MS EXCEL

MICROSOFT EXCEL is a spreadsheet program where one can record data in the form of tables. It is easy to analyse data in an Excel spread-sheet. It provides multiple features to perform various operations like calculations, pivot tables, graph tools, macro programming, etc.

An Excel spreadsheet can be understood as a collection of columns and rows that form a table. Alphabetical letters are usually assigned to columns, and numbers are usually assigned to rows.

The address of a cell is given by the letter representing the column and the number representing a row.

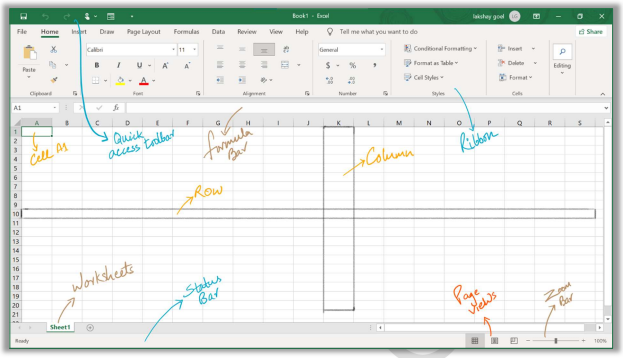
follow the steps to open MS Excel on your computer:

Click on Start

All Programs

Click on MS Office

MS Excel option



Worksheet
It is a grid made up of horizontal rows and vertical columns. The Excel 2019 worksheet contains 1,048,576 rows and 16,384 columns. Each intersection of a row and a column forms a cell, in which the user can store a value, a formula, or text.

Row
Identifies a horizontal row in the worksheet. It appears on the left border of the worksheet.

Column
Identifies a vertical column in the worksheet. It appears on the top border of the worksheet. Columns are lettered A-Z, then AA-AZ, then BA-BZ, and so on to 16,384th column.

Cell
In an Excel 2019 worksheet, the active cell can be identified with the green outline (A1). Data is always entered into the active cell.

Formula Bar
Located above the worksheet, this area displays the constant value or formula used in the active cell. It can also be used for entering or editing data and formulas.

Sheet Tab
Displays the names of the worksheets. Switching between worksheets is done by clicking on the sheet tab at the bottom of the screen.

Quick Access Toolbar
This customizable tool bar allows user to add frequently used commands. Click on the down arrow at the end of the toolbar to display the toolbar's options.

Ribbon
The Ribbon is the strip of buttons and icons located above the work area in Excel 2010. In Ribbon, commands are organized in logical groups, which are collected together under tabs. We can hide the ribbon by double-clicking the active tab.

Page view
These commands let you control the way your content will appear on a printed page, including the page orientation and margin size. Other page layout options, such as print titles and page breaks, can help make your workbook easier to read.

Zoom bar
In most cases, you can use the minus and plus symbols in the status bar to quickly zoom the document. Use the buttons on the View tab to zoom to a specific percentage and to zoom to a selection.

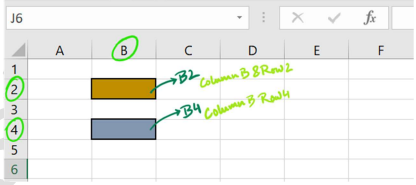
Creating a new workbook
To create a new workbook, click the file tab, and then click new. Templates provided in MS excel can also be used.

CELL REFERENCE:

A cell reference, also known as a cell address, is a mechanism that defines a cell on a worksheet by combining a column letter and a row number. We can refer to any cell (in Excel formulas) in the worksheet by using the cell references.

The intersection of a column and a row is called a cell. Each cell on the spreadsheet has a cell address that is the column letter and the row number. Cells can contain text, numbers, or mathematical formulae.

A reference identifies a cell or a range of cells on a worksheet and tells Microsoft Excel where to look for the values or data, the user wants to use in a formula. The user can also refer to cells on other sheets in: the same workbook, or other workbooks. References to cells in other workbooks are called links.



Here we refer to the cell in column A & row 2 by B2 & cell in column B & row 4 by B4. You can make use of such notations in any of the formula or to copy the value of one cell to other cell (by using = B2 or = B4).

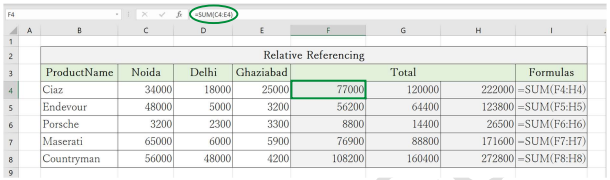
TYPES OF REFRENCING:

Cell Referencing is of three types:

- Relative Cell Referencing
- Absolute Cell Referencing
- Mixed Cell Referencing

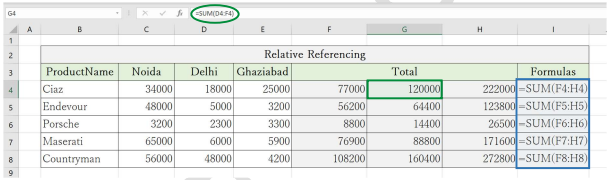
Relative Cell Referencing:

A cell reference is by default a relative reference, which means that the reference is relative to the cell's position. This is the most widely used type of cell reference in formulas. Relative cell references are basic cell references that adjust and change when copied or when using AutoFill.



Relative Referencing							
ProductName	Noida	Delhi	Ghaziabad	Total			Formulas
Ciaz	34000	18000	25000	77000	120000	222000	=SUM(F4:H4)
Endevour	48000	5000	3200	56200	64400	123800	=SUM(F5:H5)
Porsche	3200	2300	3300	8800	14400	26500	=SUM(F6:H6)
Maserati	65000	6000	5900	76900	88800	171600	=SUM(F7:H7)
Countryman	56000	48000	4200	108200	160400	272800	=SUM(F8:H8)

For example: a cell "F4" contains a formula which is shown in the image above by a green colour circle.



Relative Referencing							
ProductName	Noida	Delhi	Ghaziabad	Total			Formulas
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Porsche	3200	2300	3300	8800	14400	26500	=SUM(F6:H6)
Maserati	65000	6000	5900	76900	88800	171600	=SUM(F7:H7)
Countryman	56000	48000	4200	108200	160400	272800	=SUM(F8:H8)

Now, when copied or dragged to the next cell "G4", the formula changes.

As we continue to drag further the formula will change accordingly. Applied Formula is highlighted with blue colour box.

