

DIPLOMA IN COMPUTER APPLICATION – 6 MONTHS

Basic Fundamentals of Computer

- ✓ Desktop Environment
- ✓ Understanding the Start Menu and Taskbar.
- ✓ Navigating system folders: Documents, Downloads, and Pictures.
- ✓ File Management:
- ✓ Creating, Renaming, and Deleting
- ✓ Files/Folders.
- ✓ Understanding File Extensions and Types.
- ✓ OS APPLICATIONS
- ✓ ms paint
- ✓ wordpad
- ✓ ms-word

Microsoft Word

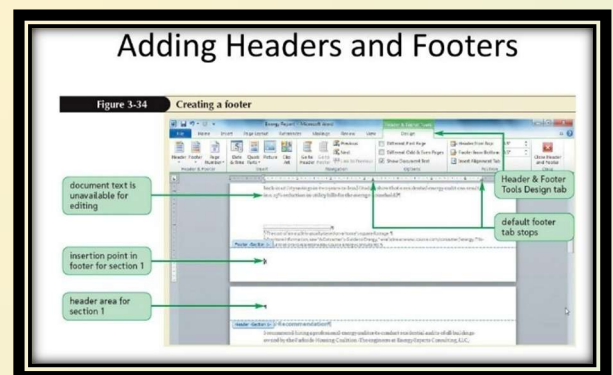
- ✓ Home Tab:
- ✓ Font Formatting: Bold, Italic, Underline, Font Size, and Color.
- ✓ Paragraph Formatting: Alignment, Line Spacing, Indentation, Bullets, and Numbering.
- ✓ Styles: Applying and Modifying
- ✓ Styles.
- ✓ Insert Tab:
- ✓ Inserting Tables, Pictures, Shapes, and SmartArt.
- ✓ Adding Headers, Footers, and Page Numbers.
- ✓ Creating and Formatting Tables.
- ✓ Design Tab:
- ✓ Document Themes and Styles.
- ✓ Page Backgrounds: Colors, Watermarks, and Borders.
- ✓ Layout Tab:
- ✓ Setting Margins, Orientation, and Size.
- ✓ Paragraph Spacing and Indentation.
- ✓ Column Layouts and Page Breaks.
- ✓ References Tab:
- ✓ Inserting Table of Contents, Footnotes, and Endnotes.
- ✓ Adding Citations, Bibliography, and Captions.
- ✓ Managing Sources and Cross-References.
- ✓ Mailings Tab:
- ✓ Creating Mail Merge Documents for Letters, Labels, and Envelop
- ✓ Setting Up Recipients and Merging Fields.
- ✓ Previewing and Completing the Mail Merge.
- ✓ Review Tab:
- ✓ Spelling & Grammar Check.
- ✓ Using Thesaurus and Word Count.

Fundamentals of Computer

- What is Computer
- Functions of Computer
- Types of Computer
- Generations of Computer
- Advantages of Computer



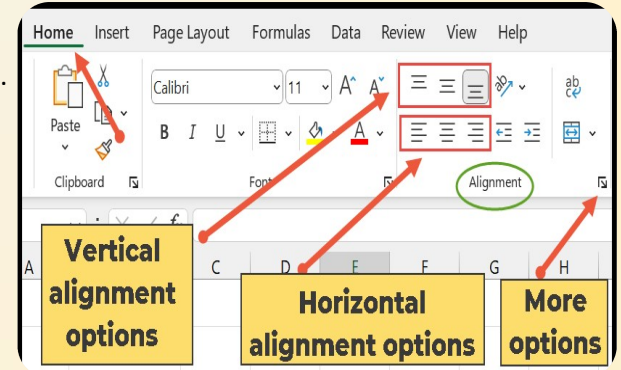
Adding Headers and Footers



- ✓ Track Changes, Comments, and Comparing Documents
- ✓ View Tab:
- ✓ Document Views: Read Mode, Print Layout, and Web Layout.
- ✓ Show/Hide Ruler, Gridlines, and Navigation Pane.
- ✓ Managing Windows: Split, Arrange, and Switch Resume Format in MS WORD

