ASSIGNMENT

1) What are charts and Different Types of Charts?

Ans: A charts is a graphical representation of data in worksheet. It helps to provide a better understanding of large quantities of data. Charts make it easier to draw comparisons and see growth and relationship among the values and trends in data. charts can make data interesting, attractive and easy to read and evaluate. A chart is a diagram, picture or graph which is intended to make information easier to understand. A charts also is a diagram, picture, or graph which is intended to make information easier to understand

In MS Excel, a chart in often called a graph. It is a visual representation of data from a worksheet that can bring more understanding to the data. A charts is a visual representative of data in both columns and rows. charts are usually used to analyse trends and patterns in data sets.

Different types of Charts are:-

i) Bar chart: This type of chart in Excel is called a column chart because the bars are placed on the columns. Bar charts illustrate comparisons among individual items. In a Bar chart, the categories are organized along the vertical axis and the values are organized along the horizontal axis. To create a Bar chart, arrange the data in columns or rows on the worksheet.

A Bar chart has the following sub types-

- Clustered Bar
- Stacked Bar
- 100% Stacked Bar
- 3-D Clustered Bar
- 3-D Stacked Bar
- 3-D 100% Stacked Bar.

ii) Pie Chart: A Pie chart is a rounded shape graph that is divided into slices of pie. Pie charts show the size of items in one data series, proportional to the sum of the items. The data points in a pie chart are shown as a percentage of the whole pie.

iii) Line Chart: Line charts can show continous data over time on an evenly scaled Axis.

Therefore, they are ideal for showing trends in data at equal intervals, such as months, quarters or years.

iv) Area Chart: Area charts can be used to plot the change over time and draw attention to the total value across a trend. By showing the sum of the plotted values, an area chart also shows the relationship of parts to a whole. To create an Area chart, arrange the data in columns or rows on the worksheet.

v) Radar chart: Data that's arranged in columns or rows on a worksheet can be plotted in a radar charts. Radar charts compare the aggregate values of several data series. Radar charts compare the values of three or more variables in relation to a center point. Radar charts also referred to as Spider charts.

vi) Scatter plot: A scatter plot, also called a coordinate graph, uses dots to represent the data values for two different variables, one on each axis. scatter use to show a hierarchical comparison with rings. scatter use with at least two data sets when the data signifies measurements.

vii) Stacked Column: A stacked column chart is a basic excel chart type to allow part-to-whole

comparisons over time, or across categories. In a stacked column chart, data series are stacked one on top of the other in vertical columns. Stacked column charts can show change over time because it's easy to compare total column lengths.

viii) Bubble chart: Bubble charts in excel help to visually quantify the share of category by comparing the size of each bubble in the chart. Bubble charts are more or less looks like scatter charts, in bubble chart it will magnify the point based on its % share.

ix) Histogram: A histogram is a specific type of bar chart, where the categories are ranges of numbers. Histograms therefore show combine continous data. Histograms are used in statistics, business and economics where numerical data plays a crucial role. A histogram is another type of bar graph that illustrates the distribution of numeric data across categories.

x) Column chart: Column chart are very useful for the comparison of at least one set of data points. The vertical axis, which is also known as the Y axis, is often shown in numeric values. The X axis on the horizontal line

shows a perio:

xi) Funnel chart: Funnel charts are a type of chart, often used to represent stages in a sales process and show the amount of potential revenue for each stage. This type of chart can also be useful in identifying potential problem areas in an organization's sales processes. A Funnel chart is similar to a stacked percent bar chart.

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2) What are Pivot Tables in Excel and their implementations?

Ans: A Pivot Tables is a table of grouped values that aggregates the individual items of a more extensive tabe (such as from a database, spreadsheet, or business intelligence program) within one or more discrete categories. This summary might includes sums, averages, or other statistics, which the pivot table groups together using a chosen aggregation function applied to the grouped values.