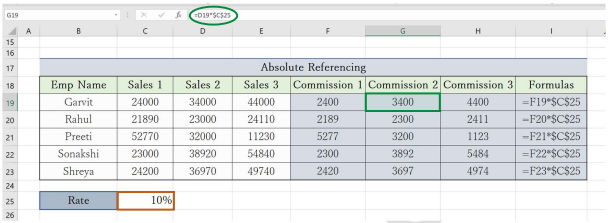
Absolute Cell Referencing:

When copying or using AutoFill, there are times when the cell reference must stay the same. A column and/or row reference is kept constant using dollar signs. So, to get an absolute reference from a relative, we can use the dollar sign ($) characters.

To refer to an actual fixed location on a worksheet whenever copying is done, we use absolute reference. The reference here is locked such that rows and columns do not shift when copied.

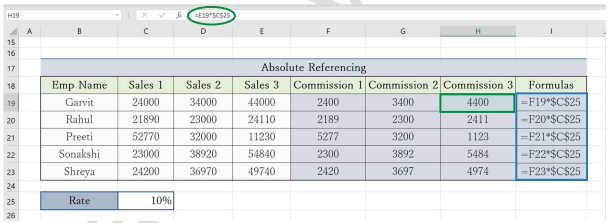
Here Dollar ($) before row fixes the row & before the column fixes the column.

For example: - In the example below, when calculating commission, we don't want cell "C25" (defines the rate) to change when copying the formula down. We want both the column and the row to remain the same to refer to that exact cell. By using "$", C25 in the formula, neither of them changes when copied downwards. Cell "G19" contains a formula in which C25 is fixed and D19 is not fixed such that when dragged the commission of sales 2 is calculated.



Absolute Referencing							
Emp Name	Sales 1	Sales 2	Sales 3	Commission 1	Commission 2	Commission 3	Formulas
Garvit	24000	34000	44000	2400	3400	4400	=F19*C25
Rahul	21890	23000	24110	2189	2300	2411	=F20*C25
Preeti	52770	32000	11230	5277	3200	1123	=F21*C25
Sonakshi	23000	38920	54840	2300	3892	5484	=F22*C25
Shreya	24200	36970	49740	2420	3697	4974	=F23*C25
Rate	10%						

Now, when copied or dragged to the next cell "H19", the formula changes but cell "C25" remains the same as "C25".



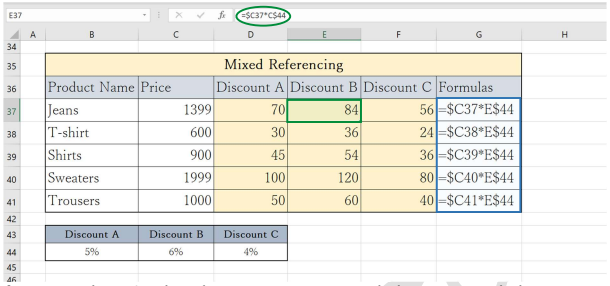
Absolute Referencing							
Emp Name	Sales 1	Sales 2	Sales 3	Commission 1	Commission 2	Commission 3	Formulas
Garvit	24000	34000	44000	2400	3400	4400	=F19*C25
Rahul	21890	23000	24110	2189	2300	2411	=F20*C25
Preeti	52770	32000	11230	5277	3200	1123	=F21*C25
Sonakshi	23000	38920	54840	2300	3892	5484	=F22*C25
Shreya	24200	36970	49740	2420	3697	4974	=F23*C25
Rate	10%						

As we continue to drag further the formula will change accordingly. Applied Formula is highlighted with blue colour box.

Mixed Cell Referencing:

An absolute column and relative row, or an absolute row and relative column, is a mixed cell reference. You get an absolute column or absolute row when you individually put the $ before the column letter or before the row number.

Here Dollar ($) before row number fixes/locks the row & before the column name fixes/locks the column.

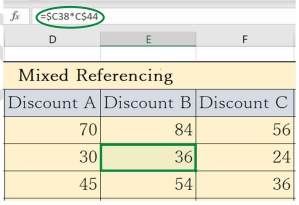


Mixed Referencing					
Product Name	Price	Discount A	Discount B	Discount C	Formulas
Jeans	1399	70	84	56	=$C37*E$44
T-shirt	600	30	36	24	=$C38*E$44
Shirts	900	45	54	36	=$C39*E$44
Sweaters	1999	100	120	80	=$C40*E$44
Trousers	1000	50	60	40	=$C41*E$44

Discount A	Discount B	Discount C
5%	6%	4%

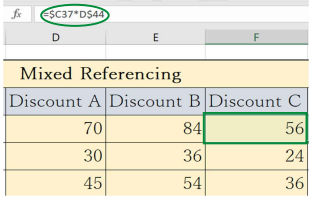
for example: - In the above image we need the price and discount to remain the same when dragged. To calculate Discount B of "6%" on the items we fix the price column "$C" whereas row i.e., "37" remains unfixed the cell will be written as "$C37". Similarly, we fix row "$44" whereas column C remains unfixed.

So that, now if we drag the cell "E37" downwards the Discount B of "6%" will remain the same but the price cell will shift downwards and now the price will be calculated on different items.



Mixed Referencing		
Discount A	Discount B	Discount C
70	84	56
30	36	24
45	54	36

Similarly, if we drag the cell "E37" towards right the price column "C37" will remain same but the discount row will also shift towards right and now the discount will be calculated on the same item but with the Discount C of "4%".

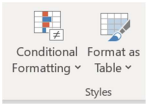


Mixed Referencing		
Discount A	Discount B	Discount C
70	84	56
30	36	24
45	54	36

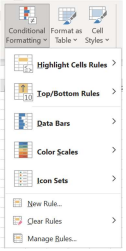
As we continue to drag further the formula will change accordingly. Applied Formula is highlighted with blue colour box.

Conditional formatting:

Conditional formatting makes it easy to highlight interesting cells or ranges of cells, emphasize unusual values, and visualize data by using data bars, colour scales, and icon sets that correspond to specific variations in the data. A conditional format changes the appearance of cells on the basis of conditions that you specify. If the conditions are true, the cell range is formatted; if the conditions are false, the cell range is not formatted. There are many built-in conditions, and you can also create your own (including by using a formula that evaluates to True or False).



