	87	80	87						
13				80	85.2	83.5	87	80	87							
14				80	87	87	80	80	80	80						
15				34	80	83.5	90	75	87							
16				71	92	80	84.8	75	80							
17																
18																
19																

FILLING OF THE MISSING DATA BY RANDOM PICK

				D	E	F	G	H	I	J	K	L	M	N	O	P
20				92	87	80	87	84	87							
21				87	80	87	80	87	80	87						
22				80	92	87	87	80	87							
23				80	87	87	80	80	80	80						
24				34	80	87	90	75	87							
25				71	92	80	87	75	80							
26																

Result:

The missing data on dataset was handled successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 5A

Perform data pre-processing operations - Normalization

AIM:

To normalize in the given dataset using MS-EXCEL.

Normalization (Or Min-Max scaling) data in excel

It is the process of scaling data in such a way that all data points lie in a range of 0 to 1. Thus, this technique, makes it possible to bring all data points to a common scale. The mathematical formula for normalization is given as:

$$X' = \frac{X - X_{\min}}{X_{\max} - X_{\min}}$$

where X is the data point, X_{\max} and X_{\min} are the maximum and minimum value in the group of records respectively. The process of normalization is generally used when the distribution of data does not follow the Gaussian distribution.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for sales data in Ms Excel application.

Step 3: Find maximum and minimum values of given data set.

Step 4: Calculate the difference between maximum and minimum values

Step 5: Apply the normalization formula using maximum value, minimum value and difference value.

Step 6: Find the best value of the normalized data.

Step 7: Display the normalized data in desired format.

Step 8: Save the excel file and Close the Ms Excel application.

OUTPUT:

The screenshot shows a Microsoft Excel spreadsheet titled "Unpivot Sales Data - Excel". The data is organized into several columns: sno, Region, State, branch, Month, no of customers, Sales, no of customers, Sales, and Total. Row 11 contains summary statistics: MIN, MAX, and Difference. The "Total" column in row 10 is highlighted in yellow, showing the value 1.68.

	A	B	C	D	E	F	G	H	I	J	K	L
1	sno	Region	State	branch	Month	no of customers	Sales	no of customers	Sales	Total		
2	1	South	Kentucky	A1	Jan	32	10000	0.00	0.00	0.00		
3	2	West	California	A2	Jan	45	12000	0.57	0.10	0.67		
4	3	South	Florida	A3	Jan	55	18000	1.00	0.40	1.40		
5	4	West	California	A4	Jan	50	20000	0.78	0.50	1.28		
6	5	South	North Carolina	A5	Jan	50	22000	0.78	0.60	1.38		
7	6	West	Washington	A6	Jan	40	24000	0.35	0.70	1.05		
8	7	Central	Texas	A7	Jan	52	26000	0.87	0.80	1.67		
9	8	Central	Wisconsin	A8	Jan	50	28000	0.78	0.90	1.68		
10	9	West	Utah	A9	Jan	41	30000	0.39	1.00	1.39		
11												
12					MIN		32	10000				
13					MAX		55	30000				
14					Difference		23	20000				

RESULT:

The given dataset was normalized using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 6 Perform dimensionality reduction operation using PCA, KPCA & SVD

AIM:

To Perform dimensionality reduction operation using PCA, KPCA & SVD

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Open XLSTAT . Select the **XLSTAT / Analyzing data / Principal components analysis** command. The Principal Component Analysis dialog box will appear.

Step 3: Select the data on the Excel sheet.

Step 4: Select **Observations/variables** in the **Data format** field because of the format of the input data and Select **Correlation** in the PCA type field.

Step 5: In the **Outputs** tab, activate the option to display significant correlations in bold characters (**Test significance**).

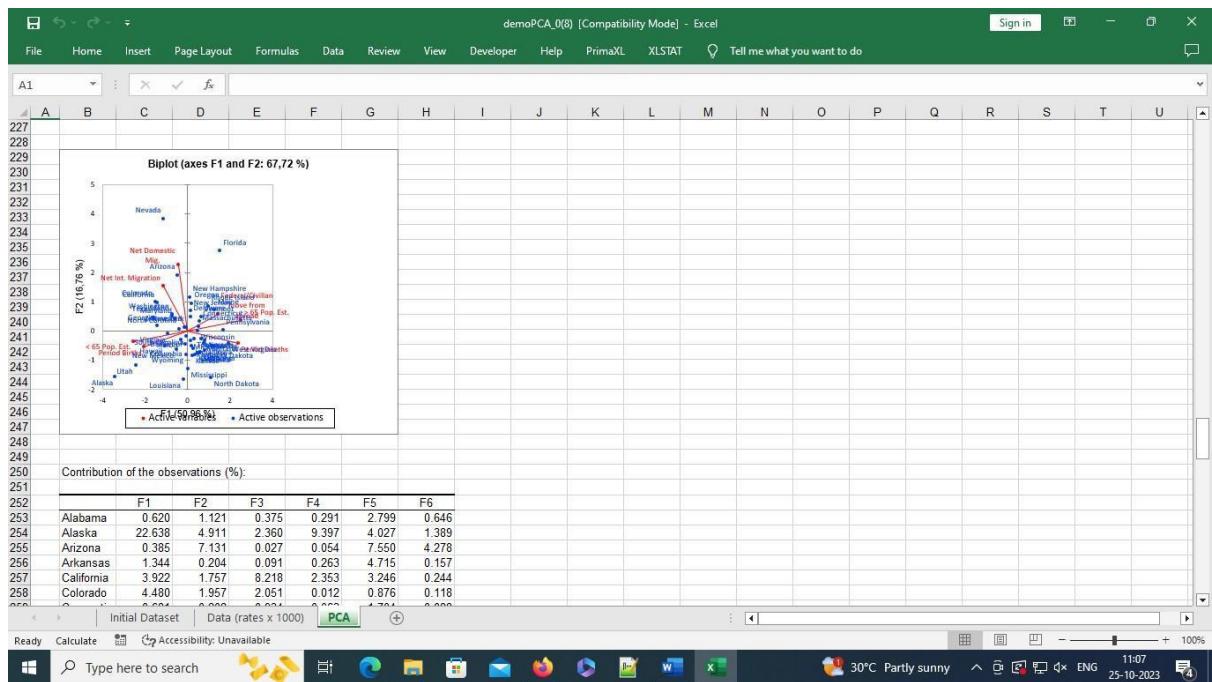
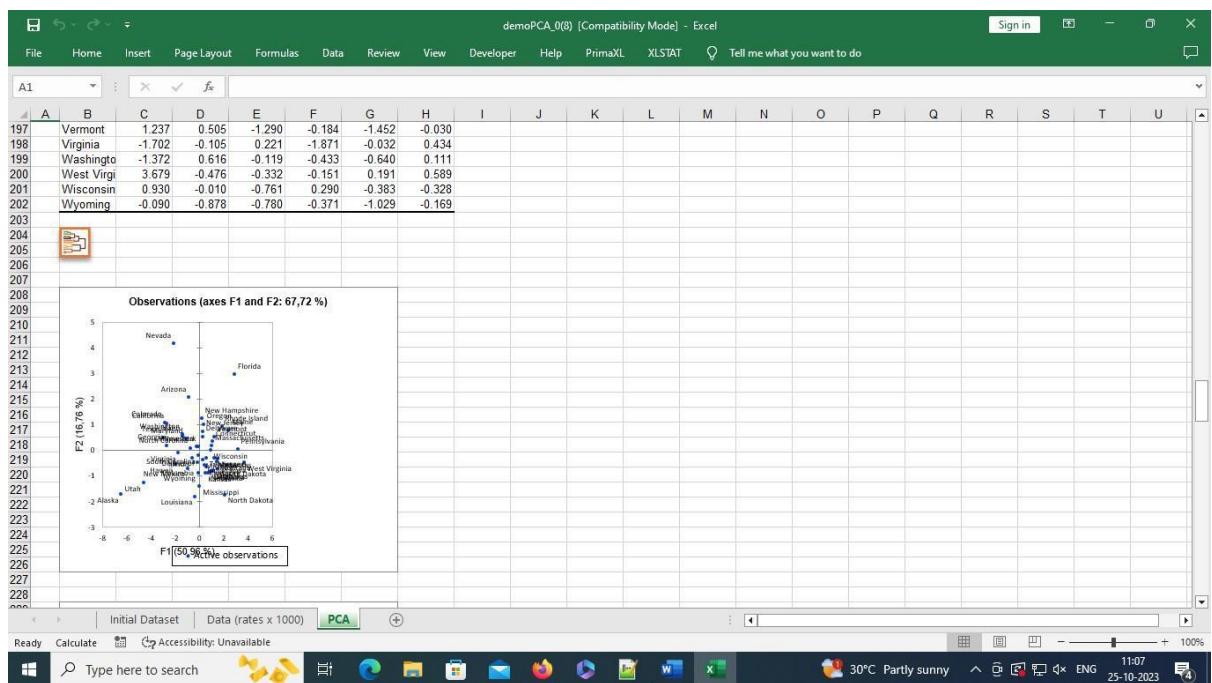
Step 6: In the **Charts** tab, in order to display the labels on all charts, and to display all the observations (observations charts and biplots), uncheck the filtering option.

Step 7: If there is a lot of data, displaying the labels might slow down the global display of the results. Displaying all the observations might make the results unreadable. In these cases, filtering the observations to display is recommended

Step 8: Click **OK** to launch the computations.

Step 7: Save the excel file and Close the Ms Excel application.

OUTPUT:



RESULT:

The given dataset was performed dimensionality reduction operation using PCA, KPCA & SVD and the desired output was displayed in neat format.

EX NO: 7a PERFORM BIVARIATE ANALYSIS ON THE DATASET

AIM:

To Perform bivariate analysis on the dataset using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **Analysis ToolPak** , Click the **Microsoft Office button**, then click on the **Excel Options** , and then select **Add-Ins** , Click **Go**, check the **Analysis ToolPak** box, and click **Ok**

Step 4: Select **Data tab**, then click on **the Data Analysis option**, then selects **Descriptive Statistics** from the list and Click **Ok**. [**Data tab >> Data Analysis >>**]

Step 5: In the **Input Range** we select **quantity** as **x range** and **discount** as **y range** then select Output Range where you want the output to be stored. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 7: When you click Ok, you will see the result in the selected output range.

Step 8: Save the excel file and Close the Ms Excel application.

Sample Sales Data Excel - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh Properties All Edit Links Sort Filter Advanced

Queries & Connections Sort & Filter

Text to Columns What-If Analysis Forecast Sheet Group Ungroup Subtotal

Data Analysis

Analysis Tools

- Fourier Analysis
- Histogram
- Moving Average
- Random Number Generation
- Rank and Percentile
- Regression**
- Sampling
- t-Test: Paired Two Sample for Means
- t-Test: Two-Sample Assuming Equal Variances
- t-Test: Two-Sample Assuming Unequal Variances

OK Cancel Help

A B C D E F G H I J

	Category	Region	Quantity	Discount
1	Furniture	South	2	1
2	Furniture	South	3	2
3	Office Supplies	West	2	0.3
4	Furniture	South	5	0.45
5	Office Supplies	South	2	0.2
6	Furniture	West	7	0.6
7	Office Supplies	West	4	1
8	Technology	West	6	0.2
9	Office Supplies	West	3	0.2
10	Office Supplies	West	5	0.8
11	Furniture	West	9	0.2
12	Technology	West	4	0.2
13	Office Supplies	South	3	0.2
14	Office Supplies	West	3	0.2
15	Office Supplies	Central	5	0.8
16	Office Supplies	Central	3	0.8
17	Office Supplies	Central	3	0.8
18				
19				
20				
21				

Ready Orders Data Sheet1 +

31°C Sunny Search ENG IN 10:17 03-10-2023

Sample Sales Data Excel - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh Properties All Edit Links Sort Filter Advanced

Queries & Connections Sort & Filter

Regression

Input

Input Y Range: \$D\$2:\$D\$17

Input X Range: \$E\$2:\$E\$17

Labels Constant is Zero

Confidence Level: 95 %

Output options

Output Range: \$H\$51

New Worksheet By:

New Workbook

Residuals

Residuals Standardized Residuals Residual Plots Line Fit Plots

Normal Probability

Normal Probability Plots

OK Cancel Help

A B C D E F G H I J

	Category	Region	Quantity	Discount
1	Furniture	South	2	1
2	Furniture	South	3	2
3	Office Supplies	West	2	0.3
4	Furniture	South	5	0.45
5	Office Supplies	South	2	0.2
6	Furniture	West	7	0.6
7	Office Supplies	West	4	1
8	Technology	West	6	0.2
9	Office Supplies	West	3	0.2
10	Office Supplies	West	5	0.8
11	Furniture	West	9	0.2
12	Technology	West	4	0.2
13	Office Supplies	South	3	0.2
14	Office Supplies	West	3	0.2
15	Office Supplies	Central	5	0.8
16	Office Supplies	Central	3	0.8
17	Office Supplies	Central	3	0.8
18				
19				
20				
21				

Ready Orders Data Sheet1 +

31°C Sunny Search ENG IN 10:17 03-10-2023

Sample Sales Data Excel - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrismXL Tell me what you want to do vanitha mani VM

From Text/CSV From Web Existing Connections Refresh Properties All Sort Filter Advanced Get & Transform Data Queries & Connections Sort & Filter

GET GENUINE OFFICE Your license isn't genuine, and you may be a victim of software counterfeiting. Avoid interruption and keep your business running.

H1

	A	B	C	D	E	F	G	H	I	J
1		Category	Region	Quantity	Discount					
2		Furniture	South	2	1					
3		Furniture	South	3	2					
4		Office Supplies	West	2	0.3					
5		Furniture	South	5	0.45					
6		Office Supplies	South	2	0.2					
7		Furniture	West	7	0.6					
8		Office Supplies	West	4	1					
9		Technology	West	6	0.2					
10		Office Supplies	West	3	0.2					
11		Office Supplies	West	5	0.8					
12		Furniture	West	9	0.2					
13		Technology	West	4	0.2					
14		Office Supplies	South	3	0.2					
15		Office Supplies	West	3	0.2					
16		Office Supplies	Central	5	0.8					
17		Office Supplies	Central	3	0.8					
18										
19										
20										
21										

Orders Data Sheet1

Point 31°C Sunny Accessibility Investigate

Search

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrismXL Tell me what you want to do vanitha mani VM

From Text/CSV From Web Existing Connections Refresh Properties All Sort Filter Advanced Get & Transform Data Queries & Connections Sort & Filter

Regression

Input

Input Y Range: \$D\$2:\$D\$17

Input X Range: \$E\$2:\$E\$17

Labels Constant is Zero

Confidence Level: 95 %

Output options

Output Range: \$H\$5:\$I\$1

New Worksheet Ply:

New Workbook

Residuals

Residuals Residual Plots

Standardized Residuals Line Fit Plots

Normal Probability

Normal Probability Plots

Analysis

Learn more

R S T U

80% 10:20 03-10-2023 ENG IN

OUTPUT:

The screenshot shows a Microsoft Excel spreadsheet titled "Sample Sales Data Data - Excel". The data is organized into several sections:

- Data Input:** Rows 2 to 18 contain data with columns for Category (e.g., Furniture, Office Supplies, Technology), Region (e.g., South, West, Central), Quantity, and Discount.
- SUMMARY OUTPUT:** This section contains statistical results:
 - Regression Statistics:** Multiple R: 0.098291647, R Square: 0.009661248, Adjusted R Square: -0.06518556, Standard Error: 2.00809767, Observations: 15.
 - ANOVA:** Shows the breakdown of variance with degrees of freedom (df), sum of squares (SS), mean square (MS), F-statistic, and Significance F.
 - Coefficients:** A table showing the relationship between variables and their significance, including Coefficients, Standard Error, t Stat, P-value, Lower 95%, Upper 95%, Lower 95.0%, and Upper 95.0%.

The bottom of the screen shows the Windows taskbar with various icons and system status information.

Result:

The bivariate analysis on dataset was performed successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 7b PERFORM MULTIVARIATE ANALYSIS ON THE DATASET

AIM:

To Perform multivariate analysis on the dataset using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: If you haven't already installed the **Analysis ToolPak** , Click the **Microsoft Office button**, then click on the **Excel Options** , and then select **Add-Ins** , Click **Go**, check the **Analysis ToolPak box**, and click **Ok**

Step 4: Select **Data tab**, then click on **the Data Analysis option**, then selects **Descriptive Statistics** from the list and Click **Ok**. [**Data tab >> Data Analysis >>**]

Step 5: In the **Input Range** we Select quantity as x range and discount and profit as y range , then select Output Range where you want the output to be stored. If you don't specify the output range it will throw output in the new worksheet.