Microsoft Excel

- ✓ Introduction to Excel:
- ✓ Understanding the Excel Interface: Ribbon, Workbook, Worksheets.
- ✓ Basic Data Entry: Numbers, Text,
- ✓ Dates.
- ✓ Formats of Cells:
- ✓ Formatting Cells: Font, Alignment, Number, Border, Fill, and Protection.
- ✓ Conditional Formatting: Applying Rules, Using Data Bars, Color Scales, and Icon Sets.
- ✓ Working with Cells:
- ✓ Inserting, Deleting, Merging, and Splitting Cells.
- ✓ Protection of Excel Data: Locking Cells, Protecting Worksheets, and Workbooks.
- ✓ Working with Charts:
- ✓ Creating and Customizing Charts: Column, Line, Pie, Bar.
- ✓ Formatting Chart Elements: Titles, Legends, Axes, Data Labels.
- ✓ Formulas and Functions:
- ✓ Basic Arithmetic: SUM, SUBTRACTION, MULTIPLICATION, DIVISION.
- ✓ AVERAGE Formula, RANK Function.
- ✓ Conditional Functions: IF, COUNTIF, SUMIF.
- ✓ Advanced Conditional Functions: COUNTIFS, SUMIFS with Multiple Conditions.
- ✓ Lookup Functions: VLOOKUP, HLOOKUP, LOOKUP.
- ✓ Fixing Formulas: Absolute and Relative References
- ✓ Financial Functions: PMT (Per Month Installment Calculation), Simple Interest Calculation.
- ✓ Running Total: Creating a Cumulative Sum.
- ✓ Text Functions: CONCATENATE, LEFT, RIGHT, MID, UPPER, LOWER, PROPER.
- ✓ Rounding Functions: ROUND, ROUNDUP, ROUNDDOWN.
- ✓ Worksheets:
- ✓ Managing Worksheets: Inserting, Deleting, Renaming, Moving, and Copying.
- ✓ Formatting Worksheets: Headers, Footers, Page Setup, and Printing.
- ✓ Practical Applications:
- ✓ Mark Sheet Creation: Using Formulas to Calculate Totals, Averages, and Grades.
- ✓ Payroll Sheet Creation: Managing Salaries, Taxes, and Deductions.
- ✓ Bills Creation with GST: Designing
- ✓ and Calculating Tax in Excel.



COUNTIF FUNCTION IN EXCEL

COUNTIF FUNCTION IN EXCEL is used to find the number of cells that satisfy the condition.

SYNTAX & ARGUMENTS

=COUNTIF(range,criteria)

- **range** – In this argument, specify the criteria to check for.
- **criteria** – In this argument, specify the actual condition.

Note that, this function will calculate number of cells from the range where the criteria is TRUE. It is not case sensitive.

EXAMPLE

Finding the number of students who score more than 80 marks

Formula	Result
=COUNTIF(A2:A13,>80)	2

1	2	3	4	5	6	7	8	9	10	11	12	13
	85	37	40	39	40	59	31	49	48	47	46	72
												89

