Advanced Excel

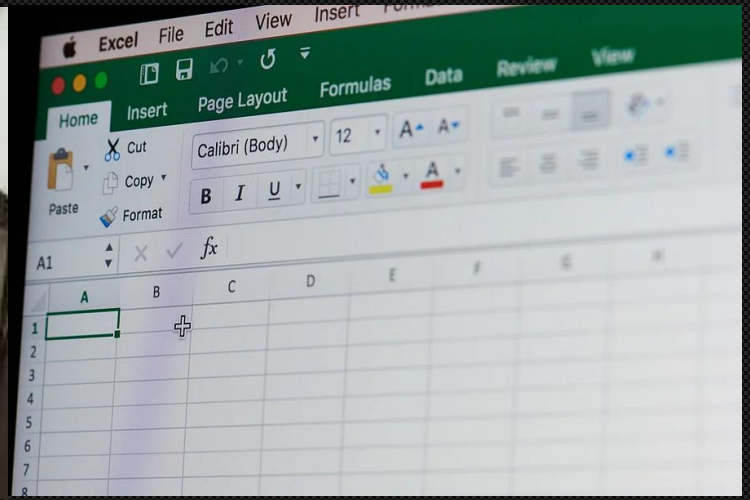
- Introduction to Excel
- Data Base & Spread sheet
- Beginning of Excel
- Basic Formatting
- MS Excel interface
- MS Excel ribbon, groups, tabs
- Save File
- Using Formulas
- Data record and basic operations
- Home tab
- Save file
- Sorting
- Filters
- Autofill
- Conditional formatting
- Insertion of rows and columns
- Deleting rows and columns
- Finding duplicates
- Removing duplicates
- Merge and center
- Rounding of Numbers
- Autofill
- Add, edit or delete comment
- Filters
- Sorting on multiple columns
- Insert table
- Slicers
- Inserting pictures

Advanced Excel

- Beginning of Excel
- Formatting
- MS Excel interface
- Sorting
- Filters
- Autofill
- Round off
- Insert shapes
- Insert link
- Insert hyperlink
- Add drop down list
- Pivot table
- Vlook up formula

- Filters
- Sorting on multiple columns
- Pie chart
- Histogram
- Column chart
- Box and whisker plot
- Radar plot
- Bar graph
- Column chart
- Funnel chart
- Water flow
- Funnel chart
- Sunburst
- treechart

Advanced Excel



Advanced Excel

Microsoft Excel is a spreadsheet program that allows users to organize, format, and calculate data

A spreadsheet is a computer program that organizes data in a table-like structure of rows and columns, allowing users to store, manipulate, and analyze information

Spreadsheet Concept ka Janm (1970s)

Spreadsheet ka idea **1970s** mein develop hona shuru hua. Iska basic concept tha ek table jisme rows aur columns ke format mein data ko organize kiya ja sake. Sabse pehla spreadsheet program tha **VisiCalc** (1979), jo Apple II computer ke liye banaya gaya tha. Yeh program businesses ke liye ek revolutionary tool bana, kyunki yeh manual calculations ko automate kar deta tha.

2. Multiplan (1982) - Microsoft ka Pehla Attempt

Microsoft ne apna pehla spreadsheet program **Multiplan** ke naam se 1982 mein launch kiya. Yeh program IBM PCs aur kuch aur systems ke liye tha. Lekin us time pe market mein **Lotus 1-2-3** kaafi popular tha, jo zyada powerful aur famous spreadsheet program tha. **Multiplan** zyada successful nahi ho paya kyunki Lotus 1-2-3 ne market ko dominate kiya hua tha.

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3. Microsoft Excel ka Janm (1985)

Microsoft ne apna naya spreadsheet program, **Excel**, 1985 mein pehle **Apple Macintosh** ke liye release kiya. Yeh Mac ke graphical interface ka poora use karta tha, jisme mouse ke saath interaction aur visual elements ko zyada effectively dikhaya ja sakta tha.

User-Friendly Interface: Excel ka interface us waqt ke liye kaafi modern aur user-friendly tha. Isme scrolling, formulae, aur large data sets ko manage karne ki capability thi.

Lotus 1-2-3 ka Competition: Jab Excel launch hua, tab bhi **Lotus 1-2-3** kaafi strong position mein tha Windows PCs ke market mein.

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4. Excel Windows ke Liye (1987)

Excel ka Windows version **1987** mein launch kiya gaya. Yeh Excel ka wo version tha jo eventually **Lotus 1-2-3** ko piche chod kar dominate kar gaya. Is waqt tak **Windows OS** bhi popular hone laga tha, aur Excel ne Windows ka full advantage liya.