Step 6: Then **select Output Range** where **you want the output to be stored**. If you don't specify the output range it will throw output in the new worksheet.

Step 7: When you click Ok, you will see the result in the selected output range.

Step 8: Save the excel file and Close the Ms Excel application.

Sample Sales Data Excel - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh Properties All Edit Links Sort Filter Advanced

Get & Transform Data Queries & Connections Sort & Filter

Text to Columns What-If Analysis Forecast Sheet Group Ungroup Subtotal

Analysis Tools

- Covariance
- Descriptive Statistics
- Exponential Smoothing
- F-Test Two-Sample for Variances
- Fourier Analysis
- Histogram
- Moving Average
- Random Number Generation
- Rank and Percentile
- Regression

E2

	A	B	C	D	E	F	G	H	I	J
1	Category	Region	Quantity	Discount	Profit					
2	Furniture	South	2	1	261.96					
3	Furniture	South	3	2	731.94					
4	Office Supplies	West	2	0.3	14.62					
5	Furniture	South	5	0.45	957.578					
6	Office Supplies	South	2	0.2	22.368					
7	Furniture	West	7	0.6	48.86					
8	Office Supplies	West	4	1	7.28					
9	Technology	West	6	0.2	907.152					
10	Office Supplies	West	3	0.2	18.504					
11	Office Supplies	West	5	0.8	114.9					
12	Furniture	West	9	0.2	1706.18					
13	Technology	West	4	0.2	911.424					
14	Office Supplies	South	3	0.2	15.552					
15	Office Supplies	West	3	0.2	407.976					
16	Office Supplies	Central	5	0.8	68.81					
17	Office Supplies	Central	3	0.8	68.81					

R S T U

OK Cancel Help

Ready Orders Data Sheet1 +

34°C Sunny Search ENG IN 12:00 03-10-2023

Sample Sales Data Excel - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Existing Connections Refresh Properties All Edit Links Sort Filter Advanced

Get & Transform Data Queries & Connections Sort & Filter

Data Tools Forecast Outline Analysis

Regression

Input

Input Y Range: \$D\$2:\$D\$17
Input X Range: \$E\$2:\$F\$17

Labels Constant is zero
 Confidence Level: 95 %

Output options

Output Range:
 New Worksheet Ply:
 New Workbook

Residuals

Residuals Residual Plots
 Standardized Residuals Line Fit Plots

Normal Probability

Normal Probability Plots

H12

	A	B	C	D	E	F	G	H	I	J
1	Category	Region	Quantity	Discount	Profit					
2	Furniture	South	2	1	261.96					
3	Furniture	South	3	2	731.94					
4	Office Supplies	West	2	0.3	14.62					
5	Furniture	South	5	0.45	957.578					
6	Office Supplies	South	2	0.2	22.368					
7	Furniture	West	7	0.6	48.86					
8	Office Supplies	West	4	1	7.28					
9	Technology	West	6	0.2	907.152					
10	Office Supplies	West	3	0.2	18.504					
11	Office Supplies	West	5	0.8	114.9					
12	Furniture	West	9	0.2	1706.18					
13	Technology	West	4	0.2	911.424					
14	Office Supplies	South	3	0.2	15.552					
15	Office Supplies	West	3	0.2	407.976					
16	Office Supplies	Central	5	0.8	68.81					
17	Office Supplies	Central	3	0.8	68.81					

R S T U

OK Cancel Help

Ready Orders Data Sheet1 +

34°C Sunny Search ENG IN 12:02 03-10-2023

Sample Sales Data Excel - Excel

File Home Insert Draw Page Layout Formulas Data Review View Developer Help PrimaXL Tell me what you want to do

From Text/CSV From Web Get & Transform Data Recent Sources Existing Connections Refresh All Edit Links Sort Filter Advanced Text to Columns What-If Forecast Analysis Sheet Group Ungroup Subtotal Forecast Outline Analysis

Regression

Input
Input Y Range: \$D\$2:\$D\$17
Input X Range: \$E\$2:\$F\$17
Labels Constant is Zero Confidence Level: 95 %

Output options
Output Range: \$I\$11
New Worksheet By:
New Workbook

Residuals
Residuals Standardized Residuals Residual Plots Line Fit Plots

Normal Probability
Normal Probability Plots

	B	C	D	E	F	G	H	I	J	K
1	Category	Region	Quantity	Discount	Profit					
2	Furniture	South	2	1	261.96					
3	Furniture	South	3	2	731.94					
4	Office Supplies	West	2	0.3	14.62					
5	Furniture	South	5	0.45	957.578					
6	Office Supplies	South	2	0.2	22.568					
7	Furniture	West	7	0.6	48.86					
8	Office Supplies	West	4	1	7.28					
9	Technology	West	6	0.2	907.152					
10	Office Supplies	West	3	0.2	18.504					
11	Office Supplies	West	5	0.8	114.9					
12	Furniture	West	9	0.2	1706.18					
13	Technology	West	4	0.2	911.424					
14	Office Supplies	South	3	0.2	15.552					
15	Office Supplies	West	3	0.2	407.976					
16	Office Supplies	Central	5	0.8	68.81					
17	Office Supplies	Central	3	0.8	68.81					

Orders Data Sheet1

Point Accessibility: Investigate 34°C Sunny Search ENG IN 12:06 03-10-2023

OUTPUT:

The screenshot shows a Microsoft Excel spreadsheet titled "Sample Sales Data Excel - Excel". The data is organized into two main sections: "Orders Data" and "Sheet1".

Orders Data: This section contains a table with columns: Category, Region, Quantity, Discount, and Profit. The data points are as follows:

	Category	Region	Quantity	Discount	Profit
1	Furniture	South	2	1	261.96
2	Furniture	South	3	2	731.94
3	Office Supplies	West	2	0.3	14.67
4	Office Supplies	South	5	0.45	957.578
5	Office Supplies	South	2	0.2	22.368
6	Office Supplies	West	7	0.5	48.86
7	Office Supplies	West	4	1	7.78
8	Technology	West	6	0.2	907.152
9	Office Supplies	West	3	0.2	18.504
10	Office Supplies	West	5	0.8	11.9
11	Office Supplies	West	9	0.2	1706.18
12	Office Supplies	South	3	0.2	15.552
13	Office Supplies	West	4	0.2	911.424
14	Office Supplies	South	8	0.2	407.976
15	Office Supplies	West	5	0.3	68.81
16	Office Supplies	Central	8	0.3	68.81
17	Office Supplies	Central	3	0.3	68.81

Sheet1: This section contains a "SUMMARY OUTPUT" table for a regression analysis. The table includes "Regression Statistics", "ANOVA", and "Coefficients" tables.

SUMMARY OUTPUT									
Regression Statistics									
Multiple R	0.615357345								
R Square	0.378664662								
Adjusted R Square	0.275108772								
Standard Error	1.655579889								
Observations	15								
ANOVA									
	df	SS	MS	F	Significance F				
Regression	2	20.04398277	10.02195138	8.65661238	0.057538207				
Residual	12	32.886355056	2.743779214						
Total	14	52.933333333							
Coefficients									
	Coefficients	Standard Error	t Stat	P value	Lower 95%	Upper 95%	Upper		
Intercept	8.440379003	0.753042525	4.580590045	0.000631737	1.808640570	5.000117608	1.808643375	5.00	
	-0.170045281	0.398296352	-0.419601493	0.852170709	-2.12754998	1.786974336	-2.127504896	1.78	
	251.96	0.0022736G3	0.000651768	2.669575062	0.02042G038	0.000418019	0.004129706	0.000413019	0.00

Result:

The multivariate analysis on the dataset was performed successfully using MS-EXCEL and the desired output was displayed in neat format.

EX NO: 8

PLOTTING FUNCTIONS ON THE DATA SET

AIM:

To apply and explore various plotting functions on the data set using MS-EXCEL.

PROCEDURE:

Step 1: Start Ms Excel application in Ms- office.

Step 2: Create datasheet for student marks in Ms Excel application.

Step 3: select the data for which a chart is to be created.

Step 4: In the INSERT menu, select Recommended Charts.

Step 5: Choose any chart from the list of charts Excel recommends for your data on the Recommended Charts tab, and click it to preview how it will look with your data.

Step 6: Click on All Charts if you are unable to locate a chart you like.

Step 7: Click on the chart that you prefer and then click OK.

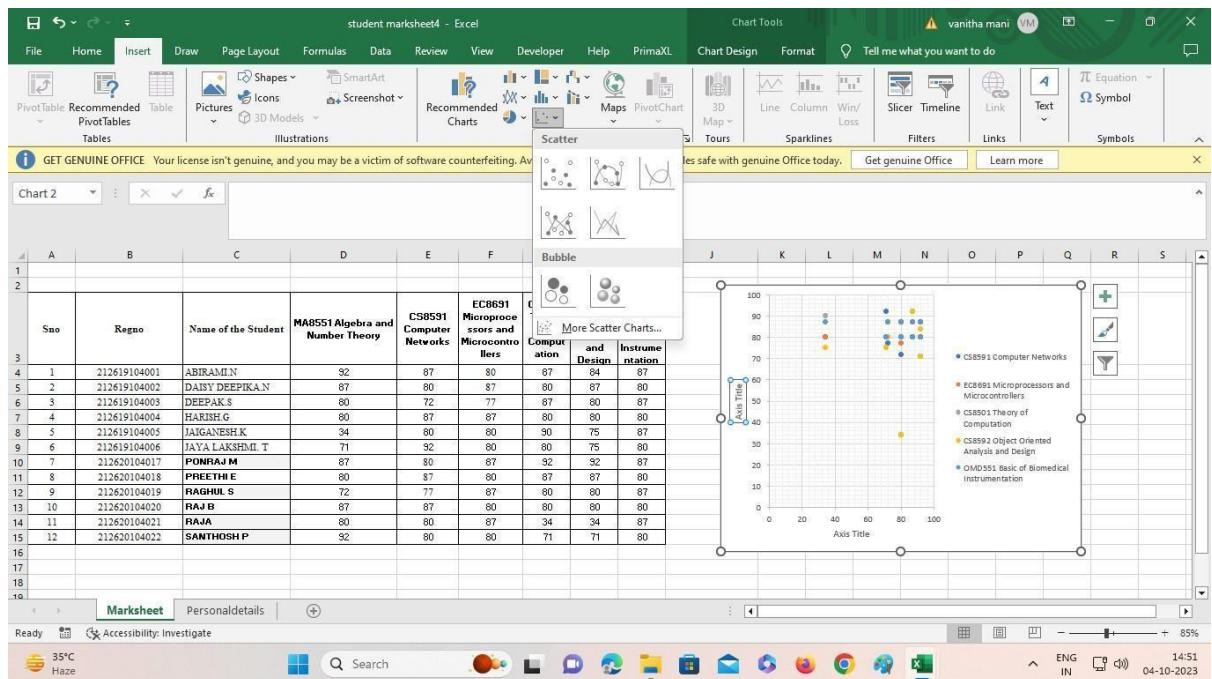
Step 8: Add chart elements such as axis titles or data labels, customize the appearance of the chart, or change the data displayed in the chart by clicking on Chart Elements, Chart Styles, and Chart Filters in the upper-right corner of the chart.

Step 9: Click on the chart TOOLS tab on the ribbon to add additional design and formatting capabilities and then click the options you desire under the DESIGN and FORMAT tabs.

Step 10: When you click Ok, you will see the result in the selected output range.

Step 11: Save the excel file and Close the Ms Excel application.

OUTPUT:



RESULT:

The plotting functions was applied and explored on the data set successfully using MS-EXCEL and the desired output was displayed in neat format.

II Cycle

power BI Desktop

EX NO: 9

Explore the features of Power BI Desktop

AIM:

To explore the features of Power BI Desktop

PROCEDURE:

Step 1: Start Power BI Desktop

Step 2: Connect to data.

Step 3: Transform and clean data to create a data model.

Step 4: Create visuals, such as charts or graphs that provide visual representations of the data.

Step 5: Create reports that are collections of visuals on one or more report pages.

Step 6: Share reports with others by using the Power BI service.

Step 7: Save the file in desired location

Step 8: Close the Power BI Desktop application

What is Power BI Desktop?

Power BI Desktop is a free application you install on your local computer that lets you connect to, transform, and visualize your data. With Power BI Desktop, you can connect to multiple different sources of data, and combine them (often called *modeling*) into a data model. This data model lets you build visuals, and collections of visuals you can share as reports, with other people inside your organization. Most users who work on business intelligence projects use Power BI Desktop to create reports, and then use the *Power BI service* to share their reports with others.

The most common uses for Power BI Desktop are as follows:

- Connect to data.
- Transform and clean data to create a data model.
- Create visuals, such as charts or graphs that provide visual representations of the data.
- Create reports that are collections of visuals on one or more report pages.
- Share reports with others by using the Power BI service.

People who are responsible for such tasks are often considered *data analysts* (sometimes referred to as *analysts*) or business intelligence professionals (often referred to as *report creators*). Many people who don't consider themselves an analyst or a report creator use Power BI Desktop to create compelling reports, or to pull data from various sources. They can build data models, and then share the reports with their coworkers and organizations.

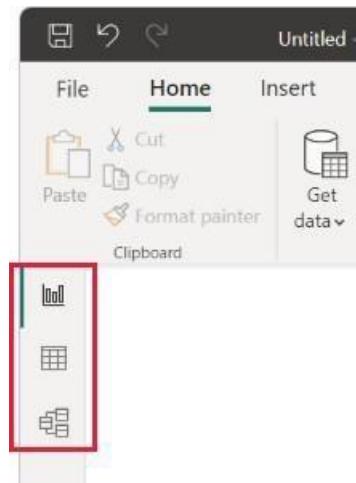
Important

Power BI Desktop is updated and released on a monthly basis, incorporating customer feedback and new features. Only the most recent version of Power BI Desktop is supported; customers who contact support for Power BI Desktop will be asked to upgrade to the most recent version. You can get the most recent version of Power BI Desktop from the [Windows Store](#), or as a single executable containing all supported languages that you [download](#) and install on your computer.

There are three views available in Power BI Desktop, which you select on the left side of the canvas. The views, shown in the order they appear, are as follows:

- **Report:** You create reports and visuals, where most of your creation time is spent.
- **Data:** You see the tables, measures, and other data used in the data model associated with your report, and transform the data for best use in the report's model.
- **Model:** You see and manage the relationships among tables in your data model.