- ✓ Attendance Sheet Format: Tracking and Analyzing • Attendance Data

Microsoft Powerpoint

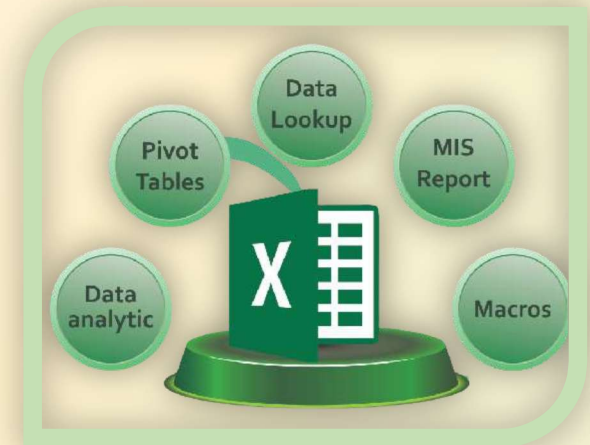
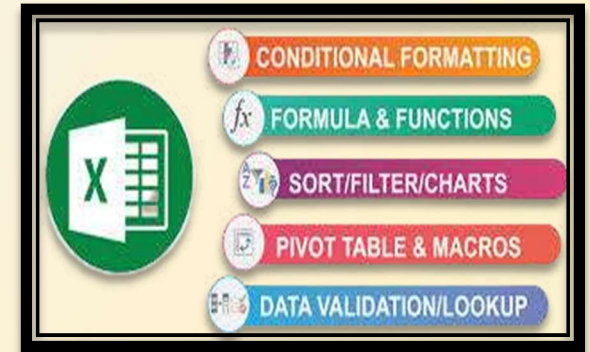
- ✓ Creating Presentations:
- ✓ Selecting Themes and Layouts.
- ✓ Inserting and Formatting Text, Images, and Shapes.
- ✓ Adding and Arranging Slides.
- ✓ Design and Formatting:
- ✓ Using Slide Master for Consistent Design.
- ✓ Applying Transitions and Animations.
- ✓ Customizing Slide Backgrounds and Themes.
- ✓ Multimedia and Interactivity:
- ✓ Embedding Videos and Audio.
- ✓ Creating Hyperlinks and Action Buttons.
- ✓ Designing Interactive Presentations.
- ✓ Software Installation
- ✓ Mailing
- ✓ Final Project:
- ✓ Comprehensive Project Combining Word, Excel, and PowerPoint.
- ✓ Creating Creative Templates and Resume Format in MS WORD

ADVANCE EXCEL

- ✓ Excel Interface Overview
- ✓ Ribbon, Toolbars, And Key Shortcuts
- ✓ Customizing The Excel Interface
- ✓ Basic Excel Operations
- ✓ Creating, Saving, And Navigating Workbooks
- ✓ Understanding Cells, Rows, Columns, And Ranges
- ✓ Arithmetic And Logical Operations
- ✓ Sum, Average, Min, Max ,If, And, Or, Not
- ✓ Text Functions Concatenate, Textjoin, Trim, Len
- ✓ Find, Replace, Upper, Lower, Data Entry Techniques
- ✓ Autofill, Flash Fill, Data Validation And Dropdown Lists
- ✓ Formatting Techniques
- ✓ Number Formatting, Custom Formats
- ✓ **CONDITIONAL FORMATTING BASICS**
- ✓ Managing Worksheets
- ✓ Adding, Deleting, And Moving Sheets
- ✓ Grouping And Linking Worksheets
- ✓ Introduction To Sorting And Filtering
- ✓ Custom Sorts, Advanced Filters
- ✓ Using Subtotals, Basic Charts
- ✓ Creating And Customizing Chart
- ✓ Sorting By Custom Lists

USING MULTIPLE CRITERIA IN FILTER

- ✓ Using Sparklines For Data Visualization
- ✓ Lookup & Reference Functions
- ✓ Vlookup, Hlookup, Xlookup



10 Advanced Formulas of Excel

1	Index And Match	6	Frequency Formula
2	Choose Formula	7	Subtotal Formula
3	Indirect Formula	8	Sumifs Formula
4	Correl Formula	9	Whatif Analysis
5	Forecast Formula	10	Isnumber Formula

- ✓ Index And Match ,Date & Time Functions
- ✓ Today, Now, Datedif, Networkdays, Workdays
- ✓ New Excel Formulas In Ms Office 2024
- ✓ Textsplit: Splitting Text Strings Into Arrays
- ✓ Textbefore And Textafter: Extracting Text Based On Delimiters.
- ✓ Lambda: Creating Custom Functions
- ✓ Let: Storing Intermediate Calculations And Values.
- ✓ Arraytotext: Converting An Array To Text Format.
- ✓ Advanced Sorting And Filter
- ✓ Removing Duplicates
- ✓ Text To Columns For Data Parsing
- ✓ Using Flash Fill For Data Cleaning