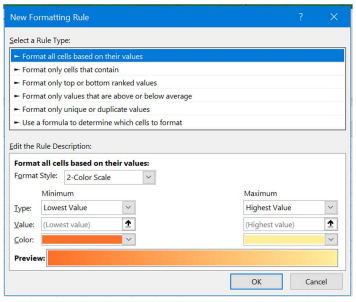
To apply conditional formatting, select the cells the user wants to analyse and then click Home Tab > Styles > Conditional Formatting.

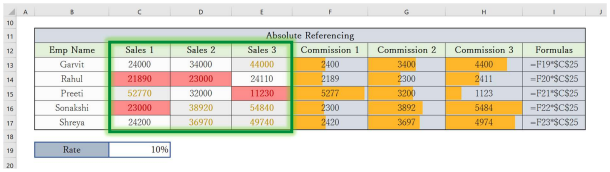


When the user chooses this option, he can highlight data that:

- Is greater than a value
- Is less than a value
- Is between a high and low value
- Is equal to a value
- Contains a value
- Is a date that occurs in a particular range
- Is either unique or duplicated elsewhere in the worksheet.

To add rules to the data on which the formatting has to be applied click on New Rules. A dialogue box will appear where you can select any rule as shown in the image. Thus, the formatting can be done one the basis of different rules.





Absolute Referencing							
Emp Name	Sales 1	Sales 2	Sales 3	Commission 1	Commission 2	Commission 3	Formulas
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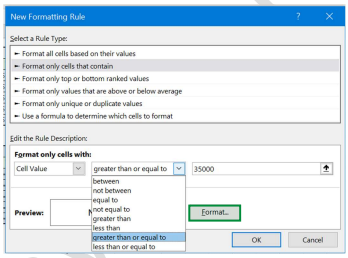
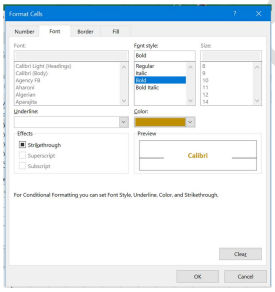
Preeti	52770	32000	11230	5277	3200	1123	=F21*C25
Sonakshi	23000	38920	54840	2300	3892	5484	=F22*C25
Shreya	24200	36970	49740	2420	3697	4974	=F23*C25
Rate	10%						

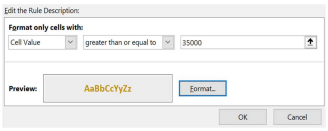
In the above image we have applied conditional formatting in the **SALES 1, SALES 2, SALES 3** highlighted with a green colour box, by setting a rule to format only cells that contain **cell value greater than or equal to 35000.** And coloured it with grey background and text in yellow colour.



to change the colour, we click on the format. A new dialogue box will appear on the screen.



A user can choose any type of style that he wants. When the formatting is done user can click on Ok. The previous dialogue box will now show you the preview of how the cell will look now. The formatting can still be changed if the user is satisfied then click ok and the formatting is applied.

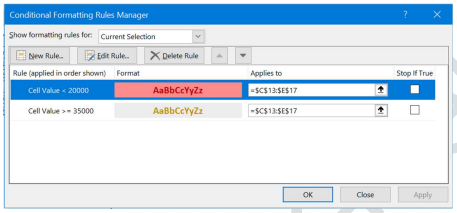


Similarly, we applied the formatting for the same by formatting the **cell value less than equal to 20000.** With red colour background and red colour text.

But now we want to edit the rule and change the criteria to **cell value less than equal to 23000.**

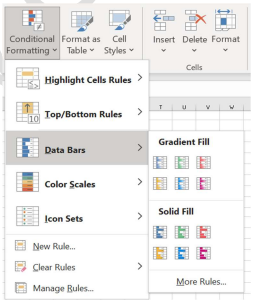
So, we will go on conditional formatting click on manage rules. A new dialogue box will appear here user can add new rule, edit old rule and delete a rule.

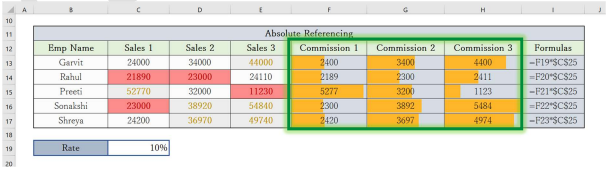
Click on the edit rule tab **change the criteria to 23000** and then click ok. And apply the rule.



In the commission tab we applied conditional formatting of data bars. A data bar helps you see the value of a cell relative to other cells. The length of the data bar represents the value in the cell.

A longer bar represents a higher value, and a shorter bar represents a lower value. Data bars are useful in spotting higher and lower numbers. Here it tells us who is getting higher sales omission and who is getting lower of all the sales.





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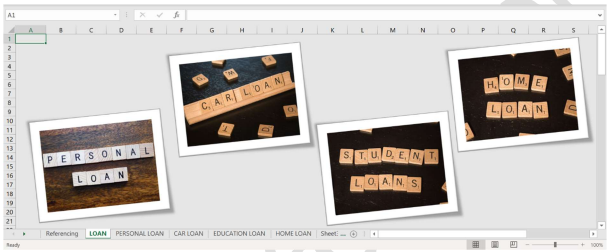
Preeti	52770	32000	11230	5277	3200	1123	=F21*C25
Sonakshi	23000	38920	54840	2300	3892	5484	=F22*C25
Shreya	24200	36970	49740	2420	3697	4974	=F23*C25
Rate	10%						

CASE STUDY:

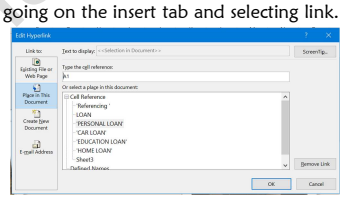
We have taken a case study on different types of loan for which a customer can apply. User can select the type of loan he requires such as Personal Loan, Car Loan, Education Loan and Home Loan.

After selecting the kind of loan, he can select the bank from which the loan is required. Moreover, he can calculate the amount of payments to be made on monthly basis that he is required to pay after the amount and period of his choice.

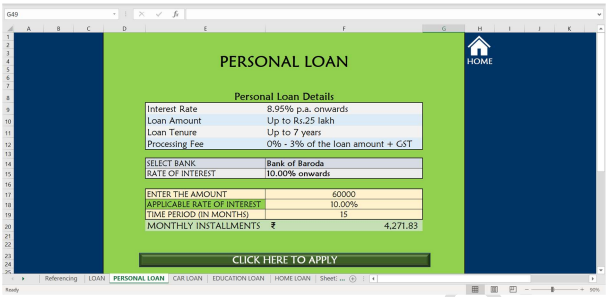


The user can click on the image according to the loan that he wants.