The following image shows the three views, as displayed along the left side of the canvas:



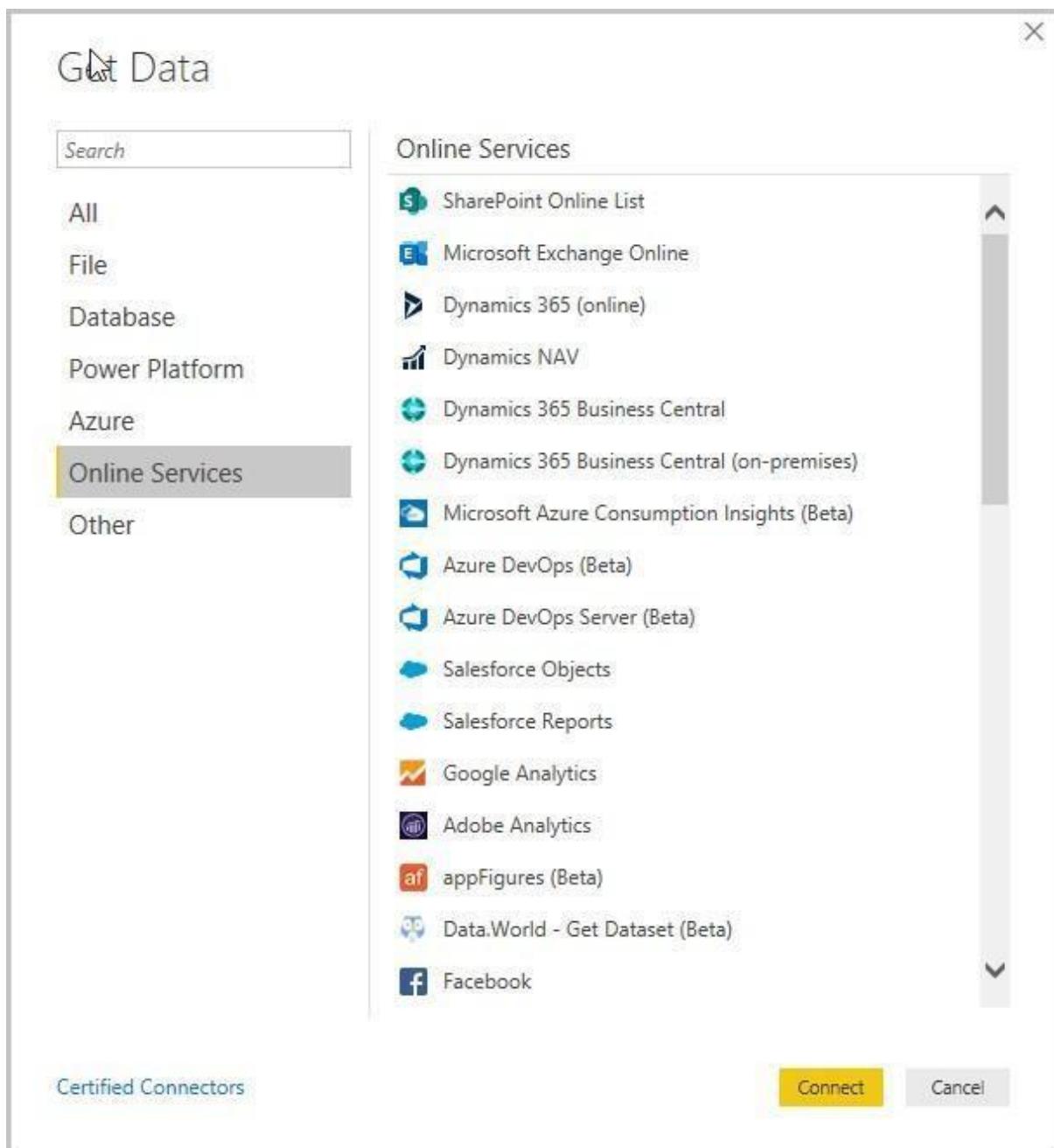
Connect to data

To get started with Power BI Desktop, the first step is to connect to data. There are many different data sources you can connect to from Power BI Desktop.

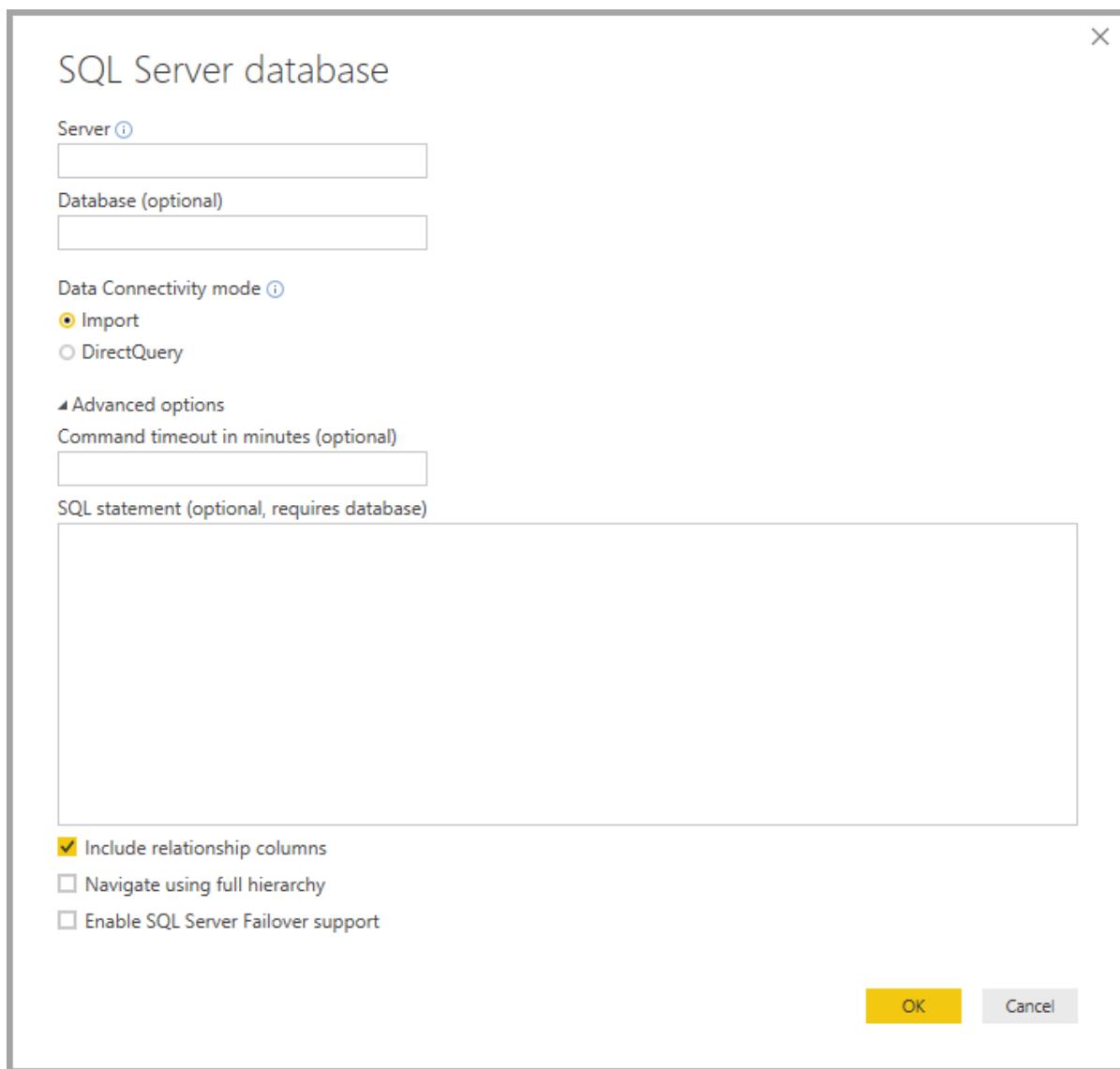
To connect to data:

1. From the **Home** ribbon, select **Get Data > More**.

The **Get Data** window appears, showing the many categories to which Power BI Desktop can connect.



- When you select a data type, you're prompted for information, such as the URL and credentials, necessary for Power BI Desktop to connect to the data source on your behalf.



3. After you connect to one or more data sources, you may want to transform the data so it's useful for you.

Transform and clean data, create a model

In Power BI Desktop, you can clean and transform data using the built-in [Power Query Editor](#).

With Power Query Editor, you make changes to your data, such as changing a data type, removing columns, or combining data from multiple sources. It's like sculpting: you start with a

large block of clay (or data), then shave off pieces or add others as needed, until the shape of the data is how you want it.

To start Power Query Editor:

- On the **Home** ribbon, in the **Queries** section, select **Transform data**.

The **Power Query Editor** window appears.

The screenshot shows the Power Query Editor interface with a query titled "Ranking of best and worst...". The query has 52 rows and 7 columns. The columns are labeled Column1 through Column5. The "APPLIED STEPS" pane shows a step named "Changed Type".

Each step you take in transforming data (such as renaming a table, transforming a data type, or deleting a column) is recorded by Power Query Editor. Every time this query connects to the data source, those steps are carried out so that the data is always shaped the way you specify.

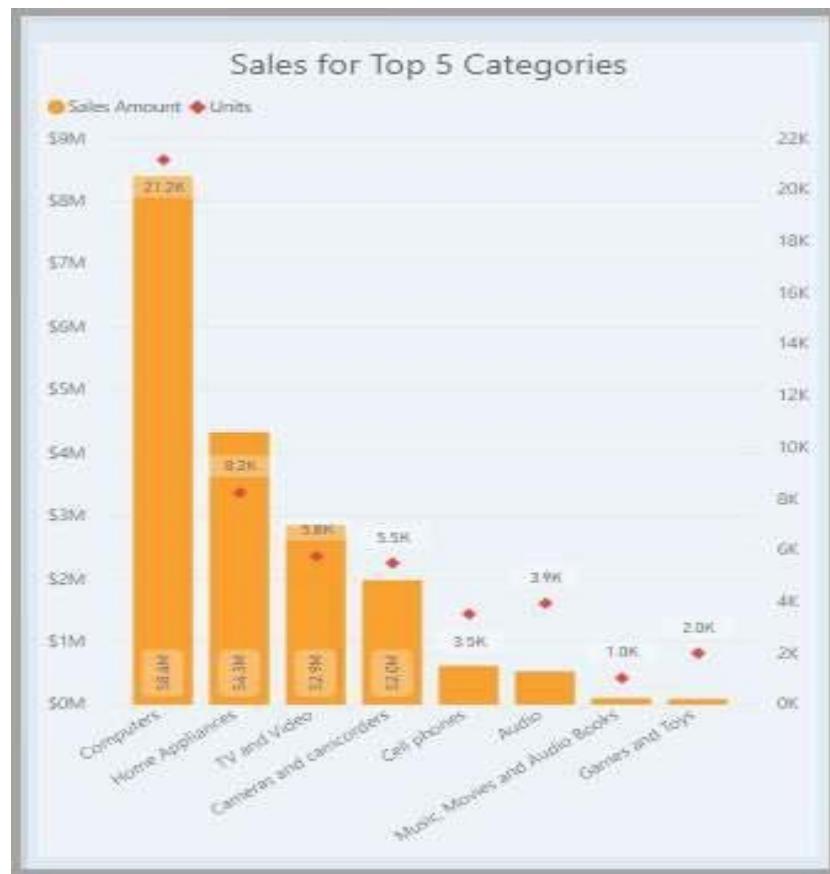
The following image shows the **Power Query Editor** window for a query that was shaped, and turned into a model.

The screenshot shows the Power Query Editor interface with a query titled "Best states for sunglasses...". The query has 40 rows and 4 columns. The columns are labeled State, Overall rank, Affordability, and Weather. The "APPLIED STEPS" pane shows multiple steps, including "Removed Columns".

Once your data is how you want it, you can create visuals.

Create visuals

After you have a data model, you can drag *fields* onto the report canvas to create *visuals*. A visual is a graphic representation of the data in your model. There are many different types of visuals to choose from in Power BI Desktop. The following visual shows a simple column chart.



To create or change a visual:

- From the **Visualizations** pane, select the **Build visual** icon.



If you already have a visual selected on the report canvas, the selected visual changes to the type you selected.

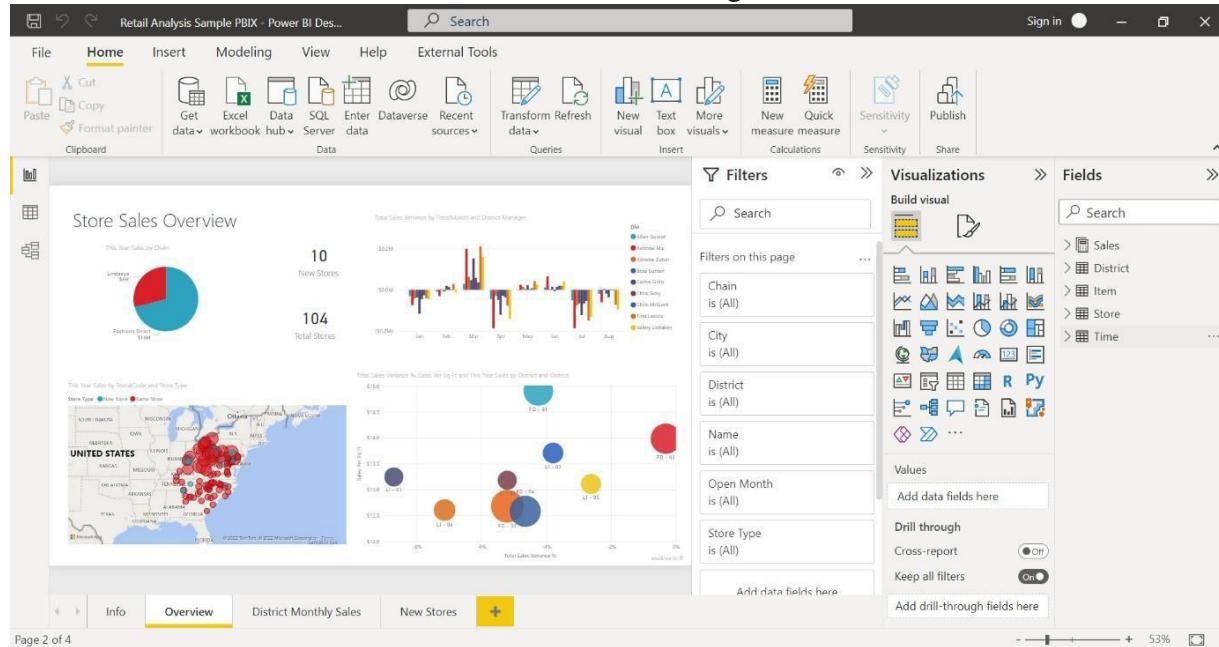
If no visual is selected on the canvas, a new visual is created based on your selection.

Create reports

More often, you'll want to create a collection of visuals that show various aspects of the data you've used to create your model in Power BI Desktop. A collection of visuals, in one Power BI Desktop file, is called a *report*. A report can have one or more pages, just like an Excel file can have one or more worksheets.

With Power BI Desktop you can create complex and visually rich reports, using data from multiple sources, all in one report that you can share with others in your organization.

In the following image, you see the first page of a Power BI Desktop report, named **Overview**, as seen on the tab near the bottom of the image.

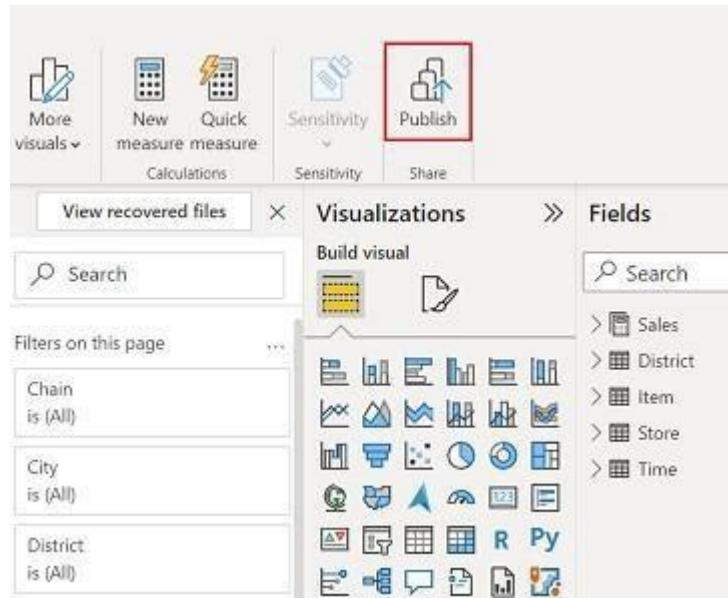


Share reports

After a report is ready to share with others, you can *publish* the report to the Power BI service, and make it available to anyone in your organization who has a Power BI license.

To publish a Power BI Desktop report:

1. Select **Publish** from the **Home** ribbon.



Power BI Desktop connects you to the Power BI service with your Power BI account.

2. You're prompted to select where in the Power BI service you'd like to share the report. For example, your workspace, a team workspace, or some other location in the Power BI service.

Following are some of the features of Power BI –

1. Power BI Desktop

Power BI Desktop is free software that you can download and install, and it allows you to build reports by accessing data easily. For using Power BI desktop, you do not need advanced report designing, or query skills to build a report.

2. Stream Analytics

Power BI's primary advantage is its support stream analytics. From factory sensors to social media sources, Power BI assists in real-time analytics to make timely decisions.

3. Multiple Data Sources

Support for various data sources is one of the vital features of Power BI. You can access various sources of data such as Excel, CSV, SQL Server, Web files, etc. to create interactive visualizations.

4. Custom Visualization

While dealing with complex data, Power BI's default standard might not be enough in some cases. In that case, you can access the custom library of visualization that meets your needs.

RESULT:

The features of Power BI explored successfully and displayed desired output in neat format.