INTRODUCTION TO PIVOT TABLES

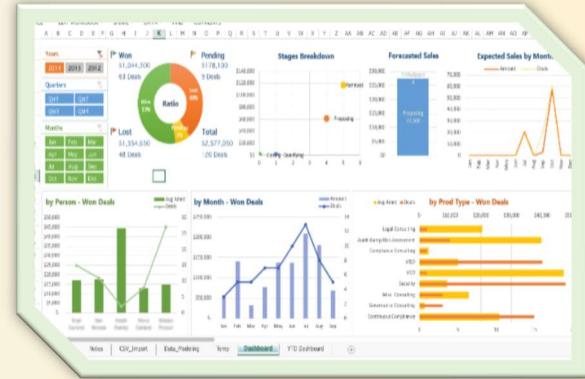
- ✓ Creating and Modifying Pivot Tables
- ✓ Grouping and Filtering Data in Pivot Tables
- ✓ Advanced Pivot Table Techniques
- ✓ Calculated Fields and Items
- ✓ Slicers and Timelines
- ✓ Pivot Charts
- ✓ Creating and Customizing Pivot Charts
- ✓ Using Pivot Charts for Dynamic Reporting
- ✓ Advanced Conditional Formatting
- ✓ Using Formulas in Conditional Formatting
- ✓ Icon Sets, Data Bars, and Color Scales
- ✓ Data Validation Techniques
- ✓ Custom Data Validation Rules
- ✓ Error Messages and Input Messages

POWER QUERY BASICS

- ✓ Introduction to Power Query
- ✓ Data Import from Various Sources
- ✓ Basic Data Transformation (Merge, Append)
- ✓ Cleaning Data with Power Query
- ✓ Advanced Data Manipulation
- ✓ Unpivoting Data
- ✓ Creating Custom Columns and Conditional Columns
- ✓ Advanced Charting Techniques
- ✓ Waterfall, Funnel, and Radar Charts
- ✓ Combo Charts with Secondary Axes
- ✓ Interactive Dashboards
- ✓ Creating Interactive Elements (Slicers, Buttons)
- ✓ Linking Charts and Tables in Dashboards
- ✓ Dynamic Charting
- ✓ Using Named Ranges and OFFSET for Dynamic Charts

INTRODUCTION TO POWER PIVOT

- ✓ Creating Data Models



Xlookup

Clipboard Font

D13 =XLOOKUP(C13,

Sales Report				
S.No	Name	Jan	Feb	March
1	Harkesh	2961	4333	3522
2	Kapil	3912	4051	4264
3	Mohit	1858	4541	2075
4	Pooja	946	1394	2160
5	Harendra	4708	509	889
6	Sujit	3088	2893	2029
7	Virendra	2269	4963	3057

12 Name Total Sales

13 =XLOOKUP(C13,

14 XLOOKUP(lookup_value,lookup

Top 10 Queries??? in Advance Excel

Table 1		Table 2	
Name	Salary	Name	Salary
osuf Peter	447,877	Yosuf	447,877
amesh P	449,267	Ramesh	449,267
hahab islam	332,857	Shahab	332,857
arun Chandru	282,287	Tarun	282,287
habbir ghor	272,071	Shabbir	272,071
aran Gowda	458,393	Karan	458,393



Work Smarter, Not Harder

- ✓ Budgets and Controls
- ✓ Credit Limits
- ✓ Price Levels and Price Lists
- ✓ Batch-wise and Expiry-based Inventory
- ✓ Multiple Stock Valuation Methods

PAYROLL, TDS & MIS REPORTS

- ✓ Payroll configuration
- ✓ Creating employee records
- ✓ Defining salary structures
- ✓ Payslip generation and reports
- ✓ TDS configuration and deduction
- ✓ TDS reports and returns
- ✓ MIS Reports: Cash Flow, Fund Flow, Ratio Analysis