Pivot tables are not created automatically. For examples, in Microsoft Excel one must first select and entire data in the original table and then go to the Insert tab and select "Pivot Table" (or "Pivot Chart"). The user then has

the option of either inserting the Pivot Table into an existing sheet or creating a new sheet to house the pivot table. A Pivot table field list is provided to the user which lists all the column headers present in the data. For instance, if a table represents sales data of a company, it might include Date of sale, Salesperson, Item sold, Units sold, Per unit price and total price. This makes the data more readily accessible. For eg.

Date of sale	Sales Person	Item sold	unit sold	Per unit price	Total price
11/01/20	Max	Notebok	5	20000	100000
13/02/20	Soya	Newspaper	20	100	2000
15/04/20	Tina	Laptop	6	40000	240000
20/06/20	Robin	TV	9	25000	225,000

This fields that would be created will be visible on the right hand side of the worksheet By default, the pivot table layout design will appear below this list.

Pivot tables fields are the building blocks of pivot tables. Each of the fields from the list can be dragged on this layout, which has four options:-

i) Filters
ii) Columns
iii) Rows
iv) Values

Some uses of Pivot tables are related to the analysis of questionnaries with optional responses but some implementations of pivot tables do not allow these use cases.

i) Filters: Report filter is used to apply a filter to an entire table.

ii) Columns: Column labels are used to apply a filter to one or more columns that have to be shown in the pivot table.

iii) Rows: Row Labels are used to apply a filter to one or more rows that have to be shown in the pivot table.

iv) values: This usually takes a field that has numerical values that can be used for different types of calculations. for examples.

Row labels	Sum of units sold
Max	5
Soya	20
Tina	6
Robin	9
Grand total	40

3) What is Conditional Formatting? Distinguish 5 types of Conditional Formatting.

Ans: Conditional Formatting makes it easy to highlight certain values or make particular cell easy to identify. This change the appearance of a cell range based on a condition (or criteria). We can use conditional formatting to highlight cells that contain values which meet a certain condition. Or we can format a whole cell range and vary the exact format as the value of each cell varies.

There are 5 types of conditional formatting visualizations available:-

- Background color shading (of cells)
- Foreground color shading (of fonts)
- Data Bars.
- Icons (which have 4 different image types)
- Values.

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4) How to clear Formatting in Excel without actually removing the cell content?

Ans: In Excel, we can easily remove formatting from cells without removing the contents of the cells following some simple steps. In this article, we'll show how we can remove formatting in Excel without removing content in 6 different situations.

i) Remove Formatting from selected cells:

⇒ First, select the cells from where we want to remove formatting.

⇒ Then, go to Home > Editing > clear and select Clear Formats.

Now, we will see the formatting of our selected cells has been removed but the contents are still there.

ii) Keyboard shortcut to Remove Formatting: The easiest way to remove formatting from selected cells is using a keyboard shortcut.

⇒ First, select the formatted cells.

⇒ Then, Press ALT + H + E + F

As a result, we will see all the formatting of the selected cells are removed.

iii) Remove Formatting from Entire Dataset: We can also remove formatting from the entire worksheet without removing any contents.

⇒ First, select all the cells by clicking on the arrow sign from the intersect point of the row and column number.

⇒ After that, go to Home > Editing > clear and select clear Formats.

As a result, all the formatting of our entire dataset will be removed.

iv) Remove Formatting From Blank Cells: Now, let's see how we can remove formatting from the Blank cells. Consider the following dataset, where we have some blank cells formatted with green color. Now, we want to remove the formatting only from the blank cells.

=> First, select your dataset and press F5.

=> Click on the Special box from the Go to window. Now, Go to special window will be opened.

=> Select Blanks and click on Ok.

Now, we can see all the blank cells of your dataset are selected.

To remove the formatting of these blank cells,

=> Go to Home > Editing > Clear and select Clear Formats.

Now we can see, formatting from the blank cells is removed.

v) Remove specific cells' formatting without Removing Contents: In this section, we'll show how to remove specific cells' formatting without deleting the contents. Suppose in our dataset we have two types of formatting, one is with green color and another is with yellow color. we will remove the formats of the yellow cells.

=> First, Go to Home > Editing > Find and Select > Find.

It will open the Find and Replace window.

=> Now, Click on options in this window to expand it.