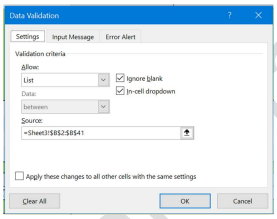
We have created a hyperlink by going on the insert tab and selecting link. A new dialogue box appears where we have selected to link it to a place in the document and selecting the respective sheet like for the Personal Loan, we linked it to the sheet named Personal Loan. Click OK once done.



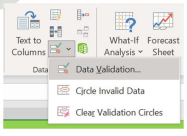
When the picture is clicked, the user is directed to the Personal Loan sheet. Here the user can select the bank from which he requires the loan. The loan amount should be between 50000 and 2500000. And the time period should range between 12 months and 84 months. According to the bank rate monthly installments will be displayed. If user is satisfied, he can click on the "click here to apply" tab. He can also check the rate of other banks by changing the bank name.

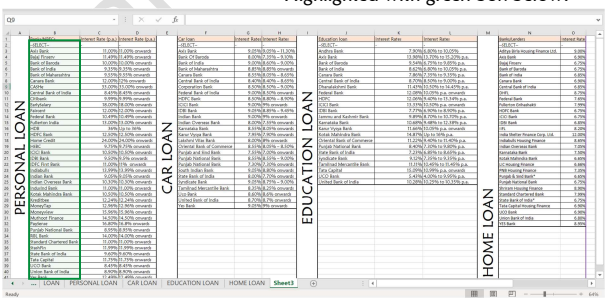


we created a list of banks and used data validation to make a drop-down list for selecting the banks. The lists are available in "sheet 3". Data validation is a feature in Excel used to control what a user can enter into a cell. The data can be protected by simply locking it down, preventing anyone from changing it.



In the data tab under data tools section select data validation. It has three options setting, input message and error alert. We created a list by applying criteria allowing list from source in sheet 3. Highlighted with green box below.

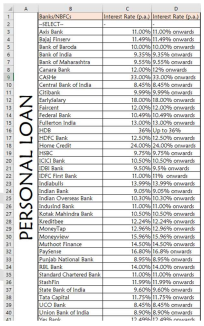




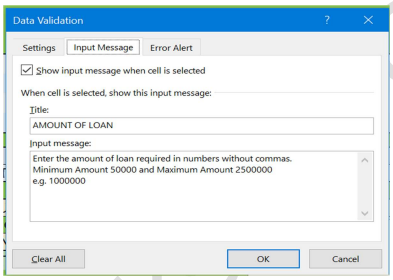
And for the rate of interest, we have applied VLOOKUP syntax.

=VLOOKUP(lookup_value,table_array,col_index_num,[range_lookup])

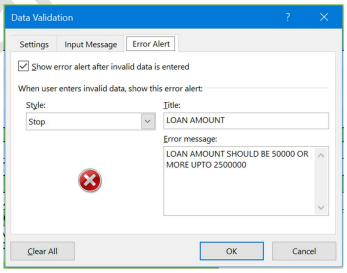
Where lookup value is the name of the bank, table_array is the whole table of personal loan, col_index_num is 2 where all the interest rates are mentioned in numerical form.



We have also created input message from data validation for the amount of loan as it should be between 50000 and 2500000.



And also, an error alert for the same if the amount is entered less than the minimum amount or more than the maximum limit a dialogue box will appear asking the user to stop and fill within the given range.



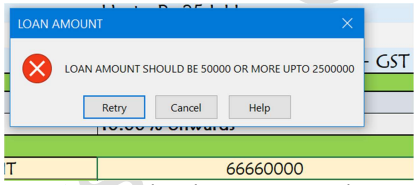
INPUT MESSAGE:

The Input Message tab defines a message to display when a cell with validation rules is selected. This Input Message is completely optional. If no input message is set, no message appears when a user selects a cell with data validation applied. The input message has no effect on what the user can enter — it simply displays a message to let the user know what is allowed or expected.

ERROR ALERT:

The Error Alert Tab controls how validation is enforced. For example, when style is set to "Stop", invalid data triggers a window with a message, and the input is not allowed.

If the amount is not entered within the range, then the dialogue box appears as shown below



The input message appears when the user is writing the required amount of loan.as shown in the image below.

the user can click on the home tab to go back to the loan sheet.

MS ACCESS

Microsoft Access is a Database Management System (DBMS) from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software development tools. It is a member of the Microsoft Office suite of applications, included in the professional and higher editions.

Microsoft Access is just one part of Microsoft's overall data management product strategy. It stores data in its own format based on the Access Jet Database Engine.

Like relational databases, Microsoft Access also allows you to link related information easily. For example, customer and order data. However, Access 2013 also complements other database products because it has several powerful connectivity features. It can also import or link directly to data stored in other applications and databases.

As its name implies, Access can work directly with data from other sources, including many popular PC database programs, with many SQL (Structured Query Language) databases on the desktop, on servers, on minicomputers, or on mainframes, and with data stored on Internet or intranet web servers.

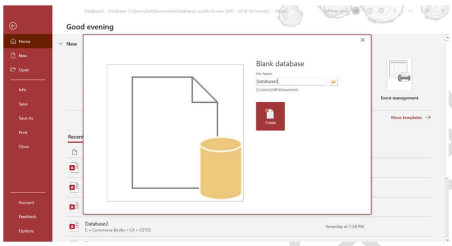
Access can also understand and use a wide variety of other data formats, including many other databases file structures. You can export data to and import data from word processing files, spreadsheets, or database files directly.

Access can work with most popular databases that support the Open Database Connectivity (ODBC) standard, including SQL Server, Oracle, and DB2.

Software developers can use Microsoft Access to develop application software.

CREATING A DATABASE:

To create database open MS Access, click on blank database a new window will appear on the screen type a file name and click create.



WORKING WITH THE TABLES:

Table is a database object used to contain data about a particular subject, such as employees or products. Each record in a table contains information about one item, such as a particular employee. A record is made up of fields, such as name, address and telephone number. Table is created by Access in the database with an empty table named (Table 1). The table will be in datasheet view. In Datasheet view, we can enter data immediately and let Access build the table structure behind the scenes. Field names are assigned numerically (Field1, Field2 and so on…) and Access automatically sets each field's data type, based on the data we enter. In this, we can edit fields, add and delete data and search for data.