SECURITY, DATA MANAGEMENT & FINAL REVIEW

- ✓ User Roles and Security Levels
- ✓ Tally Vault and Audit Trail
- ✓ Backup and Restore
- ✓ Split Company Data
- ✓ Exporting, Emailing, and Printing Reports
- ✓ Remote Access and Tally.
- ✓ Final Assessment & Practice Exercises

WEB DEVELOPMENT

HTML

MODULE 1: BASIC HTML STRUCTURE TAGS

- ✓ HTML document structure (<!DOCTYPE html>, <html>, <head>, <body>)
- ✓ Head elements:
 - <title>
 - <meta> tags
 - <link> to external files
- ✓ Body elements:
 - Headings (<h1>—<h6>)
 - Paragraphs (<p>)
 - Line breaks (
) and horizontal rules (<hr>)

MODULE 2: TEXT FORMATTING S LISTS

- ✓ Bold, italic, underline (, <i>, <u>, ,)
- ✓ Superscript and subscript (<sup>, <sub>)
- ✓ Lists:
 - Ordered lists ()
 - Unordered lists ()
 - Definition lists (<dl>)

MODULE 3: LINKS S NAVIGATION

- ✓ Creating hyperlinks (<a>)
- ✓ Internal vs external links
- ✓ Email and phone links



FEATURES OF AUDIT TRAIL IN TALLY



Accurately tracks changes in data



Maintains transparent financial transactions



Prevent fraudulent practices



Ensures proper verification of all kinds of data



- ✓ Opening links in new tabs (target="_blank")
- ✓ Using anchors for page navigation

MODULE 4: IMAGES S MEDIA

- ✓ Inserting images ()
- ✓ Image attributes (src, alt, width, height)
- ✓ Adding videos (<video>)
- ✓ Adding audio (<audio>)
- ✓ Embedding external content (YouTube, Google Maps with <iframe>)

MODULE 5: TABLES IN HTML

- ✓ Creating a table (<table>)
- ✓ Table headers (<th>), rows (<tr>), and cells (<td>)
- ✓ Merging cells (colspan, rowspan)
- ✓ Adding borders and captions
- ✓ Best practices for table accessibility

MODULE 6: FORMS IN HTML

- ✓ Form basics (<form>, action, method)
- ✓ Input fields (<input>, <textarea>)
- ✓ Drop-down lists (<select>, <option>)
- ✓ Radio buttons and checkboxes
- ✓ Submit and reset buttons
- ✓ HTML5 form attributes (required, placeholder, pattern)

MODULE 7: SEMANTIC HTML

- ✓ Understanding semantic tags
- ✓ <header>, <footer>, <nav>, <main>, <article>, <section>, <aside>
- ✓ Benefits for SEO and accessibility

MODULE 8: HTML5 FEATURES

- ✓ New input types (email, date, color, number)
- ✓ <figure> and <figcaption>
- ✓ <progress> and <meter>
- ✓ <details> and <summary> for collapsible content

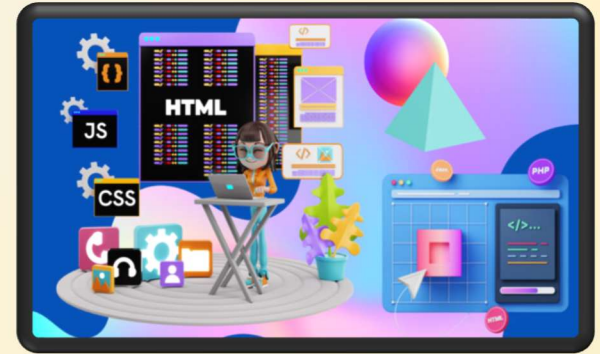
Module 9: Project Work s Practice

- ✓ Mini-project ideas:
 - Personal portfolio webpage
 - Product catalog page
 - Resume/CV in HTML
 - Event registration form
- ✓ Debugging HTML code