EX NO:10

Prepare & Load data

AIM:

To Prepare & Load data in Power BI Desktop

PROCEDURE:

Step 1: Start Power BI Desktop

Step 2: Goto to home menu , select get data and then choose excel worksheet

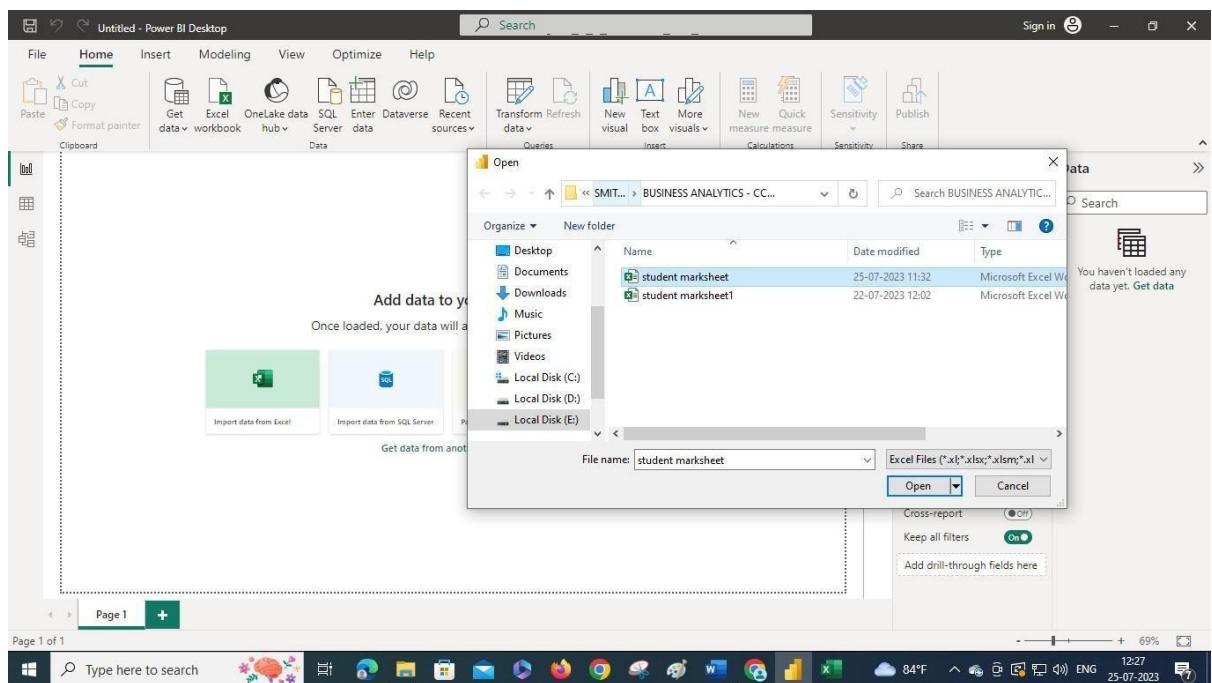
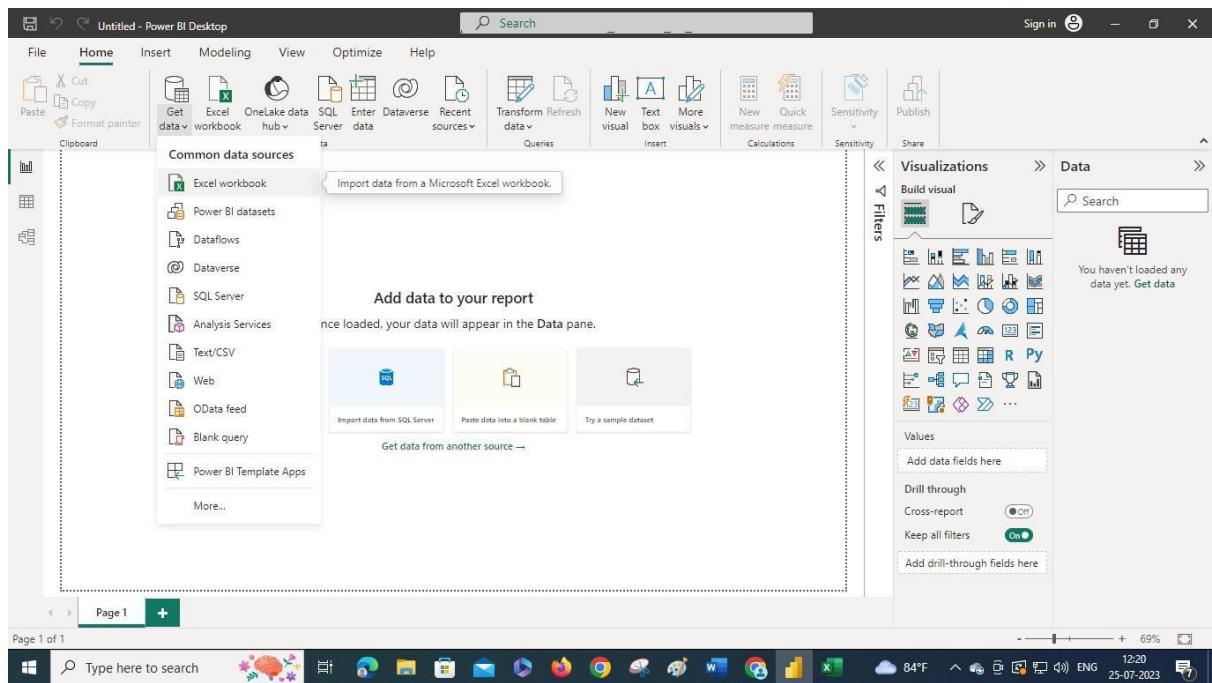
Step 3: Select your file to load into Power Bi application and press load button

Step 4: Now the file is loaded and now click data view in the left panel

Step 5: Now the file is loaded in the form of table format

Step 6: Save the file in desired location

Step 7: Close the Power BI Desktop application



Untitled - Power BI Desktop

File Home Insert Modeling View Optimize Help

Navigator

Display Options

- student marksheet.xlsx [3]
 - Sheet1
 - Sheet2
 - Sheet3
- Suggested Tables [4]
 - SUMMARY (Sheet2)
 - ANOVA (Sheet2)
 - SUMMARY (Sheet3)
 - ANOVA (Sheet3)

Sheet1

Sno	Regno	Name of the Student	MAB8551 Algebra and Number Theory
1	2.12619E+11	ABIRAMI.N	91
2	2.12619E+11	DAISY DEEPIKA.N	85
3	2.12619E+11	DEEPAK.S	80
4	2.12619E+11	HARISH.G	80
5	2.12619E+11	JAIGANESH.K	94
6	2.12619E+11	JAYA LAKSHMI.T	78

Data

Search

You haven't loaded any data yet. Get data

Load Transform Data Cancel

Page 1 of 1

This screenshot shows the Power BI Desktop interface. The 'Navigator' pane on the left lists the contents of 'student marksheet.xlsx'. Under 'student marksheet.xlsx [3]', 'Sheet1' is selected. Under 'Suggested Tables [4]', four tables are listed: 'SUMMARY (Sheet2)', 'ANOVA (Sheet2)', 'SUMMARY (Sheet3)', and 'ANOVA (Sheet3)'. The main area shows 'Sheet1' with data for six students. The data table has columns: Sno, Regno, Name of the Student, and MAB8551 Algebra and Number Theory. The data is as follows:

Sno	Regno	Name of the Student	MAB8551 Algebra and Number Theory
1	2.12619E+11	ABIRAMI.N	91
2	2.12619E+11	DAISY DEEPIKA.N	85
3	2.12619E+11	DEEPAK.S	80
4	2.12619E+11	HARISH.G	80
5	2.12619E+11	JAIGANESH.K	94
6	2.12619E+11	JAYA LAKSHMI.T	78

Untitled - Power BI Desktop

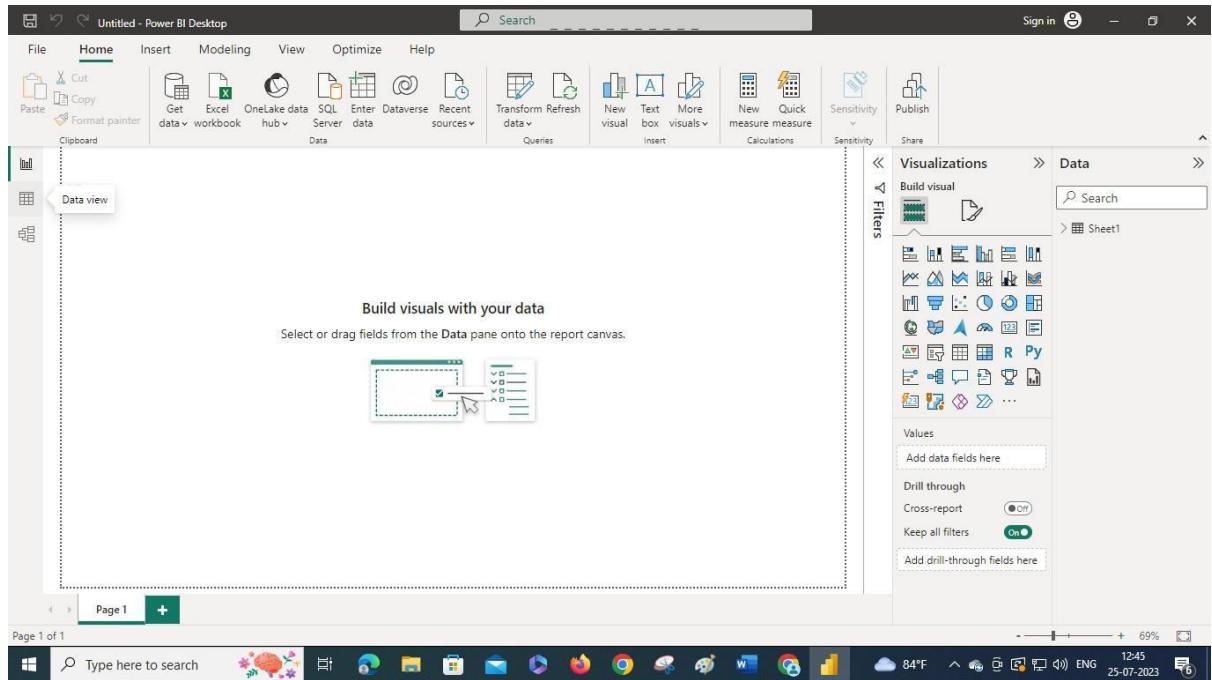
File Home Insert Modeling View Optimize Help

Clipboard

Build visuals with your data

Select or drag fields from the Data pane onto the report canvas.

The screenshot shows the Power BI Desktop interface with the 'Home' tab selected in the ribbon. The 'Visualizations' pane on the right is open, showing 'Sheet1' as the current sheet. It includes sections for 'Name', 'Storage mode', 'Data refreshed', and a list of visualization icons. The main canvas area is currently empty, awaiting data placement.



OUTPUT:

A screenshot of the Microsoft Power BI Desktop application window titled "Untitled - Power BI Desktop". The "Table tools" tab is selected in the top menu. The "Structure" group contains "Name" (set to "Sheet1"), "Mark as date table", "Calendars", "Manage relationships", "Relationships", "New measure", "Quick measure", "New column", and "New table". The "Calculations" group contains "Calculations". The main area displays a table titled "Sheet1" with 6 rows of data. The columns are "Sno", "Regno", "Name of the Student", "MA8551 Algebra and Number Theory", "CS8591 Computer Networks", "EC8691 Microprocessors and Microcontrollers", and "CS8501 Th".

Sno	Regno	Name of the Student	MA8551 Algebra and Number Theory	CS8591 Computer Networks	EC8691 Microprocessors and Microcontrollers	CS8501 Th
1	212619104001	ABIRAMLN	92	87	80	
2	212619104002	DAISY DEEPIKAN	87	80	87	
3	212619104003	DEEPAKS	80	72	77	
4	212619104004	HARISH.G	80	87	87	
5	212619104005	JAGANESH.K	34	80	80	
6	212619104006	JAYA LAKSHMI.T	71	92	80	

RESULT:

The Excel data sheet was prepared and loaded successfully into Power BI Desktop and displayed desired output in neat format.

AIM:

To Develop the data model using Power BI Desktop

PROCEDURE:

Step 1: Start Power BI Desktop

Step 2: Goto to home menu, select get data and then choose excel worksheet

Step 3: Select your file to load into Power Bi application and press load button

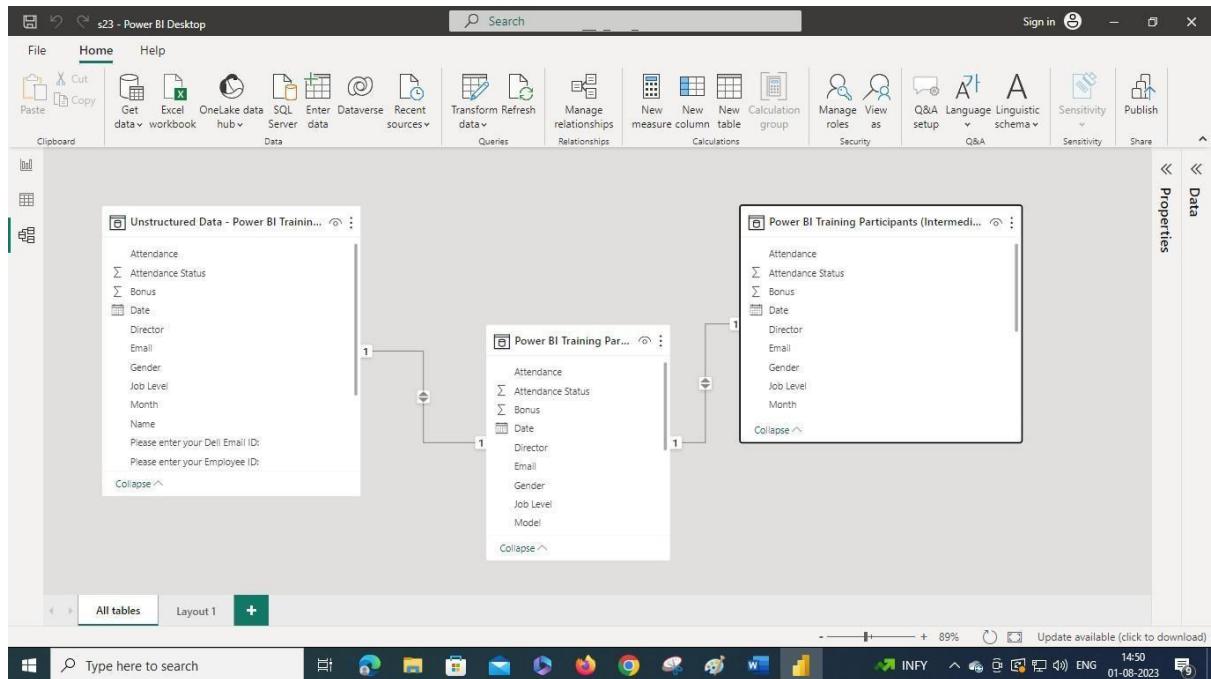
Step 4: Now the file is loaded and now click model view in the left panel

Step 5: Now data modeling of the given tables are displayed in output screen

Step 6: Save the file in desired location

Step 7: Close the Power BI Desktop application

OUTPUT:



RESULT:

The data model was developed and loaded successfully using Power BI Desktop and displayed desired output in neat format.

EX NO:12**Perform DAX calculations****AIM:**

To perform DAX calculations using Power BI Desktop

PROCEDURE:

Step 1: Start Power BI Desktop

Step 2: Goto to home menu, select get data and then choose excel worksheet

Step 3: Select your file to load into Power Bi application and press load button

Step 4: Now the file is loaded and now click report view in the left panel

Step 5: Goto data panel and right click on data file and choose new measure

Step 6: Type the formula for new measure and click the new measure “ was added

Step 7: Drag the corresponding various types of visualization in workspace.

Step 8: Save the file in desired location

Step 9: Close the Power BI Desktop application

s24 - Power BI Desktop

File Home Insert Modeling View Optimize Help Table tools

Name: Orders Data

Structure

Build visuals with your data
Select or drag fields from the Data pane onto the report canvas.

Visualizations Data

Filters

New measure

Category

City

Cost of Goods

Country

Customer ID

Customer Name

Discount

Order Date

Date Hierarc...