After that, we can see the Format box in the Find and Replace window.

=> Click on the Format box.

As a result, a new window, named Find Format will appear.

=> Go to the Fill tab and select the color of the cells from where we want to remove formatting.

=> At last press OK.

Now in the Find and Replace window we will see our selected color in the Preview box.

=> Click on Find All.

As a result, a list of cells containing the specific format will appear at the bottom of the Find and Replace window.

=> Now, select all the cells from the list.

=> After that, go to Home > Editing > Clear and select Clear Formats.

As a result, the formatting of yellow colored cells is removed.

=> Lastly, close the Find and Replace window.

Now, we can see the formats of the yellow colored cells are removed while the contents of these cells are still in place.

vi) Remove Conditional Formatting without Removing Contents: To remove conditional formatting from our dataset without removing contents,

=> First, select our entire dataset.

=> Then, Go to Home > Conditional Formatting > Clear Rules and select Clear Rules from Selected Cells.

As a result, conditional formatting from the selected cells will be removed without removing any contents.

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7) Define statistics?

Ans: Statistics is the study and manipulation of data, including ways to gather, review, analyze, and draw conclusions from data. A branch of mathematics dealing with the collection, interpretation, and presentation of masses of numerical data. statistics in excel apply a mathematical process to a group of cells in a worksheet. For example the Sum function is used to add the values contained in a range of cells.

Here, are some statistic Function:

i) Count Function.
ii) Counta function
iii) Count blank.
iv) Countifs Function.
v) Average function.
vi) median function
vii) mode function
viii) standard deviation function.
ix) Quartiles functions.
x) Correlation function.

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8) Explain about any two Data Analysis Tools Pack?

Ans: The Analysis Toolpark includes the tools described in the following sections. To access these tools, click Data Analysis in the Analysis group on the Data tab. If the Data Analysis command is not available, we need to load the Analysis Toolpark add-in program. The two type Data Analysis are:-

i) Regression: The Regression analysis tool performs linear regression analysis by using the "least square" method to fit a line through a set of observations. We can analyze how a single dependent variable is affected by the values of one or more independent variables. The Regression tool uses the worksheet function Linest.

ii) Sampling: The Sampling analysis tool create a sample from a population by treating the input range as a population. when the population is too large to process or chart, we can use a representive sample. we can also create a sample that contains only the values from a particular part of a cycle if we believe that the input data is periodic.

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9) Explain about Histogram?

Ans: A histogram is a display of statistical information that uses rectangles to show the frequency of data items in successive numerical intervals of equal size. In the most common form of histogram, the independent variable is plotted along the horizontal axis and the dependent variables is plotted along the vertical axis. The data appears as colored or shaded rectangles of variables area. A histogram is a chart that shows frequencies for intervals of values of a metric variables. Such intervals as known as "bins" and they all have the same 'width." A histogram is also a type of chart that allows us to visualize the distribution of values in a dataset.