CSS PROGRAMMING COURSE

MODULE 1: INTRODUCTION TO CSS

- ✓ What is CSS? Purpose and importance in web design
- ✓ Difference between HTML and CSS
- ✓ CSS syntax (selectors, properties, values)
- ✓ Types of CSS:
 - ✓ Inline CSS
 - ✓ Internal CSS
 - ✓ External CSS



- ✓ Linking CSS to HTML (<style>, <link>)

MODULE 2:

- ✓ Basic selectors:
- ✓ Element, ID, and class selectors
- ✓ Grouping and universal selectors
- ✓ Descendant, child, and sibling selectors
- ✓ Attribute selectors
- ✓ CSS colors:
- ✓ Named colors, HEX, RGB, RGBA, HSL, HSLA

MODULE 3: TEXT & FONT STYLING

- ✓ Changing font family, size, and style
- ✓ Font weight and letter spacing
- ✓ Text alignment and decoration
- ✓ Line height and word spacing
- ✓ Google Fonts integration

MODULE 4: BOX MODEL & BORDERS

- ✓ Understanding the CSS box model (content, padding, border, margin)
- ✓ Setting width and height
- ✓ Borders: style, width, and color
- ✓ Border radius for rounded corners
- ✓ Outline vs border

MODULE 5: BACKGROUNDS

- ✓ Background color
- ✓ Background images (background-image)
- ✓ Background repeat, size, position
- ✓ Gradient backgrounds (linear and radial)

MODULE 6: CSS LAYOUT BASICS

- ✓ Display property (block, inline, inline-block, none)
- ✓ Positioning (static, relative, absolute, fixed, sticky)
- ✓ Z-index for layering elements
- ✓ Float and clear
- ✓ Overflow control

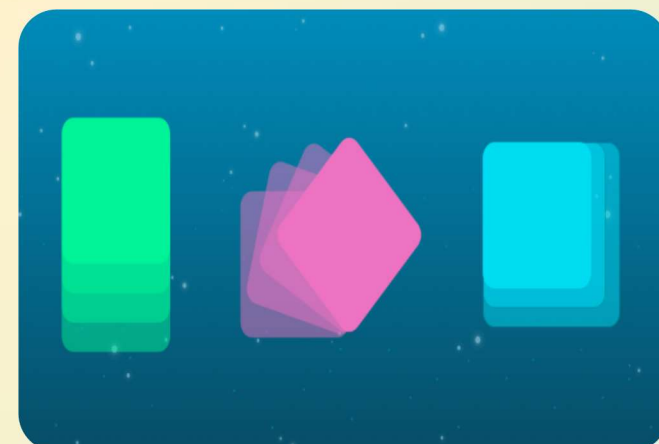
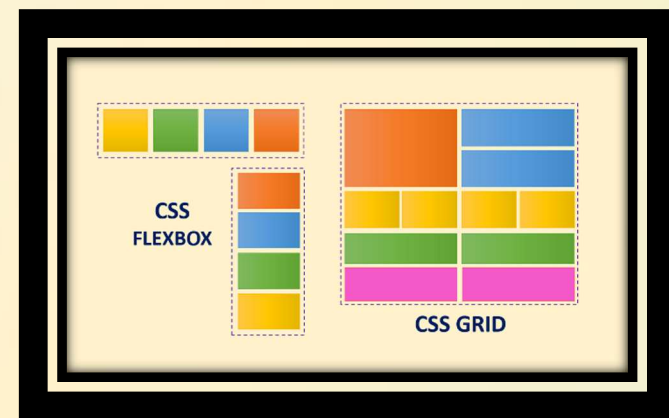
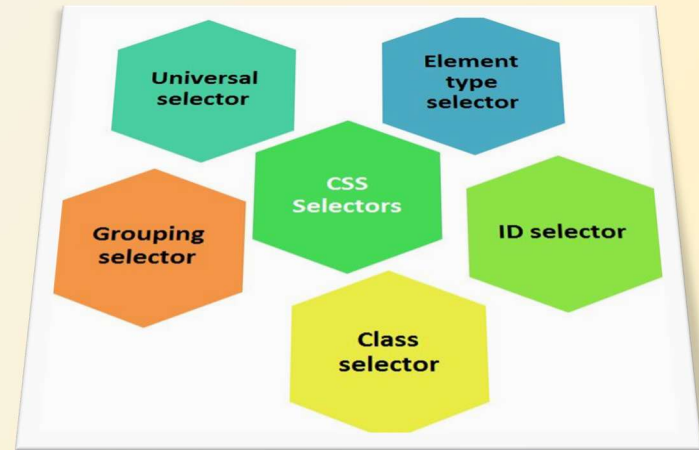
MODULE 7: FLEXBOX