Order ID

Postal Code

Price

Product ID

Product Name

Quality Status

Quantity

Region

Row ID

Values

Add data

Drill through

Cross-report

Keep all filters

Add drill-through fields here

Page 1 Page 2 Page 3 +

Type here to search

37°C 15:34 ENG 02-08-2023

This screenshot shows the Power BI Desktop interface with the 'Table tools' tab selected in the ribbon. A context menu is open over the 'New measure' item in the Data pane, displaying a list of data items such as Category, City, Cost of Goods, Country, Customer ID, Customer Name, Discount, Order Date, Date Hierarc..., Order ID, Postal Code, Price, Product ID, Product Name, Quality Status, Quantity, Region, and Row ID. The report canvas below has a placeholder for a chart.

s24 - Power BI Desktop

File Home Insert Modeling View Optimize Help Table tools Measure tools

Name: Measure

Home table: Orders Data

Format: \$ %

Data category: Uncategorized

Properties

Calculations

Structure

Formatting

Build visuals with your data
Select or drag fields from the Data pane onto the report canvas.

Visualizations Data

Filters

Measure

no of units Sold

Category

City

Cost of Goods

Country

Customer ID

Customer Name

Discount

Order Date

Order ID

Postal Code

Price

Product ID

Product Name

Quality Status

Quantity

Region

Values

Add data fields here

Drill through

Cross-report

Keep all filters

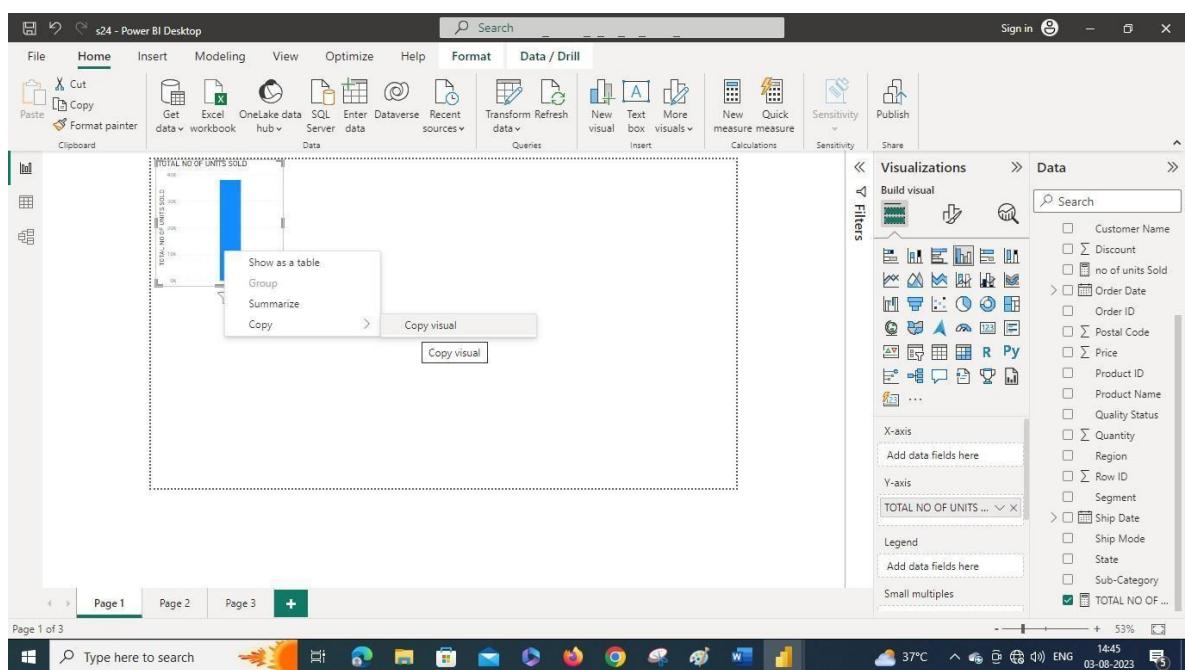
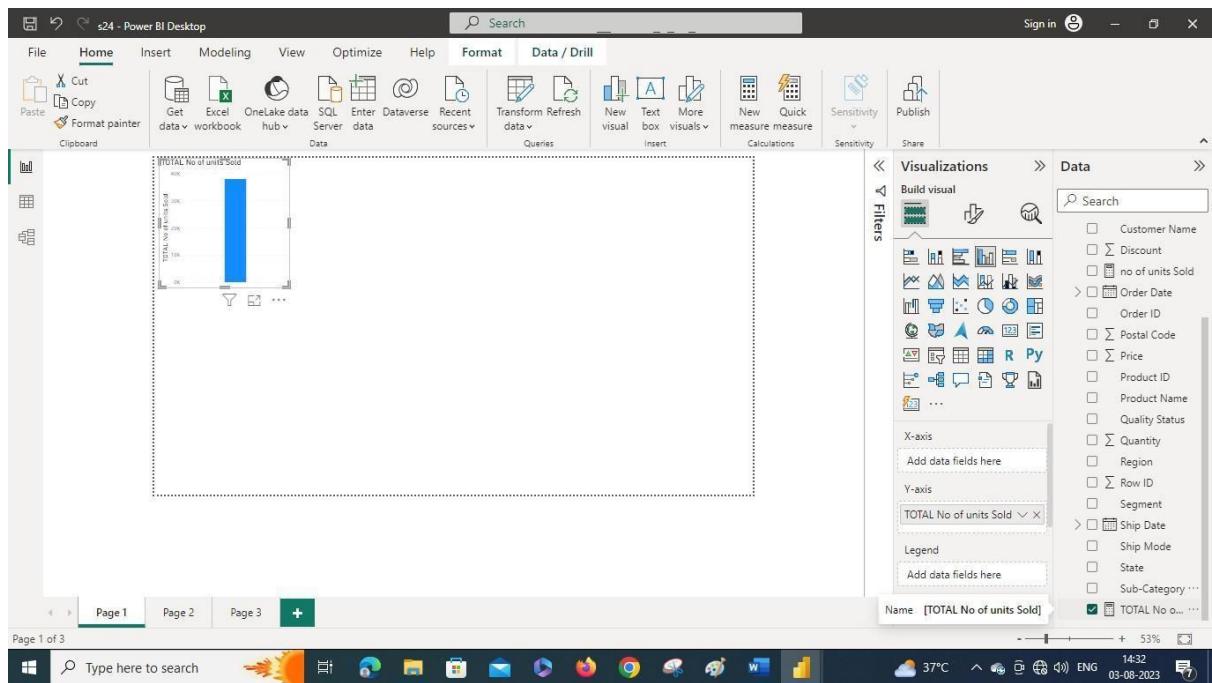
Add drill-through fields here

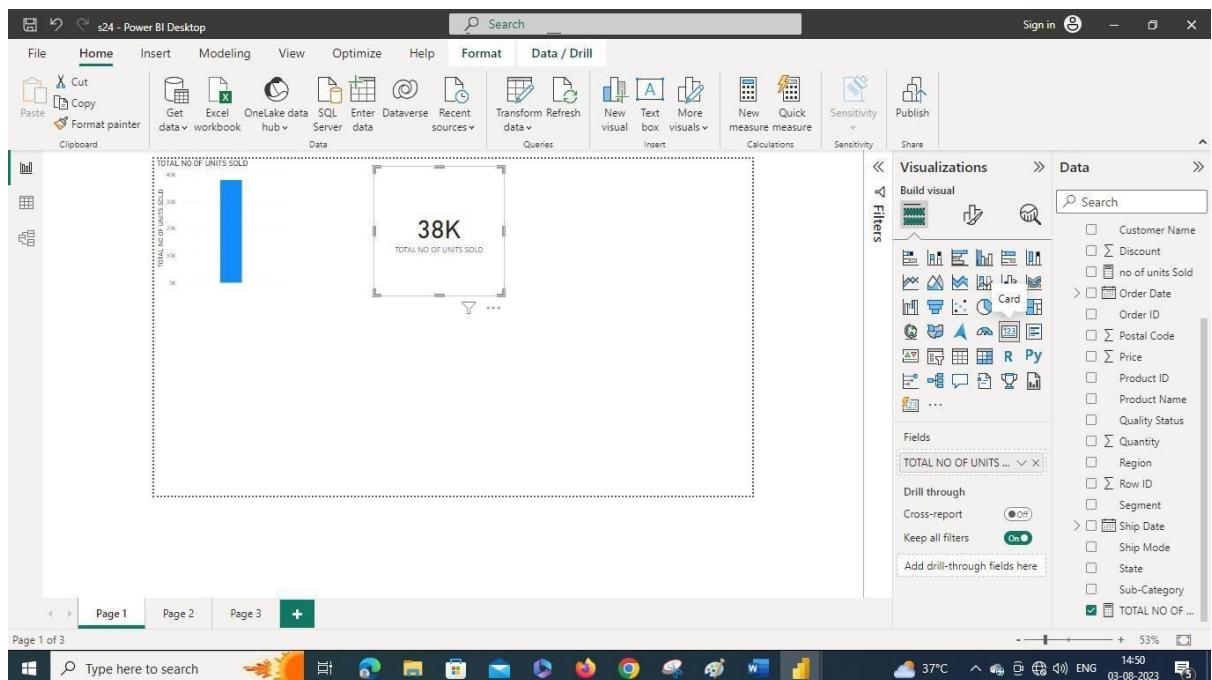
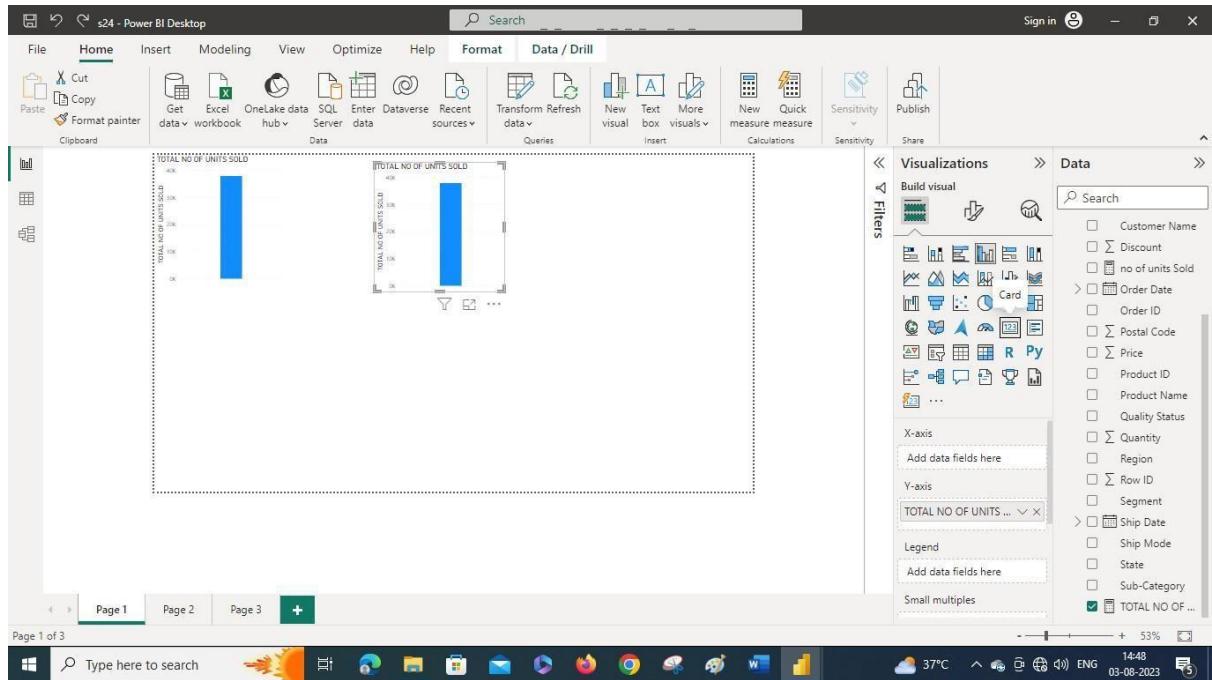
Page 1 Page 2 Page 3 +

Type here to search

37°C 14:43 ENG 03-08-2023

This screenshot shows the Power BI Desktop interface with the 'Measure tools' tab selected in the ribbon. A context menu is open over the 'Measure' item in the Data pane, displaying a list of data items such as no of units Sold, Order Date, Order ID, Postal Code, Price, Product ID, Product Name, Quality Status, Quantity, and Region. The report canvas below has a placeholder for a chart.





s24 - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Paste Format painter Clipboard

Get data Workbook OneLake data hub SQL Server Data Recent sources Data Queries Transform Refresh data New visual Text box More visuals Insert Calculations Sensitivity Share Publish

TOTAL NO OF UNITS SOLD

38K

Customer Name	TOTAL NO OF UNITS SOLD
Jonathan Dekkerly	180
William Brown	146
John Lee	141
Paul Scott	138
Steven Carpenter	131
Robert Parker	124
Cassandra Brantley	122
Christina Koenen	122
Michael Green	120
Matt Anderson	117
Ken Lonsdale	113
Mike George	113
Nevil Stevens	111
Mark Murphy	111
Seth Vernon	108
Glynn Kelly	108
Drew Hall	107
Clay Luther	106
Doug Tait	106
James Thompson	106
Martina Schwing	105
Markus Müller	105
Sergio Jacobs	104
Dan Fischenthal	104
Total	17673

Filters

Visualizations Build visual

Data

Search

Customer N...

\sum Discount

\sum no of units Sold

> Order Data

Order ID

\sum Postal Code

\sum Price

Product ID

Product Name

Quality Status

\sum Quantity

Region

\sum Row ID

Segment

> Ship Date

Ship Mode

State

Sub-Category

TOTAL NO OF ...

Rows Customer Name

Columns Add data fields here

Values TOTAL NO OF ...

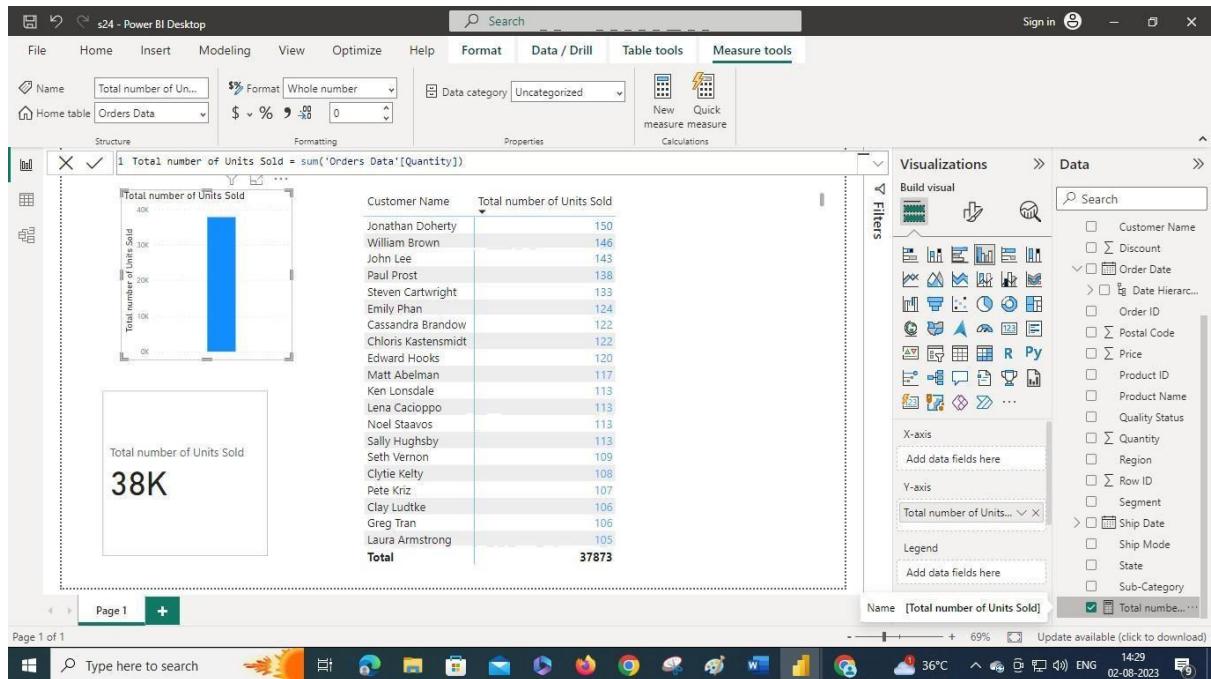
Drill through

Page 1 of 3 Page 1 Page 2 Page 3 +

Type here to search

37°C 14:53 03-08-2023

OUTPUT:



RESULT:

The perform DAX calculations were performed successfully using Power BI Desktop and displayed desired output in neat format.