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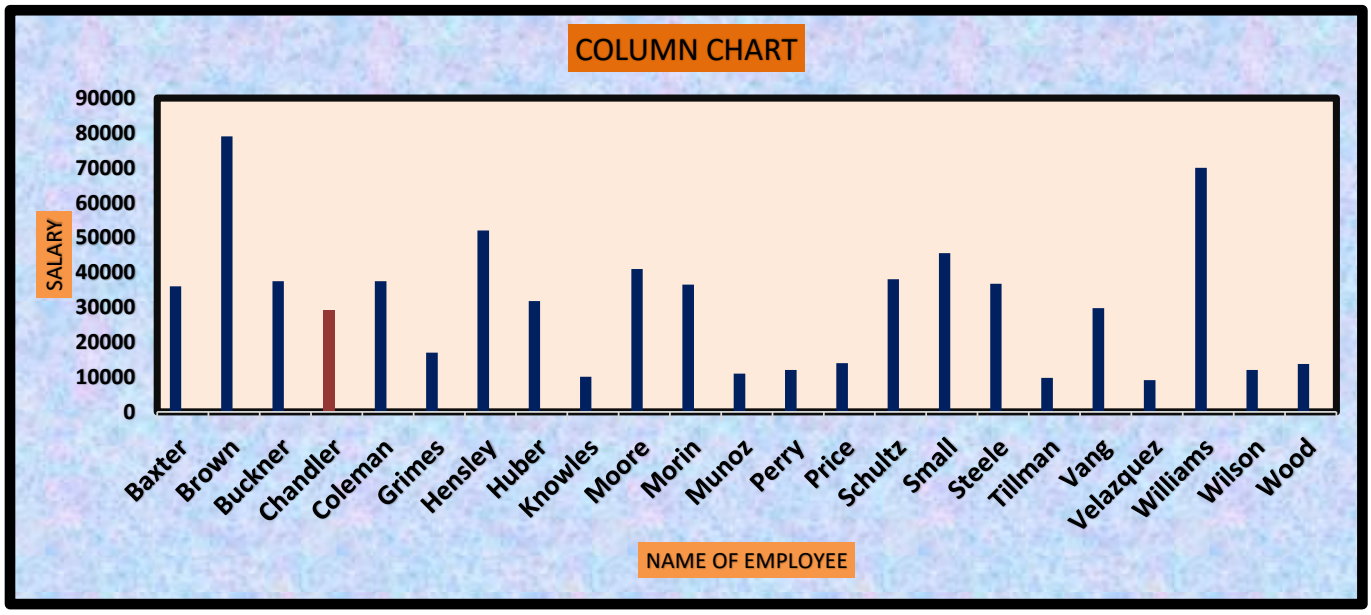
5)Create a Pivot Table and Chart for the Given Table?

Employees details

Name	Surname	Job	salary
Williams	Mary	Full Time	₹ 35,000.00
Brown	Carol	Full Time	₹39,000.00
Brown	Charles	Full Time	₹8,000.00
Chandler	Debra	Full Time	₹29,000.00
Coleman	Donald	Full Time	₹37,500.00
Grimes	Donna	Full Time	₹17,000.00
Huber	Frank	Full Time	₹31,750.00
Morin	Jason	Full Time	₹36,500.00
Munoz	Jennifer	Full Time	₹11,000.00
Perry	Jerry	Full Time	₹12,050.00
Price	Jessica	Full Time	₹14,000.00
Small	Joshua	Full Time	₹45,500.00
Vang	Marilyn	Full Time	₹29,750.00
Velazquez	Mary	Full Time	₹9,075.00
Williams	Matthew	Full Time	₹35,000.00
Wilson	Robert	Full Time	₹12,000.00
Baxter	Aaron	Part Time	₹36,000.00
Brown	Carlos	Part Time	₹32,000.00
Buckner	Daniel	Part Time	₹37,500.00
Hensley	Elizabeth	Part Time	₹52,000.00
Knowles	Gary	Part Time	₹10,050.00
Moore	George	Part Time	₹41,000.00
Schultz	Jose	Part Time	₹38,050.00
Steele	Kathleen	Part Time	₹36,750.00
Tillman	Lisa	Part Time	₹9,750.00
Wood	Ruth	Part Time	₹13,750.00

Row Labels	Sum of salary	Count of salary2
Baxter	36000	1
Brown	79000	3
Buckner	37500	1
Chandler	29000	1
Coleman	37500	1
Grimes	17000	1
Hensley	52000	1
Huber	31750	1
Knowles	10050	1
Moore	41000	1
Morin	36500	1
Munoz	11000	1
Perry	12050	1
Price	14000	1
Schultz	38050	1
Small	45500	1
Steele	36750	1
Tillman	9750	1
Vang	29750	1
Velazquez	9075	1
Williams	70000	2
Wilson	12000	1
Wood	13750	1
Grand Total	**708975**	**26**


COLUMN CHART
SALARY
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
Baxter
Brown
Buckner
Chandler
Coleman
Grimes
Hensley
Huber
Knowles
Moore
Morin
Munoz
Perry
Price
Schultz
Small
Steele
Tillman
Vang
Velazquez
Williams
Wilson
Wood
NAME OF EMPLOYEE

Q6. Create a Dashboard for the attached Excel Sheet.