Graphics aur Formatting: Excel ne data ko visually attractive tarike se present karne ke liye kai advanced graphing aur formatting tools diye.

Cells aur Formulas: Users ko alag-alag cells mein complex formulas apply karne ki ability thi, jo calculations ko kaafi automate aur simple bana deti thi.

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5. 1990s Mein Growth

1990s mein Microsoft Excel ne apna market share kaafi tezi se badhaya, aur **Lotus 1-2-3** ko kaafi tough competition diya. Yahan tak ki 1993 tak Excel industry standard ban gaya tha for spreadsheets.

Excel 5.0 (1993): Excel ka version 5.0 ek major update tha. Isme ek revolutionary feature aaya **Pivot Tables** ka, jo complex data analysis ke liye use hota hai.

VBA (Visual Basic for Applications): Is version ne Excel mein programming ke liye support diya through **VBA**. Is se users macros likh ke apne repetitive tasks ko automate kar sakte the.

6. Excel ka Evolution (2000s ke Baad)

2000 ke baad Excel ne kai naye features introduce kiye jo isko aur bhi zyada powerful aur versatile bana diya.

•**Excel 2007**: Yeh version bohot bada upgrade tha. Isme **Ribbon Interface** aaya jo toolbar ko replace karta hai. Isne Excel ke tools ko aur easy access karne layak bana diya.

•**Larger Spreadsheets**: Excel 2007 ke saath, Excel ne pehle se zyada rows aur columns ko support karna shuru kiya, jo large data sets ke liye beneficial tha.

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Cloud aur Real-Time Collaboration (2010s aur Aage)

Excel Online aur Office 365 Integration: 2010s mein, Microsoft ne Excel ko apne **Office 365** suite ka part bana diya, jisse log web-based Excel ko bhi access kar sakte hain, aur cloud pe apne data ko store karke real-time collaboration kar sakte hain.

AI-Based Features: Aaj ke time mein Excel mein **AI** aur machine learning-based tools bhi include hain jo users ko suggestions aur insights dete hain.

Excel Aaj ke Time Mein

Aaj Microsoft Excel sirf ek spreadsheet tool nahi, balki ek powerful data analysis, visualization, aur automation tool ban gaya hai. Iska use har industry mein hota hai - chahe accounting ho, data science ho, ya phir business analytics.

Advanced Excel

Doug Klunder
Civil liberties aur privacy advocacy

Practice Questions

1) Which of the following is NOT a valid data type in Excel?

A) Text
B) Number
C) Currency
D) Boolean

Ans - D

Practice Questions

2) In Excel, which of the following features allows you to visually represent data trends over time?

A) Data Validation
B) Pivot Table
C) Chart
D) Conditional Formatting

Ans - C

Practice Questions

3) What does the VLOOKUP function do?

A) Searches for a value in the first column of a table and returns a value in the same row from a specified column.
B) Counts the number of cells that meet a criterion.
C) Returns the maximum value in a range.
D) Finds the position of a value in a range.

Ans - A

Practice Questions

4) What does "conditional formatting" in Excel allow you to do?

A) Change the layout of a worksheet
B) Apply formatting to cells based on specific criteria
C) Create a new worksheet
D) Sort data

Ans - B

Practice Questions

5) What is the purpose of a Pivot Table?

A) To visualize data with charts
B) To create complex formulas
C) To summarize and analyze data
D) To sort data alphabetically

Ans - C

Practice Questions

6) In Excel, which of the following is a way to filter data in a table?

A) Data Sorting
B) Conditional Formatting
C) Data Validation
D) Filter Dropdown

Ans - D

Practice Questions

7) What is the maximum number of rows in an Excel worksheet (as of Excel 2016 and later)?

A) 65,536
B) 1,048,576
C) 2,048,576
D) 1,000,000

Ans - B

Practice Questions

8) In a bar chart, what does each bar represent?

A) The average of data points
B) A single data point
C) A category of data
D) The sum of all values

Ans - C

Practice Questions

9) Which of the following charts is best for showing proportions of a whole?

A) Line Chart
B) Bar Chart
C) Pie Chart
D) Scatter Plot

Ans - C

Practice Questions

10) What is the function of the "Sort" feature in Excel?