- ✓ Introduction to flexbox
- ✓ Main axis and cross axis
- ✓ Flex container properties:
 - display: flex
 - flex-direction, justify-content, align-items, flex-wrap
- ✓ Flex item properties:
 - order, flex-grow, flex-shrink, flex-basis

MODULE 8: CSS GRID

- ✓ Introduction to CSS Grid layout
- ✓ Creating grid containers (display: grid)
- ✓ Defining rows and columns
- ✓ Grid gap and alignment
- ✓ Spanning rows and columns

MODULE 9: STYLING LISTS, LINKS & TABLES



- ✓ Customizing bullet points and numbering
- ✓ Styling links (:link, :hover, :active, :visited)
- ✓ Table styling (borders, spacing, striping rows)

MODULE 10: CSS TRANSITIONS, TRANSFORMS ANIMATIONS

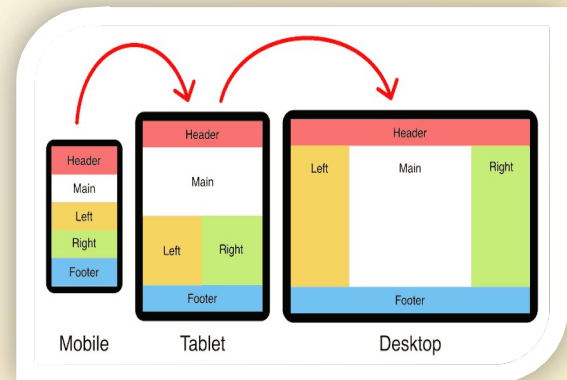
- ✓ CSS transitions (duration, delay, timing function)
- ✓ CSS transforms (rotate, scale, translate, skew)
- ✓ Keyframe animations (@keyframes)
- ✓ Animation properties (animation-name, animation-duration, animation-iteration-count)

MODULE 11: RESPONSIVE DESIGN

- ✓ Introduction to responsive design
- ✓ Viewport meta tag
- ✓ Media queries (@media)
- ✓ Flexible images and text
- ✓ Mobile-first design approach

MODULE 12: PROJECT WORK & PRACTICE

- ✓ Mini-project ideas:
 - Responsive personal portfolio website
 - Animated landing page
 - Product card UI design
 - Navigation bar with hover effects
- ✓ Debugging CSS issues



JAVA SCRIPT

MODULE 1: JAVA BASICS

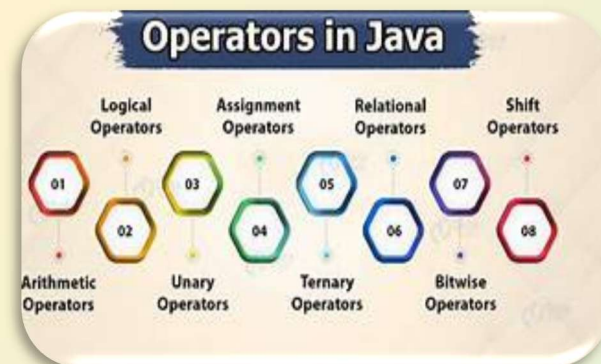
- ✓ Variables and data types
- ✓ Constants (final keyword)
- ✓ Type casting
- ✓ Input and output (System.out.print, System.out.println, Scanner class)
- ✓ Comments and documentation (javadoc)
- ✓ Reserved keywords