EX NO:13

DESIGN A REPORT

AIM:

To using Power BI Desktop

PROCEDURE:

Step 1: Start Power BI Desktop

Step 2: Goto to home menu, select get data and then choose excel worksheet

Step 3: Select your file to load into Power Bi application and press load button

Step 4: Now the file is loaded and now click report view in the left panel

Step 5: Goto data panel and right click on data file and choose new measure

Step 6: Type the formula for new measure and click the new measure “was added

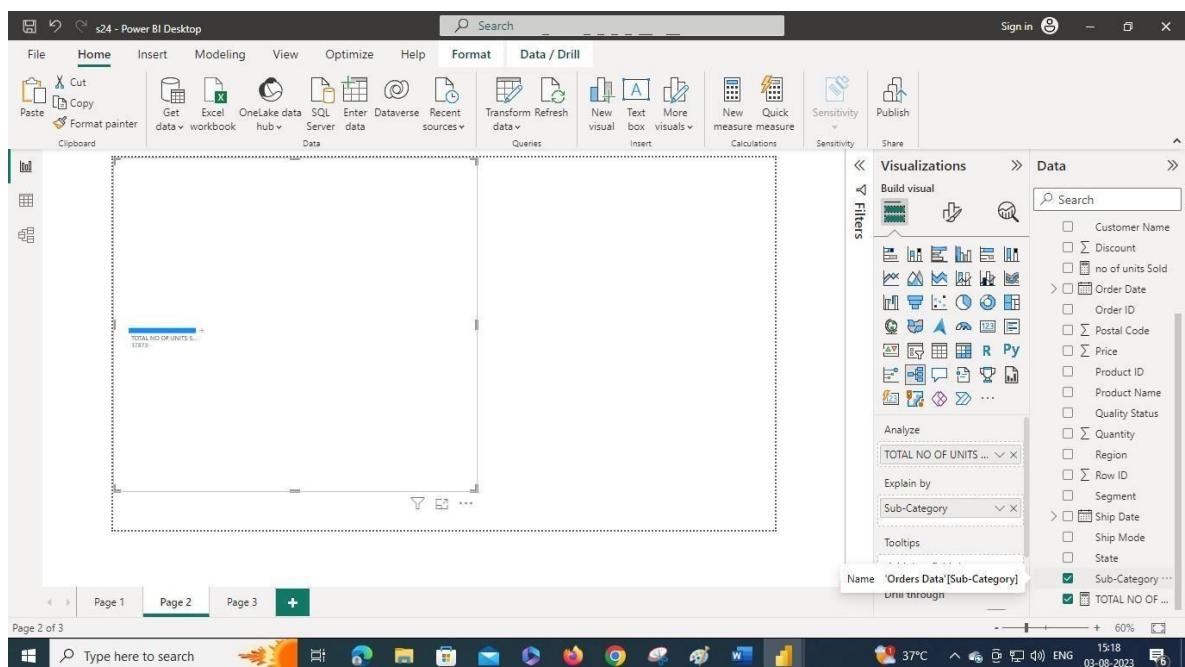
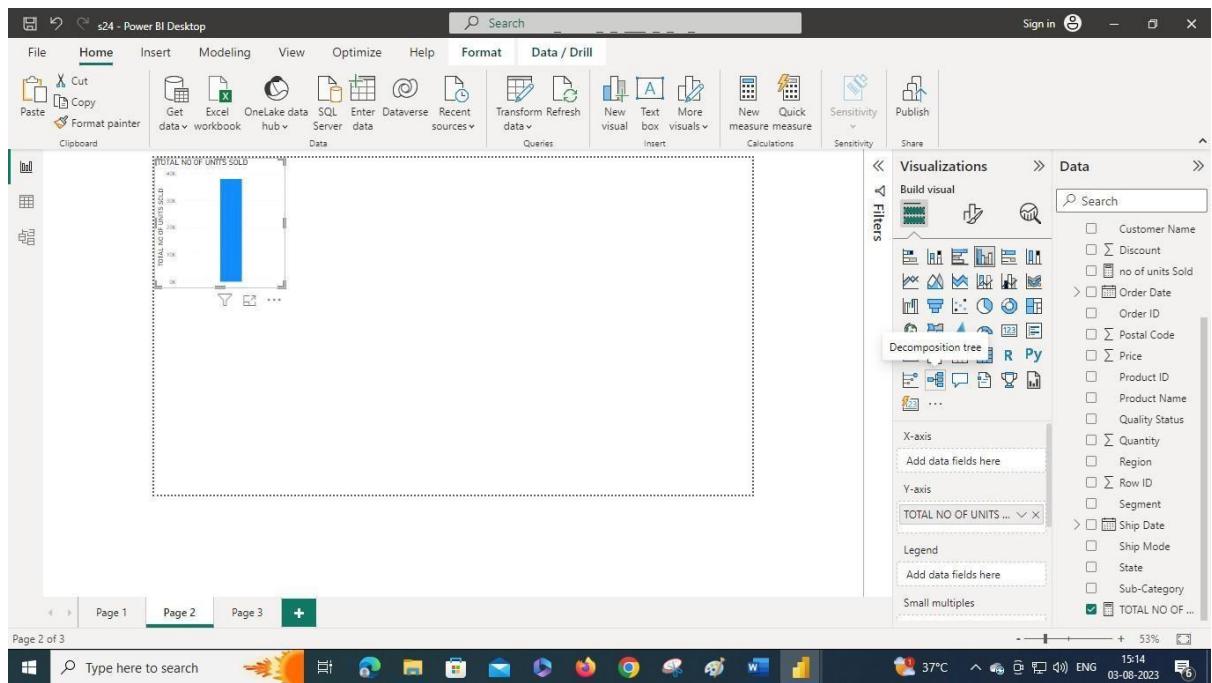
Step 7: Select clustered column chat and copy the visualization in workspace.

Step 8: Change to decomposition tree visualization in workspace.

Step 9: Explore the data in various forms for select filed.

Step 10: Save the file in desired location

Step 11: Close the Power BI Desktop application



s24 - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Get data Excel workbook OneLake data hub SQL Server data Enter Dataverse Recent sources Transform Refresh data New visual Text box More visuals Insert New measure Quick measure Calculations Sensitivity Publish Clipboard Data Queries Insert Share

Visualizations Data

Filters

Build visual

Analyze

Explain by Sub-Category

Tooltips Add data fields here

Drill through

Customer Name \sum Discount no of units Sold Order Date Order ID \sum Postal Code \sum Price Product ID Product Name Quality Status \sum Quantity Region Row ID Segment Ship Date Ship Mode State Sub-Category TOTAL NO OF ...

Page 1 Page 2 Page 3 +

Type here to search 37°C 15:22 ENG 03-08-2023

A screenshot of the Power BI Desktop application. The main area displays a bar chart with a single bar labeled 'Sub-Category' and a value of 'TOTAL NO OF UNITS: 33873'. A tooltip is open over the bar, showing two options: 'High value' and 'Low Find the field with the highest value for your metric'. The ribbon at the top includes tabs for File, Home, Insert, Modeling, View, Optimize, Help, Format, and Data / Drill. The Home tab is selected. The ribbon icons include Cut, Copy, Format painter, Paste, Get data, Excel workbook, OneLake data hub, SQL Server data, Enter Dataverse, Recent sources, Transform, Refresh data, New visual, Text box, More visuals, Insert, New measure, Quick measure, Calculations, Sensitivity, and Publish. The left sidebar shows the 'Visualizations' and 'Data' sections. The 'Data' section contains a search bar and a list of fields: Customer Name, \sum Discount, no of units Sold, Order Date, Order ID, \sum Postal Code, \sum Price, Product ID, Product Name, Quality Status, \sum Quantity, Region, Row ID, Segment, Ship Date, Ship Mode, State, Sub-Category, and TOTAL NO OF ... The 'Analyze' section shows 'TOTAL NO OF UNITS ...' and 'Sub-Category'. The 'Explain by' section shows 'Sub-Category' and 'Product Name'. The 'ToolTips' section has an option 'Add data fields here'. The bottom status bar shows 'Page 2 of 3', the system tray with icons for search, file, and power, and the date and time '03-08-2023'.

s24 - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Get data Excel workbook OneLake data hub SQL Server data Enter Dataverse Recent sources Transform Refresh data New visual Text box More visuals Insert New measure Quick measure Calculations Sensitivity Publish Clipboard Data Queries Insert Share

Visualizations Data

Filters

Build visual

Analyze

Explain by Sub-Category

Product Name

Name 'Orders Data'[State]

Add data fields here

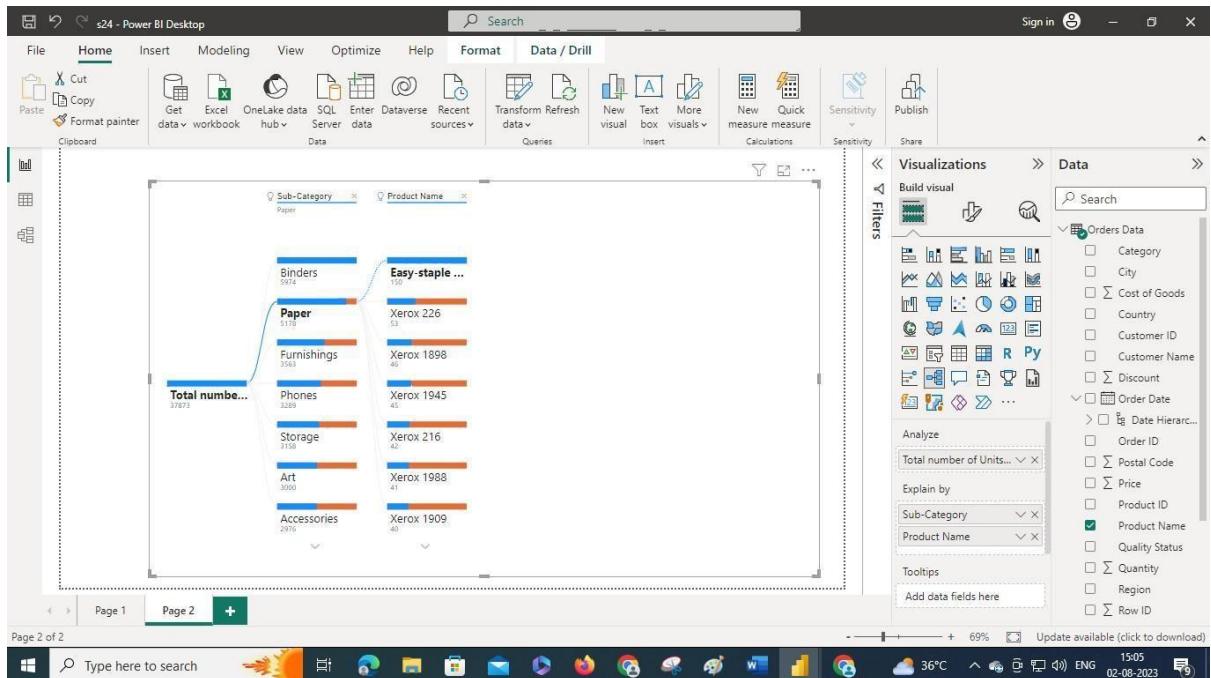
Customer Name \sum Discount no of units Sold Order Date Order ID \sum Postal Code \sum Price Product Name Quality Status \sum Quantity Region Row ID Segment Ship Date Ship Mode State Sub-Category TOTAL NO OF ...

Page 1 Page 2 Page 3 +

Type here to search 37°C 15:25 ENG 03-08-2023

A screenshot of the Power BI Desktop application, identical to the one above but with a different configuration. The main area now displays a bar chart with multiple bars representing different product categories. The bars are ordered from highest to lowest value. The 'Product Name' field is selected in the 'Analyze' section of the Power BI Fields pane. The 'Explain by' section also lists 'Sub-Category' and 'Product Name'. The rest of the interface, including the ribbon, sidebar, and status bar, is identical to the first screenshot.

OUTPUT:



RESULT:

The report was created successfully using Power BI Desktop and displayed desired output in neat format.

EX NO:14 CREATION OF A DASHBOARD AND PERFORM DATA ANALYSIS

AIM:

To create of a dashboard and perform data analysis using Power BI Desktop

PROCEDURE:

Step 1: Start Power BI Desktop

Step 2: Goto to home menu, select get data and then choose excel worksheet

Step 3: Select your file to load into Power Bi application and press load button

Step 4: Now the file is loaded and now click report view in the left panel

Step 5: Goto data panel and right click on data file and choose team filed and slicer visualization

Step 6: Now teamwise slicer was displayed. Next copy the visualization and change to card visualization

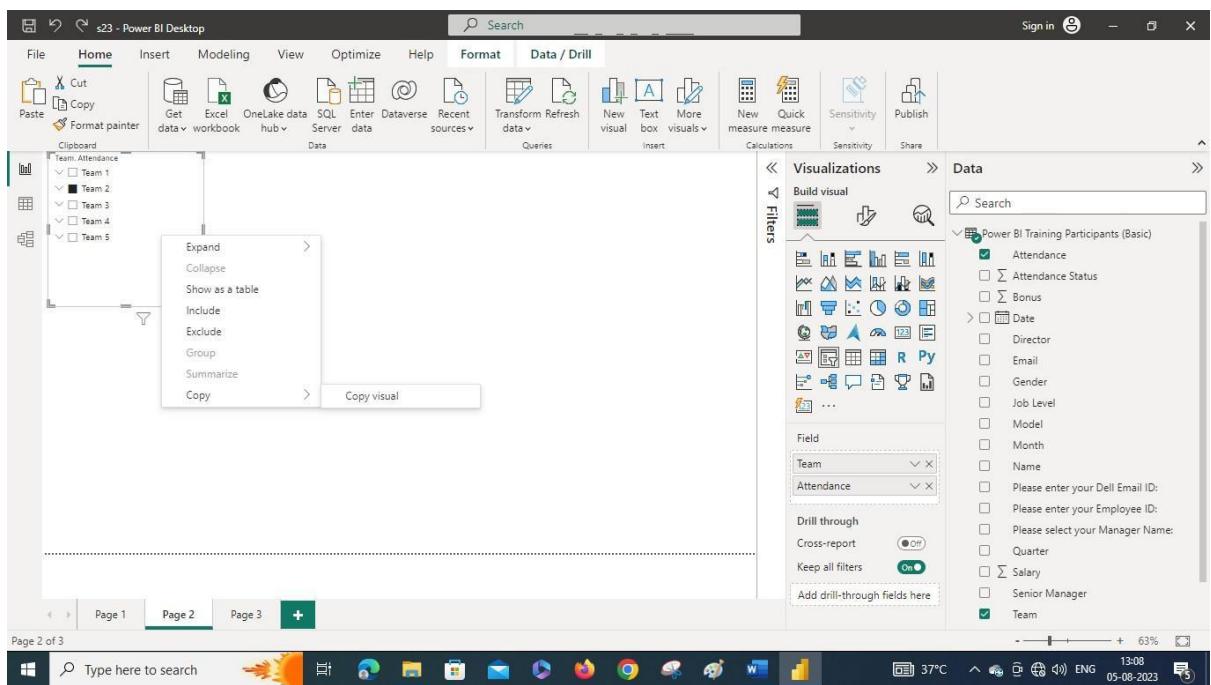
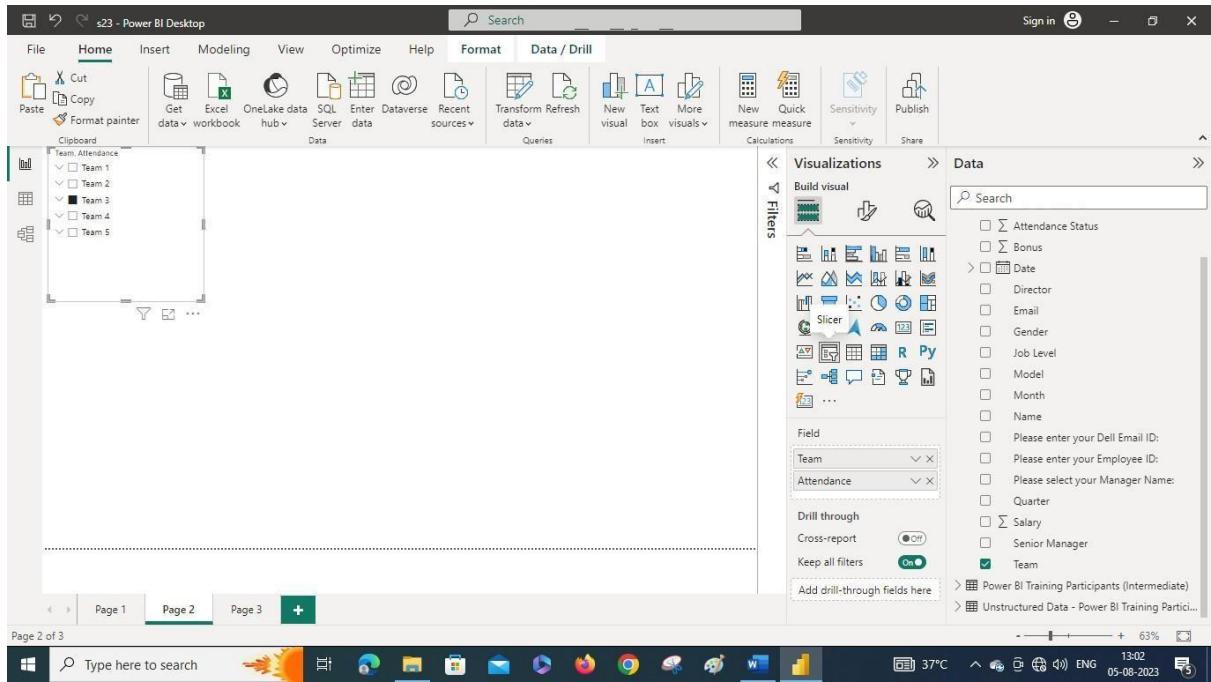
Step 7: Now copy the visualization and change to gauge visualization