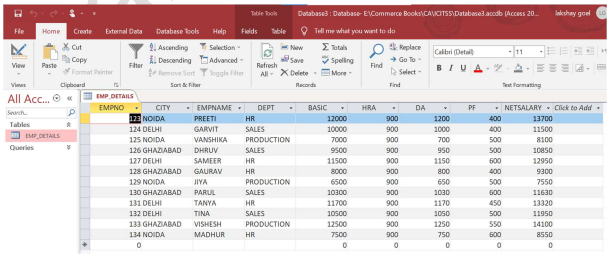
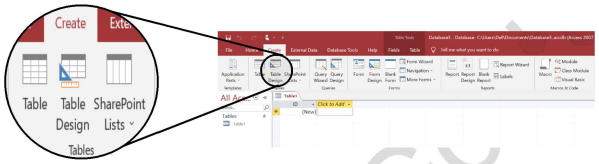
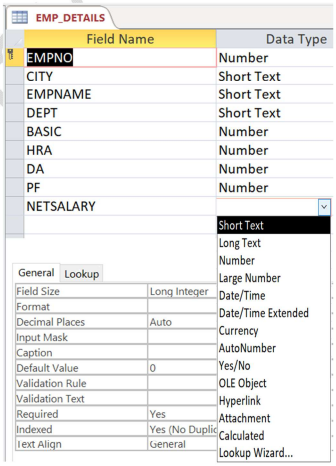


TABLE AND FIELD PROPERTIES:

Table properties are attributes of a table that affect the appearance or behaviour of the table as a whole. A table opens in Design view and its properties are set in the table's property sheet.



Field Name defines one of the field's characteristics or an aspect of the field's behaviour and applies to a particular field in a table through Datasheet view. One can also set any field property in Design view by using the Field Properties pane.



Data Type Every field has to be assigned a data type which indicates the kind of data that the field stores, such as large amounts of text or attached files. A data type is a field property, but it differs from other field properties as follows :

- We set a field's data type in the table design grid, not in the Field Properties pane.
- A field's data type determines what other properties the field has.

LAKSHAY GOEL

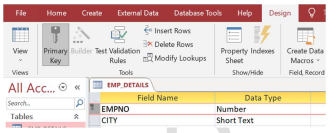
FORMAT	USE TO DISPLAY
TEXT	Short, alphanumeric values, such as a last name or a street address. Note, beginning in Access 2013, Text data types have been renamed to **Short Text**.
NUMBER, LARGE NUMBER	Numeric values, such as distances. Note that there is a separate data type for currency.
CURRENCY	Monetary values.
YES/NO	Yes and No values and fields that contain only one of two values.
DATE/TIME, DATE/TIME EXTENDED	Date/Time: Date and time values for the years 100 through 9999. Date/Time Extended: Date and time values for the years 1 through 9999.
OLE OBJECT	OLE objects, such as Word documents.
CALCULATED FIELD	Results of a calculation. The calculation must refer to other fields in the same table. You would use the Expression Builder to create the calculation. Note, Calculated fields were first introduced in Access 2010.
ATTACHMENT	Attached images, spreadsheet files, documents, charts, and other types of supported files to the records in your database, similar to attaching files to e-mail messages.
HYPERLINK	Text or combinations of text and numbers stored as text and used as a hyperlink address.
MEMO	Long blocks of text. A typical use of a memo field would be a detailed product description. Note, beginning in Access 2013, Memo data types have been renamed to Long Text.
AUTONUMBER	A unique sequential (incremented by 1) number or random number assigned whenever a new record is added to a table. AutoNumber fields can't be updated.
LOOKUP WIZARD	Creates a field that allows the user to choose.

LAKSHAY GOEL

KEYS

Fields that are part of a table relationship are called keys. A key usually consists of one field, but may consist of more than one field.
Here are two kinds of keys :

A table can have only one **Primary key** which consists of one or more fields that uniquely identify each record that is stored in the table. Often, there is a unique identifi cation number, such as an ID number or a code, that serves as a primary key.

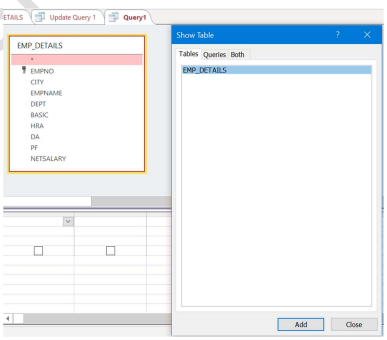


A **Foreign key** contains values that correspond to values in the primary key of another table. A table can also have one or more foreign keys.

QUERY

A query can pull the information from various tables and assemble it for display in the form or report. It can give you an answer to a simple question, perform calculations, combine data from different tables, add, change, or delete data from a database.

To create a query, click on the create TAB under the queries section click on query design. A new query tab will appear along with a dialogue box.

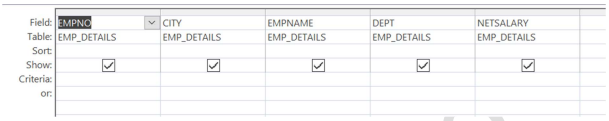


All the tables created are displayed here, select the table, click add and close.

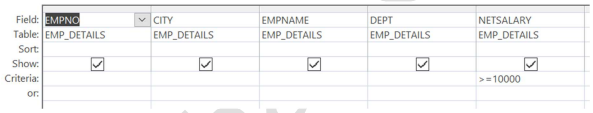
LAKSHAY GOEL

DIFFERENT TYPES OF QUERIES

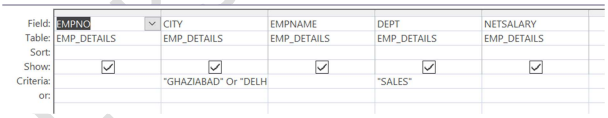
Simple Query may be used to select and display data from either one or more table(s) depending upon the requirement. The user-determined criteria convey to the database about the selection of records from table(s). After the select query is called, it creates a "virtual" table where the data can be changed one record at a time.



Condition Query is a type of query that tests your data to see if it meets a condition, and then takes an action depending on the result. The query is set up by creating an expression in the criteria.



Complex Query is similar to condition query. In this if the expression is applied in more than one field in the criteria row it will be called as complex query.