A) To format cells
B) To change the appearance of charts
C) To arrange data in a specific order
D) To protect the worksheet

Ans C

Lecture 1 – Fundamentals of Python

Instagram Handle

theiscale

The iScale Organization Handle

theiscale.founders

Siblings - Nishant Dhote & Swati Dhote

 Basic Navigation:

- **Arrow Keys:** Move one cell up, down, left, or right.
- **Ctrl + Arrow Keys:** Jump to the edge of data regions.
- **Home:** Move to the beginning of the row.

 Selection:

- **Shift + Arrow Keys:** Extend selection by one cell.
- **Ctrl + Shift + Arrow Keys:** Extend selection to the last non-empty cell.

 Editing:

- **F2:** Edit the selected cell.
- **Ctrl + C:** Copy selected cells.
- **Ctrl + V:** Paste copied cells.
- **Ctrl + Z:** Undo the last action.

 Formatting:

- **Ctrl + B:** Bold selected text.
- **Ctrl + I:** Italicize selected text.
- **Ctrl + U:** Underline selected text.

 Formulas:

- **Alt + =:** AutoSum.
- **F4:** Repeat last action or toggle absolute/relative references in formulas.

 Saving:

- **Ctrl + S:** Save the workbook.
- **Ctrl + P:** Print the workbook.

1. Statistical Functions:

- **AVERAGE(range):** Calculates the average of a range.
- **MEDIAN(range):** Finds the median value in a range.
- **MODE(range):** Returns the most frequently occurring value.
- **COUNT(range):** Counts the number of cells that contain numbers.
- **COUNTA(range):** Counts the number of non-empty cells.
- **COUNTIF(range, criteria):** Counts cells that meet specific criteria.
- **SUM(range):** Adds up a range of numbers.
- **SUMIF(range, criteria, sum_range):** Sums values that meet criteria.
- **STDEV.S(range):** Estimates standard deviation based on a sample.
- **VAR.S(range):** Estimates variance based on a sample.

2. Logical Functions:

- **IF(condition, true_value, false_value):** Returns one value if true, another if false.
- **AND(condition1, condition2, ...):** Returns TRUE if all conditions are true.
- **OR(condition1, condition2, ...):** Returns TRUE if any condition is true.
- **NOT(condition):** Reverses the value of a logical condition.

3. Lookup Functions:

- **VLOOKUP(lookup_value, table_array, col_index_num, [range_lookup]):** Looks up a value in the first column of a table and returns a value in the same row from a specified column.
- **HLOOKUP(lookup_value, table_array, row_index_num, [range_lookup]):** Looks up a value in the first row of a table.
- **INDEX(array, row_num, [column_num]):** Returns the value of a cell in a specified row and column.
- **MATCH(lookup_value, lookup_array, [match_type]):** Returns the relative position of an item in an array.

4. Text Functions:

- **CONCATENATE(text1, text2, ...):** Joins two or more text strings together. (Use TEXTJOIN or & for newer versions.)
- **LEFT(text, num_chars):** Returns the leftmost characters from a text string.
- **RIGHT(text, num_chars):** Returns the rightmost characters from a text string.
- **MID(text, start_num, num_chars):** Extracts a substring from a text string.
- **LEN(text):** Returns the length of a text string.
- **TRIM(text):** Removes extra spaces from text.
- **UPPER(text):** Converts text to uppercase.
- **LOWER(text):** Converts text to lowercase.
- **PROPER(text):** Capitalizes the first letter of each word.

5. Date and Time Functions:

- **TODAY():** Returns the current date.
- **NOW():** Returns the current date and time.
- **DATE(year, month, day):** Returns a date.
- **DATEDIF(start_date, end_date, unit):** Calculates the difference between two dates.
- **EDATE(start_date, months):** Returns a date a specified number of months before or after a start date.
- **EOMONTH(start_date, months):** Returns the last day of the month a specified number of months before or after a start date.

6. Financial Functions:

- **PMT(rate, nper, pv):** Calculates the payment for a loan based on constant payments and a constant interest rate.
- **NPV(rate, value1, [value2], ...):** Calculates the net present value of an investment based on a discount rate and a series of future payments.

7. Array Functions (Dynamic Arrays in Excel 365):

- **FILTER(array, include, [if_empty]):** Filters a range based on criteria.
- **SORT(array, [sort_index], [sort_order], [by_col]):** Sorts the contents of a range.
- **UNIQUE(array, [by_col], [exactly_once]):** Returns a list of unique values from a range.

8. Miscellaneous:

- **IFERROR(value, value_if_error):** Returns a value you specify if a formula evaluates to an error; otherwise, it returns the result of the formula.
- **SUMPRODUCT(array1, [array2], ...):** Returns the sum of the products of corresponding ranges or arrays.