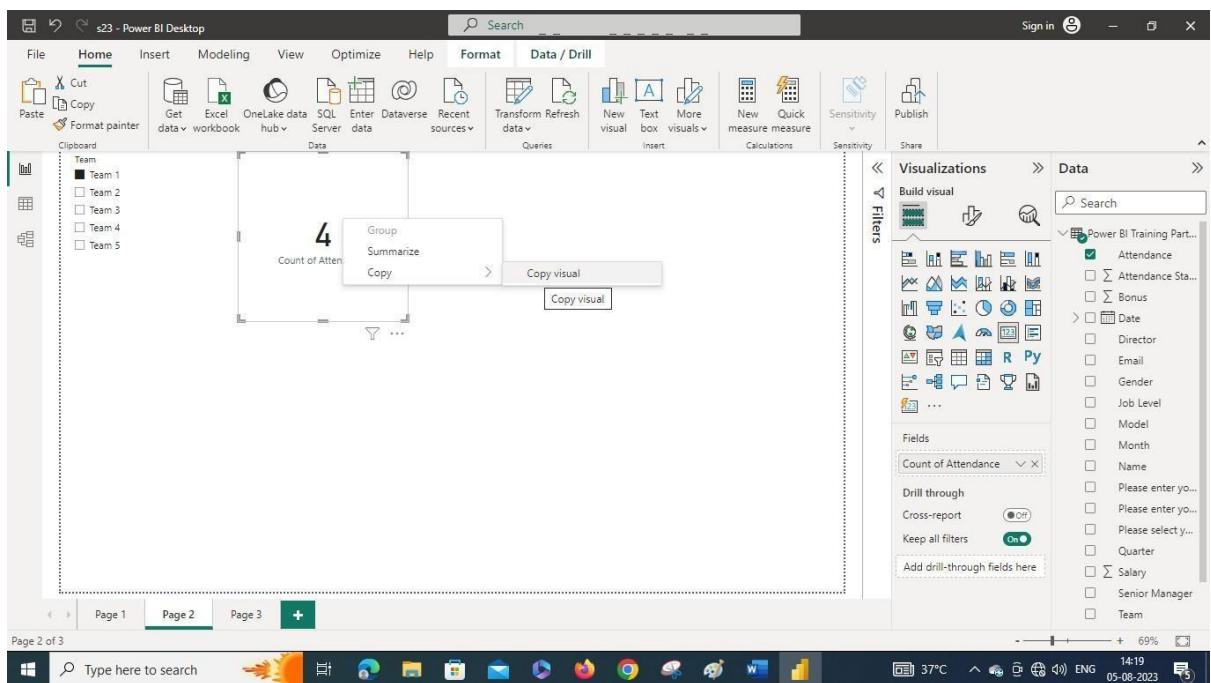
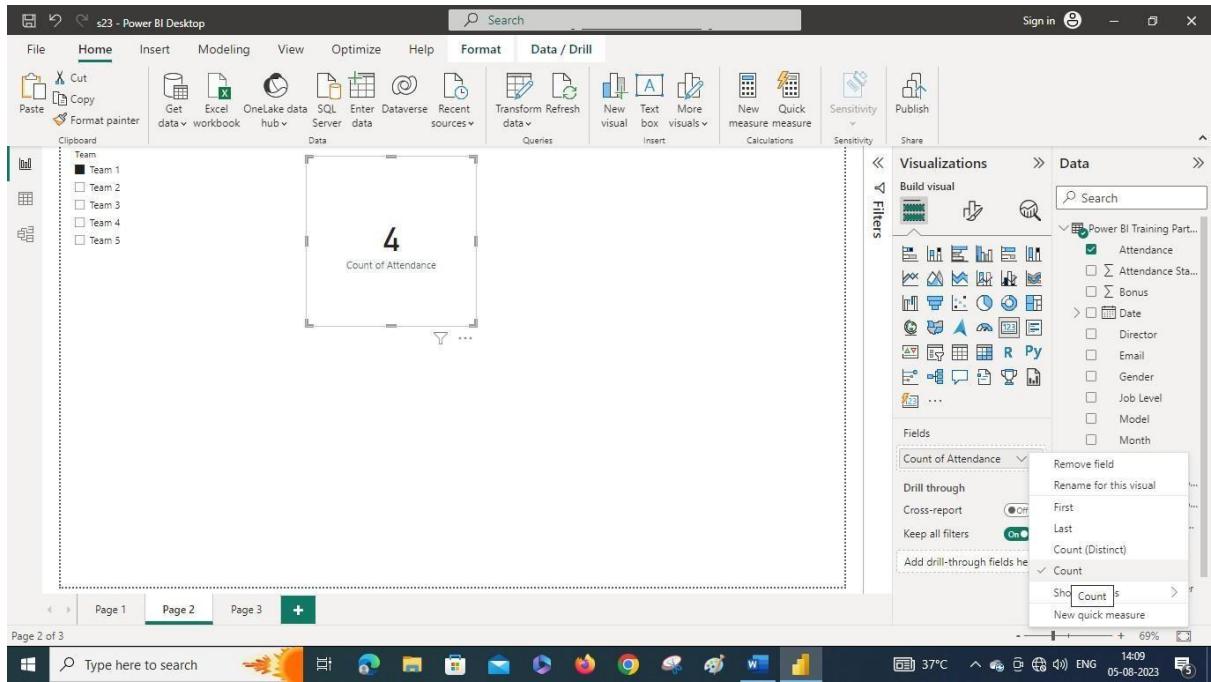
Step 8: Next copy the visualization and change to donut visualization and drag gender field and change value filed as count of gender

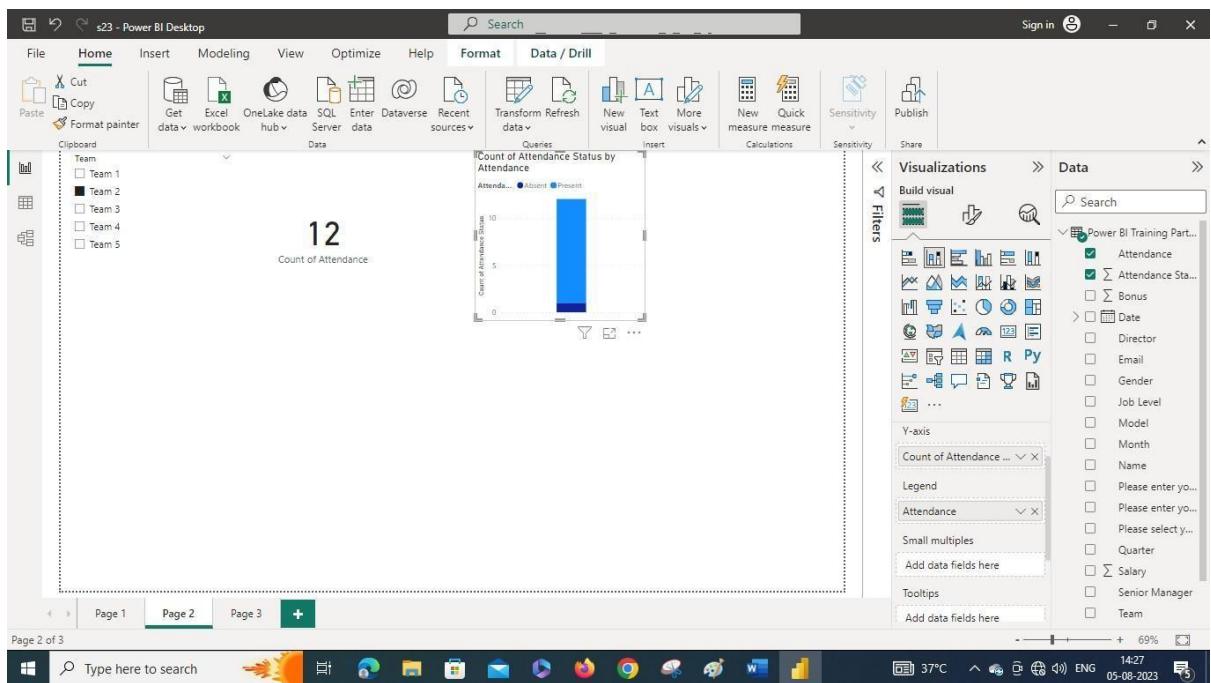
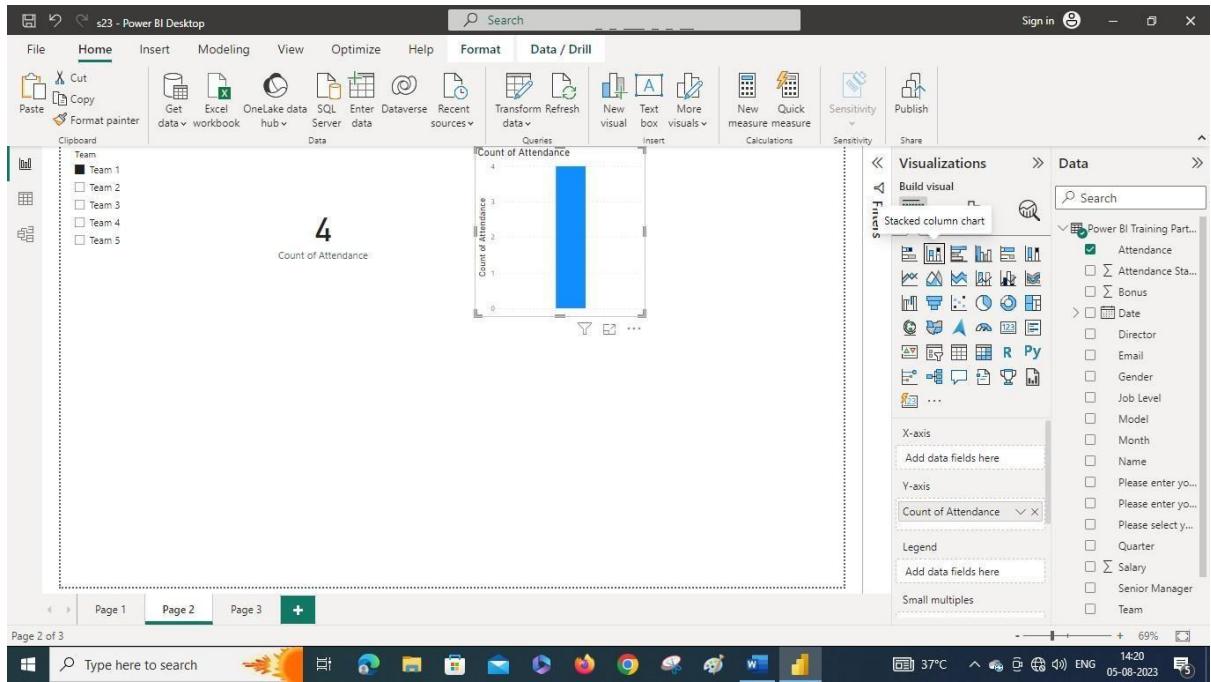
Step 9: Now change and display the visualization as per teamwise

Step 10: Save the file in desired location

Step 11: Close the Power BI Desktop application







s23 - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Get data v Excel workbook OneLake data hub v SQL Server Enter data Dataverse Recent sources v Transform Refresh data New visual New Text box More visuals v Insert New measure Quick measure Calculations Sensitivity Share

Clipboard Team □ Team 1 ■ Team 2 □ Team 3 □ Team 4 □ Team 5

Count of Attendance

12

Count of Attendance Status by Attendance

Attendance Absent Present

Count of Attendance Status

Attendance Absent Present

Show data point as a table Show as a table Group data Include Exclude Group Summarize Copy visual Copy visual

Visualizations Build visual

Data Search

Power BI Training Part... Attendance ∑ Attendance Sta... Bonus Date Director Email Gender Job Level Model Month Name Please enter yo... Please enter yo... Please select yo... Quarter ∑ Salary Senior Manager Team

Page 1 Page 2 Page 3 +

Type here to search 37°C 14:31 ENG 05-08-2023

The screenshot shows a Power BI report with a bar chart titled "Count of Attendance Status by Attendance". The chart has two bars: "Absent" (dark blue) and "Present" (light blue). The "Present" bar has a value of 12. A context menu is open over the "Present" bar, with the "Copy visual" option highlighted. The Power BI interface includes a ribbon with Home, Insert, and Format tabs, a data pane on the left, and a visualizations pane on the right.

s23 - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Format painter Paste Get data v Excel workbook OneLake data hub v SQL Server Enter data Dataverse Recent sources v Transform Refresh data New visual New Text box More visuals v Insert New measure Quick measure Calculations Sensitivity Share

Clipboard Team □ Team 1 ■ Team 2 □ Team 3 □ Team 4 □ Team 5

Count of Attendance

12

Count of Attendance Status by Attendance

Attendance Absent Present

Count of Attendance Status

Attendance Absent Present

Visualizations Build visual

Data Search

Power BI Training Part... Attendance ∑ Attendance Sta... Bonus Date Director Email Gender Job Level Model Month Name Please enter yo... Please enter yo... Please select yo... Quarter ∑ Salary Senior Manager Team

Page 1 Page 2 Page 3 +

Type here to search 37°C 14:31 ENG 05-08-2023

The screenshot shows the same Power BI report as the first one, but with a different view of the data pane and visualizations pane. The data pane now shows a single item under "Power BI Training Part...": "Attendance". The visualizations pane shows various chart and table options. The context menu over the "Present" bar is still open, with the "Copy visual" option highlighted.

s23 - Power BI Desktop

File Home Insert Modeling View Optimize Help Format Data / Drill

Cut Copy Paste Format painter

Get data workbook OneLake data hub SQL Server Data Enter data Dataverse Recent sources Transform Refresh data New visual Text box More visuals New measure Quick measure Calculations Sensitivity Publish

Clipboard Team Team 1 Team 2 Team 3 Team 4 Team 5

Count of Attendance Status by Attendance

Attendance: Absent Present

Count of Attendance Status

12 Count of Attendance

Count of Attendance Status

12 24

Count of Attendance Status by Attendance

Attendance: Absent Present

Count of Attendance Status

12 Count of Attendance

Count of Attendance Status

12 24

Page 1 Page 2 Page 3 +

Page 2 of 3

Type here to search 37°C 14:33 05-08-2023

Visualizations Data

Build visual

Filters

Value

Count of Attendance ...