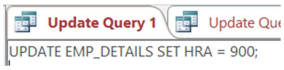


Update Query allows for one or more field in table(s) to be updated. In other words, we can say that, the update query allows the user to make global changes to data in one or more tables. Various syntax for update query:

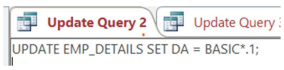
a) UPDATE <Tablename> SET <fieldname> =value
b) UPDATE <Tablename> SET <fieldname> =expression/formula
c) UPDATE <Tablename> SET <fieldname> =value/expression
Where <fieldname> =value

LAKSHAY GOEL

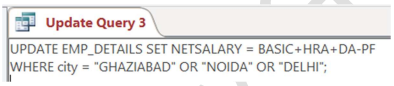
- UPDATE EMP_DETAILS SET HRA = 900;



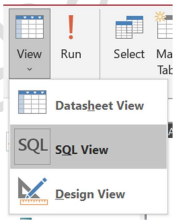
- UPDATE EMP_DETAILS SET DA = BASIC*.1;



- UPDATE EMP_DETAILS SET NETSALARY = BASIC+HRA+DA-PF WHERE city = "GHAZIABAD" OR "NOIDA" OR "DELHI";



To edit an update query use SQL view.



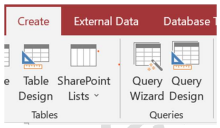
After the queries are created click on the run tab

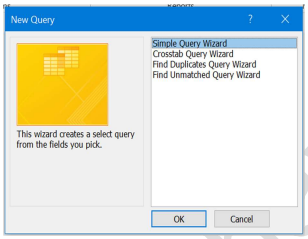
CASE STUDY:

WIZARD

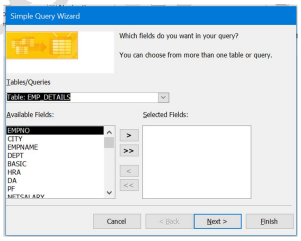
QUERY WIZARD

Query wizard may be used by a user to automatically create a simple query. Although, the query wizard provides less control in handling a query but surely, query once created using query wizard can always be modified using design view. Query wizard is available under the create tab.

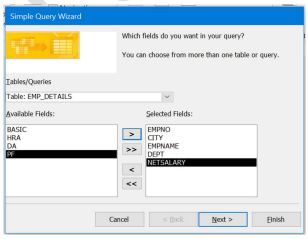




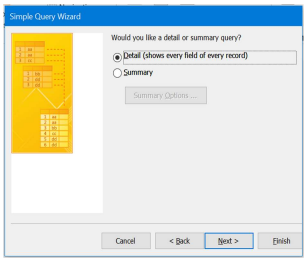
- Click query wizard, a new query dialogue box will appear on screen, click simple query and then click ok.
- A new dialogue box will appear on the screen to choose the fields that is required in query. Any number of fields can be added.



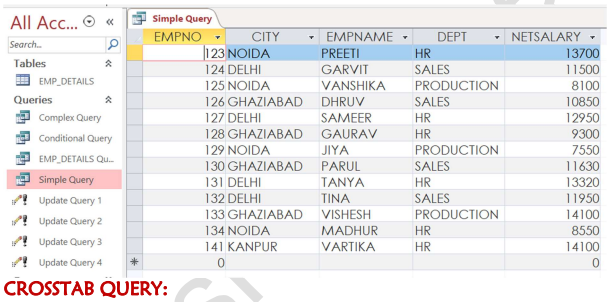
- Up to 255 fields from as many as 32 tables or queries can be added.
- Click on that required query and then click on the add arrow (>) or double click on the field. We added EMPNO, CITY, EMPNAME, DEPT and NETSALARY. Click OK.



- The query wizard provides the user with a choice to either open the query to view information or to modify the query in query Design view.



- Click on the finish button to complete the query wizard, the query is generated and the results of the query is displayed as shown below.



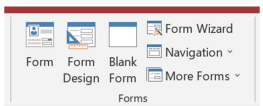
EMPNO	CITY	EMPNAME	DEPT	NETSALARY
123	NOIDA	PREETI	HR	13700
124	DELHI	GARVIT	SALES	11500
125	NOIDA	VANSHIKA	PRODUCTION	8100
126	GHAZIABAD	DHRUV	SALES	10850
127	DELHI	SAMEER	HR	12950
128	GHAZIABAD	GAURAV	HR	9300
129	NOIDA	JIYA	PRODUCTION	7550
130	GHAZIABAD	PARUL	SALES	11630
131	DELHI	TANYA	HR	13320
132	DELHI	TINA	SALES	11950
133	GHAZIABAD	VISHESH	PRODUCTION	14100
134	NOIDA	MADHUR	HR	8550
141	KANPUR	VARTIKA	HR	14100
	0			0

CROSSTAB QUERY:

A crosstab query is a type of select query. When you run a crosstab query, the results display in a datasheet that has a different structure from other types of datasheets.

FORM WIZARD

Access provides several quick-create form tools on the Create tab, each of which lets you create a form with a single click. However, if you want to be more selective about what fields appear on the form, you can use the Form Wizard instead. On the create tab click form wizard to create a form.



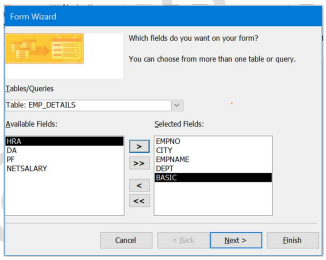
FORM AND ITS TYPES

As mentioned above, the user can create a form in MS-Access in either of the following two ways: -

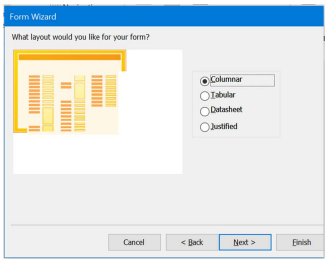
- Choose the Form Wizard provided by Microsoft Access. Opting for form wizard make the form creation an easy task. But the form thus created is very simple with little options.
- Create form from scratch using Form Design view. Opting for form design view provides the user with more controls to customize and design the form in a complex yet effective way.