MODULE 2: OPERATORS IN JAVA

- ✓ Arithmetic operators
- ✓ Relational operators
- ✓ Logical operators
- ✓ Assignment operators
- ✓ Increment & decrement operators
- ✓ Conditional (ternary) operator
- ✓ Bitwise operators
- ✓ Operator precedence

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- ✓ Operator precedence

MODULE 4: ARRAYS AND STRINGS

- ✓ Single-dimensional arrays
- ✓ Multi-dimensional arrays
- ✓ Array manipulation and traversal
- ✓ String class and common methods
- ✓ StringBuffer and StringBuilder
- ✓ String immutability concept

MODULE 5: METHODS IN JAVA

- ✓ Declaring and calling methods
- ✓ Method parameters and return types
- ✓ Method overloading
- ✓ Variable scope and lifetime
- ✓ Recursion

MODULE 6: OBJECT-ORIENTED PROGRAMMING (OOP) IN JAVA

- ✓ Classes and objects
- ✓ Data members and member functions
- ✓ Constructors and this keyword
- ✓ Access modifiers (public, private, protected)
- ✓ Static members and methods

MODULE 7: ADVANCED OOP CONCEPTS

- ✓ Inheritance (single, multilevel, hierarchical)
- ✓ Method overriding
- ✓ Polymorphism (compile-time C run-time)
- ✓ Abstraction:
- ✓ Abstract classes
- ✓ Interfaces
- ✓ Encapsulation
- ✓ Final keyword in variables, methods, and classes

Module 8: Packages and Access Control

- ✓ Using packages
- ✓ Built-in Java packages (java.util, java.io, etc.)
- ✓ Access control levels

Module 9: Exception Handling

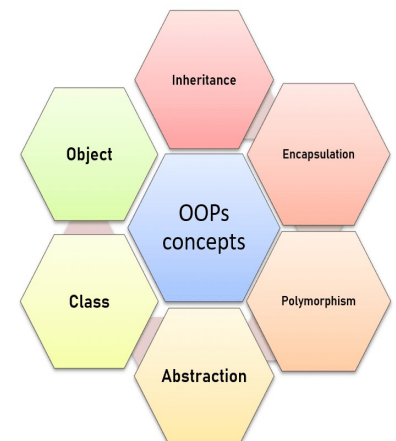
- ✓ Types of exceptions
- ✓ Try-catch blocks
- ✓ Multiple catch blocks
- ✓ Finally block

Module 10: Java Collections Framework

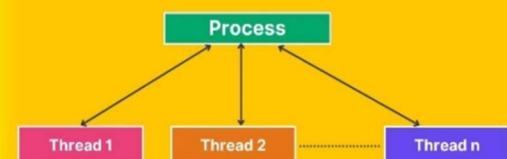
- ✓ Throw and throws
- ✓ Custom exceptions
- ✓ Collection hierarchy overview
- ✓ Lists: ArrayList, LinkedList
- ✓ Sets: HashSet, TreeSet
- ✓ Maps: HashMap, TreeMap



Object Oriented Programming in Java



Understanding Multithreading In Java Programming



- ✓ Iterators and enhanced for loop
- ✓ Generics

Module 11: File Handling

- ✓ File I/O streams
- ✓ Reading and writing text files
- ✓ Reading and writing binary files
- ✓ Serialization and deserialization

Module 12: Multithreading

- ✓ Introduction to threads
- ✓ Creating threads by extending Thread class and implementing Runnable
- ✓ Thread lifecycle
- ✓ Thread synchronization
- ✓ Inter-thread communication

Module 13: Project Work s Practice

- ✓ Mini-project ideas:
 - Library management system
 - Online quiz application
 - Banking application
 - File-based contact manager
- ✓ Debugging and best coding practices