Minimum value

Add data fields here

Maximum value

Add data fields here

Target value

Power BI Training Part... Attendance Bonus Date Director Email Gender Job Level Model Month Name Please enter yo... Please enter yo... Please select yo... Quarter Salary Senior Manager Team

s23 - Power BI Desktop

File Home Insert Modeling View Optimize Help

New page New visual More visual

Q&A Key influencers Decomposition tree Smart narrative

Paginated report Power Automate (preview)

Power Apps (preview)

Text box Buttons Shapes Image

Add a sparkline Sparklines

AI Visuals Power Platform Elements

Add a visual to your report.

Team Team 1 Team 2 Team 3 Team 4 Team 5

Count of Attendance Status by Attendance

Attendance: Absent Present

Count of Attendance Status

8 Count of Attendance

Count of Attendance Status

8 16

Count of Attendance Status by Attendance

Attendance: Absent Present

Count of Attendance Status

8 Count of Attendance

Count of Attendance Status

8 16

Page 1 Page 2 Page 3 +

Page 2 of 3

Type here to search 37°C 14:33 05-08-2023

Visualizations Data

Build visual

Filters

Values

Add data fields here

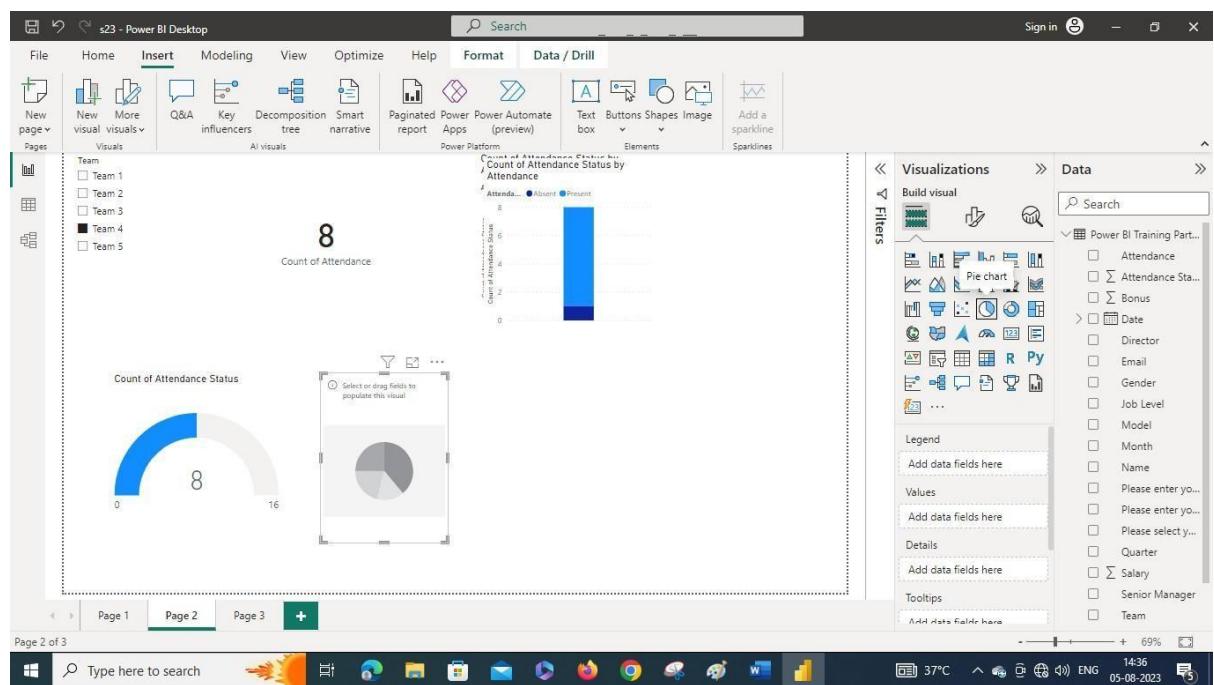
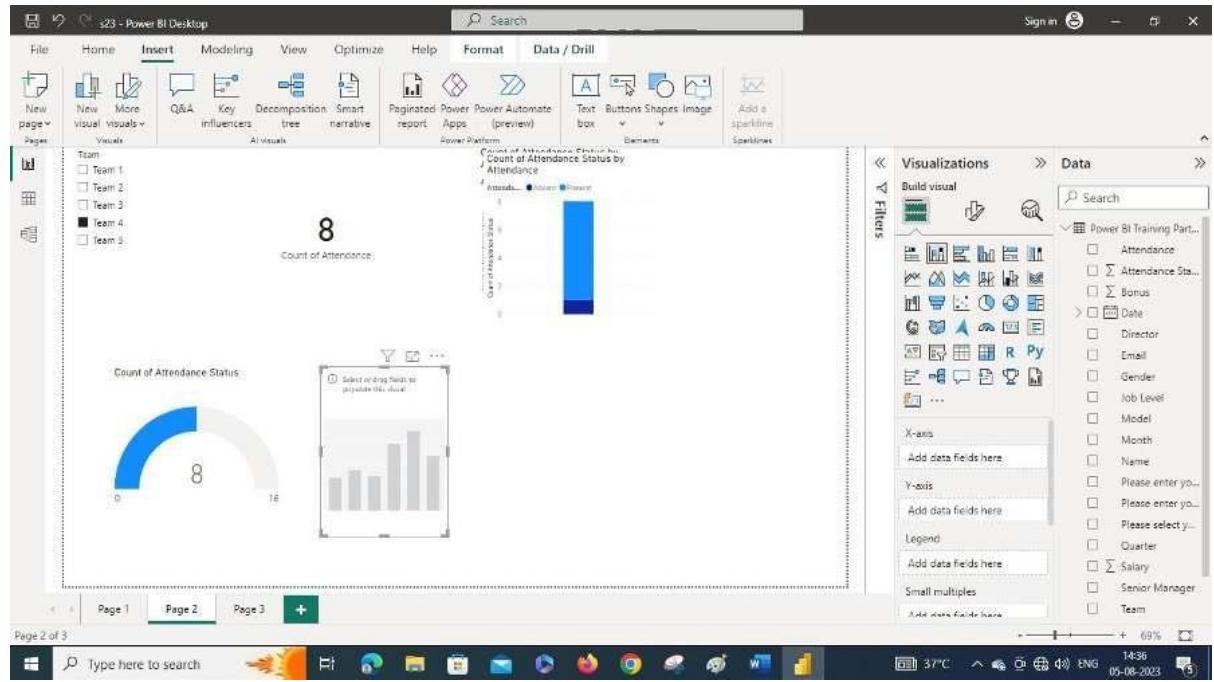
Drill through

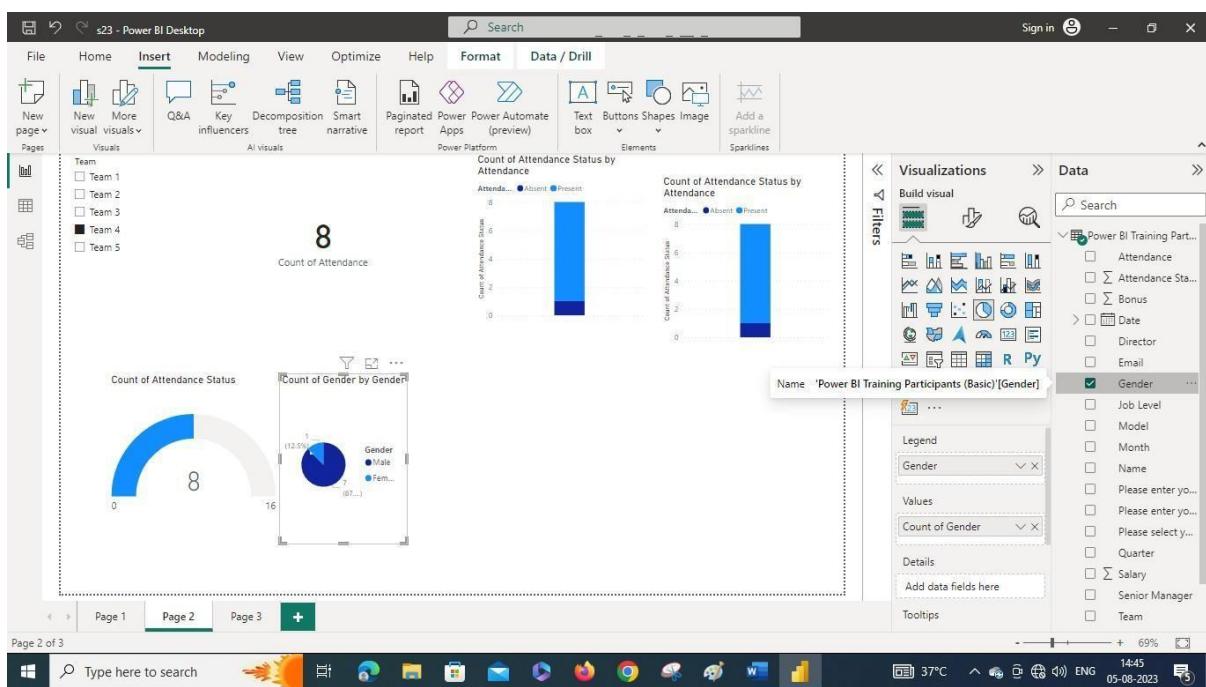
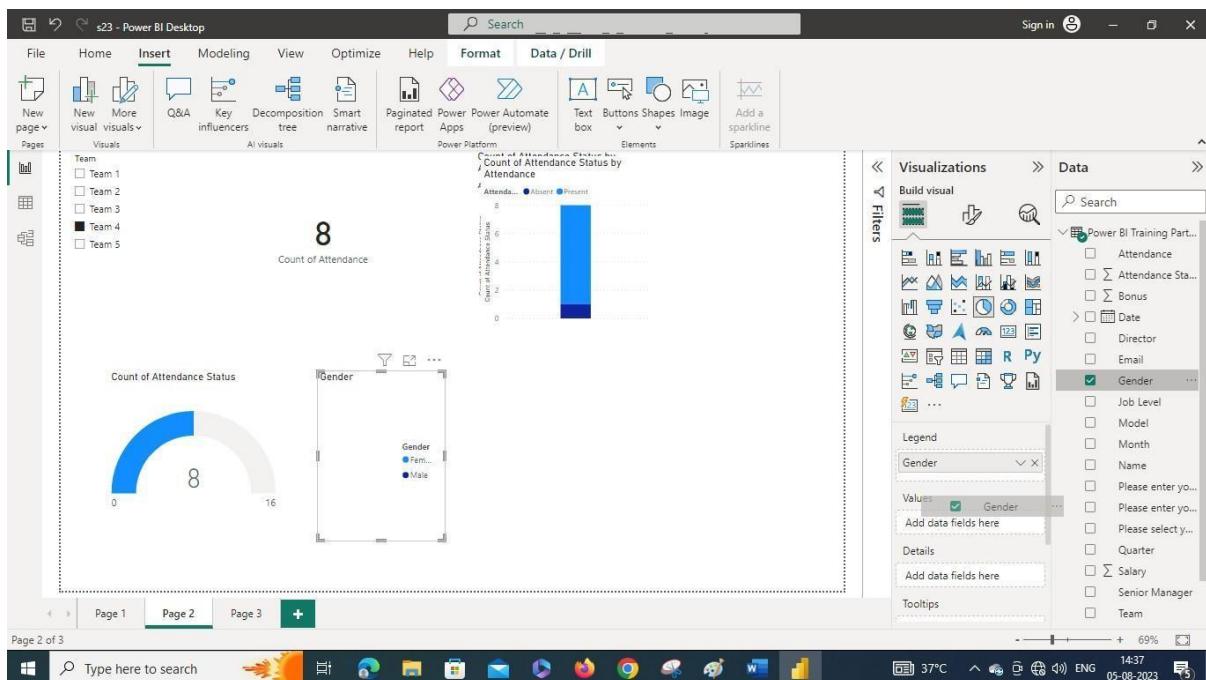
Cross-report

Keep all filters

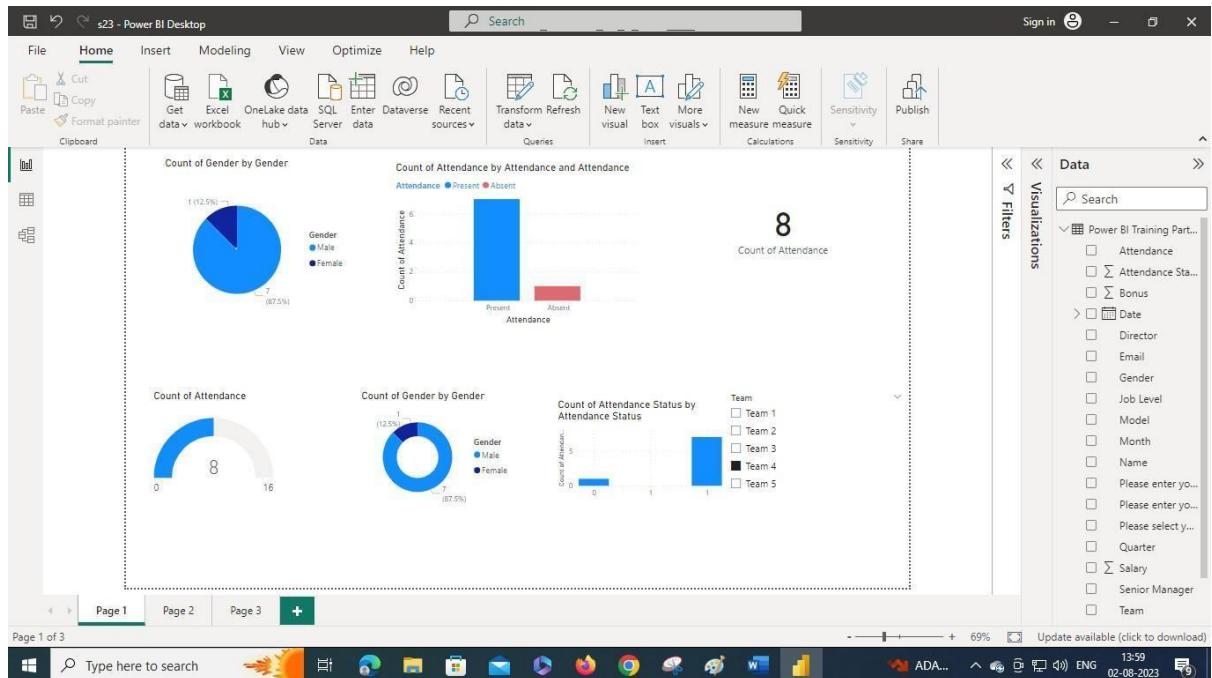
Add drill-through fields here

Power BI Training Part... Attendance Bonus Date Director Email Gender Job Level Model Month Name Please enter yo... Please enter yo... Please select yo... Quarter Salary Senior Manager Team





OUTPUT:



RESULT:

The dashboard was created and data analysis was performed successfully using Power BI Desktop and displayed desired output in neat format.

EX NO:15 Presentation of a case study - Campus Recruitment Analysis

AIM:

To Presentation of a case study for Campus Recruitment Analysis using Power BI Desktop

The Challenge

Campus Placements/ Campus Recruitment drives are conducted in various educational institutes for providing job opportunities to the students who are pursuing their particular academic courses.

As much as it is important to the students, it is also important to the institute as it gives a chance to contemplate about the process. This data includes students from various colleges.

The Solution

What every management team wants to know:

- How many companies appeared?
- How many students appeared?
- Which companies have hired the most of the students and from which college?
- How many students accepted the offer?
- Were the companies beneficial in accordance to their vacancies?
- How many students were selected by the companies?
- What was the ratio between students applied and the vacancies available?
- Which college were the most preferred by the students?
- Which technologies were the most preferred by the students?
- Which colleges were benefitted by this recruitment in terms of the selection?
- Which colleges did not perform up to the mark?
- Which colleges were involved the most in terms of the students registered?
- Which companies were beneficial in accordance to their vacancies?

The Extra Mile

- We gave users a menu driven page where they can navigate to the page of their interest.
- Overview of companies with respect to the technologies.
- Overview of students with respect to the technologies, companies and colleges.
- Overview of selected students with respect to the technologies, companies and colleges.
- Insights on basis of the students' priority and the offers given to them.
- We have given extra information apart from what is need about every area of interest.

OUTPUT:





RESULT:

The Presentation of a case study for Campus Recruitment Analysis was performed successfully using Power BI Desktop and displayed desired output in neat format.