General Types of forms that MS Access offers:

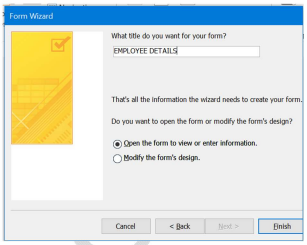
i. Simple Form
ii. Split Form
iii. Multiple Form
iv. Blank Form
v. Pivot Chart
vi. Form wizard
vii. Datasheet
viii. Model dialog
ix. Pivot Table
x. Form design



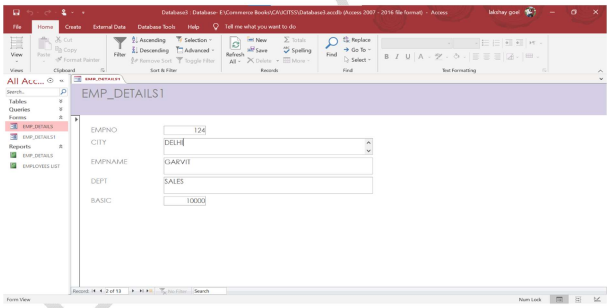
- Form wizard may be used by a user to automatically create a simple form. Specify the table or query for which the user wants to create the form. Select the desired field from table or query. Here we have selected EMPNO, CITY, EMPNAME, DEPT, BASIC. Click next.
- A new dialogue box will appear here user needs to specify the layout of form. Here we have used Columnar layout.



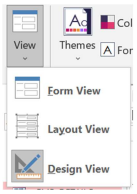
- The user may then specify the title of the form and may further specify whether they want to open the newly created form in form view to carry out form related activities like addition of records, editing existing records, etc or to modify the form in form design view for further customization. The title of our form is EMPLOYEE DETAILS.

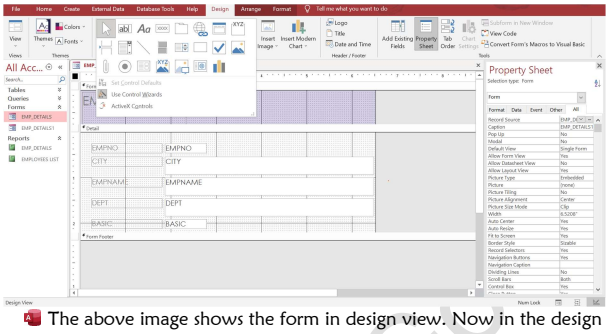


- Click finish and the form is now created.
- The form can now be edited in design view.

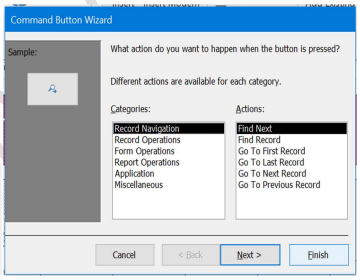


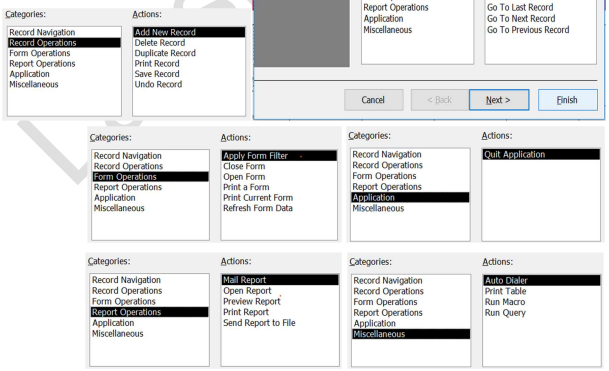
- To edit the form in design view, go to home tab click on view, under it select design view. It gives you a more detailed view of the structure of the form. You can see the Header, Detail, and Footer sections for the form. You cannot see the underlying data while you are making design changes.





- The above image shows the form in design view. Now in the design tab under the controls option we can modify the form in different ways. We added buttons by clicking on the button XXXX icon.
- The Button icon performs various functions and provides users to add controls that are required in a form. There are various categories and every category has different actions.



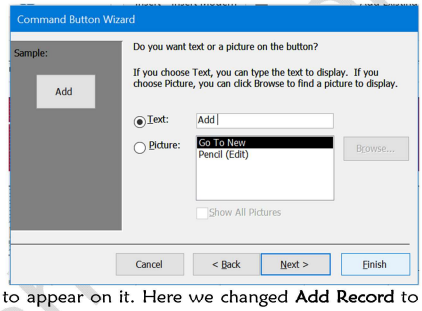


We have added buttons to perform actions such as:

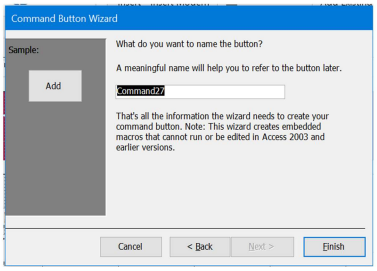
- **Find Record**, **Go To Next Record (Next)**, **Go To Previous Record (Previous)** from the **Record Navigation** category.
- **Add New Record (Add)**, **Delete Record (Delete)**, **Save Record** from the **Record Operations** category.
- **Close Form** from **Form Operations** category.

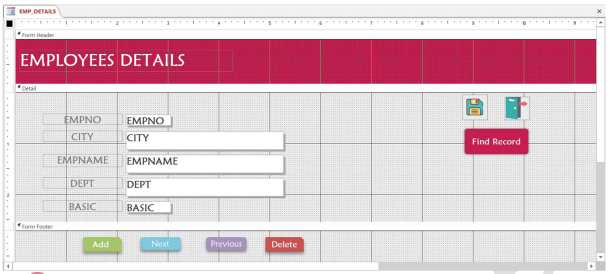
Buttons are drawn one by one and (command no.) is displayed on the button. As one category and action are selected, we click next.

- A new dialogue box will appear asking for the format of button to be in **Text** or **Picture** form. Select one option from both.

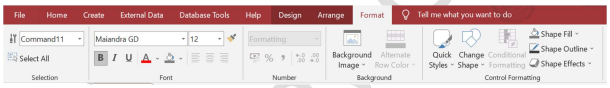


- If text is selected then type the name you want to appear on it. Here we changed **Add Record** to **Add**, click next.
- If picture is selected the available pictures can be applied or user can add a new by clicking on the browse tab and select the picture. Here we have changed **Save Record** to and **Close Record** to after the buttons text or picture is applied Click Next.
- A new window appears displaying the name of button (command no.) that is going to be changed, Click Finish.

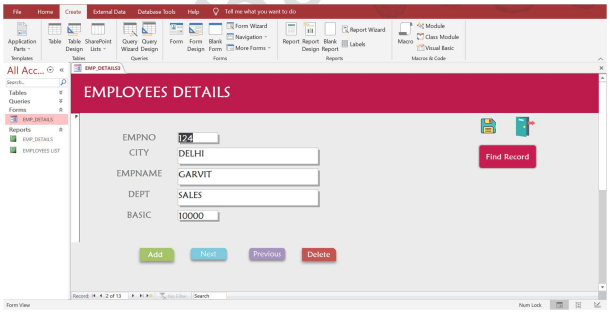




- As all the buttons are added user can rearrange them, and add design to his form by clicking on Format tab. It allows to change the shape colour of the buttons added and the background of the form by using shape fill.



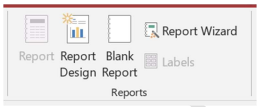
- Now the final step is to open the data in the form view.



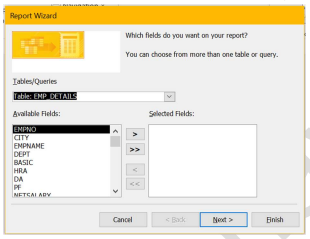
- The final form is ready here you can add new employees and save them, find record of old employees, delete data of any employee and close the form.

REPORT WIZARD

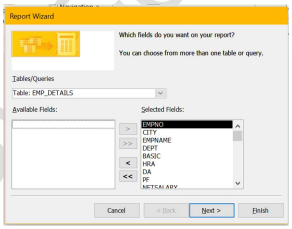
You can create a variety of different reports in Access, ranging from the simple to the complex. Begin by thinking about your report's record source. Whether your report is a simple listing of records or a grouped summary of sales by region, you must first determine which fields contain the data you want to see in your report, and in which tables or queries they reside.



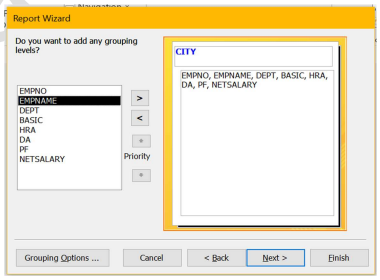
- To create a report, select report wizard from the create tab under reports section. A new dialogue box appears on screen. the user can choose the fields that are required in the report.



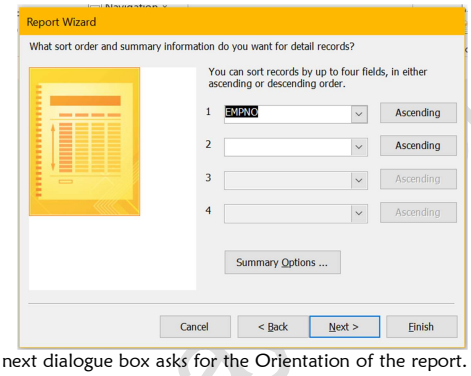
Here we have taken all the fields.



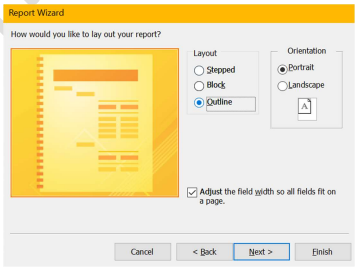
- Once the fields are selected user can now click next. A new dialogue box appears, asking to add any grouping level. It can be one or more. We have used city to differentiate between employees of different city Click next.

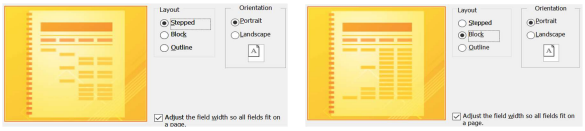


- Now the next dialogue box asks for the sorting field according to which the data should be sorted. It can take up-to 4 fields. We have taken **EMPNO** as sorting field. Once the sorting fields are added click next.

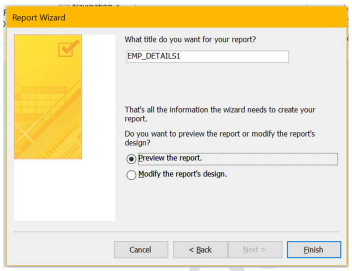


- The next dialogue box asks for the Orientation of the report. It can be in Portrait mode or Landscape mode. And also, the layout of the report **Step, Block or Outline.**
- In our report we have used **Outline Layout** in **Portrait mode**. Once the layout and Orientation are selected user can click next and move to next dialogue box.

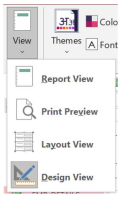




- the next dialogue box asks for the title name of the report. User can write as per his wish and click on Finish, to generate report.

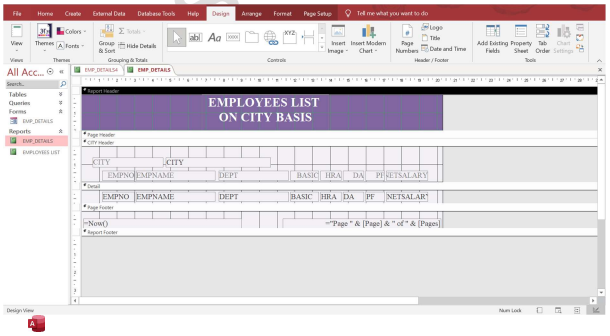


- The generated report in the report view appears. To edit the report the report should be opened in design view. It is opened by clicking on design tab, view section, click on the design view.



- The report can be made creative by adding background colour and adjusting the field tabs size. The format tab allows user to do so.

- We have created list of employees on city basis to identify employees of different cities easily.



THE FINAL REPORT

EMPLOYEES LIST ON CITY BASIS

CITY	EMPNO	EMPNAME	DEPT	BASIC	HRA	DA	PF	NETSALARY
DELHI								
	124	GARVIT	SALES	10000	900	1000	550	11500
	127	SAMEER	HR	11500	900	1150	550	12950
	131	TANYA	HR	11700	900	1170	550	13320
	132	TINA	SALES	10500	900	1050	550	11950
GHAZIABAD								
	126	DHRUV	SALES	9500	900	950	550	10850
	128	GAURAV	HR	8000	900	800	550	9300
	130	PARUL	SALES	10300	900	1030	550	11630
	133	VISHESH	PRODUCTION	12500	900	1250	550	14100
KANPUR								
	141	VARTIKA	HR	12000	900	1200	550	14100
NOIDA								
	123	PREETI	HR	12000	900	1200	550	13700
	125	VANSHIKA	PRODUCTION	7000	900	700	550	8100
	129	JIYA	PRODUCTION	6500	900	650	550	7550
	134	MADHUR	HR	7500	900	750	550	8550

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