

# Program Offered by the Department for various

## CLASSES / SYLLABUS

| Sr. No. | Class      | Courses Offered  |
|---------|------------|--|
| 1       | B.SC I     | Microsoft Office v.2021 / HTML Basic(Any One)                      |
| 2.      | B.SC II    | HTML(Advance) /PageMaker/ C language (Any One )                    |
| 3.      | B.SC III   | C ++ language /Corel Draw/Photoshop (Any One)                      |
| 4.      | B.Com I    | Microsoft Office v.2021/ HTML Basic (Any One)                      |
| 5.      | B. Com II  | PageMaker / C language/Tally ERP 9(Any One )                       |
| 6.      | B. Com III | Corel Draw / C++ language/ /HTML (Advance)(Any One)                |
| 7.      | B.B.A I    | Microsoft Office 2021/Adobe Photoshop(Any One)                     |
| 8.      | B.B.A II   | HTML (Basic) / Page Maker/ C language (Any One)                    |
| 9.      | B.B.A III  | HTML 5 (Advance) / Adobe Photoshop Python(Any One)                 |
| 10.     | B.A I      | Microsoft Office v 2021 / C language(Any One)                      |
| 11.     | B.A II     | C ++ language / HTML (Basic) / Corel Draw (Any One )               |
| 12.     | B.A III    | HTML 5 (Advance) /Photoshop /Tally ERP 9 (Any One)                 |
| 13.     | M.Com I    | Tally ERP 9 / PageMaker /HTML Basic (Any One)                      |
| 14.     | M.Com II   | Adobe Photoshop / HTML (Advance)/ Tally ERP 9<br>(Any One)         |
| 15.     | M-Sc I     | Microsoft Office v 2021 / C language (Any One)                     |
| 16.     | M-Sc II    | C++ language / Adobe Photoshop /Python (Any One)                   |
| 17.     | M.A I      | Microsoft Office v. 2021/ Adobe Photoshop / HTML<br>Basic(Any One) |
| 18.     | M.A II     | Corel Draw/ PageMaker /HTML (Advanced)(Any One)                    |

# **NABIRA MAHAVIDYALA, KATOL**

## **Computer Literacy Programme**

### **SYLLABUS**

#### **Course -01 : MS-OFFICE 2021**

#### **MS-WORD**

##### **Module 1: Text Basics**

- Typing the text, Alignment of text
- Editing Text: Cut, Copy, Paste, Select All, Clear
- Find & Replace

##### **Module 2: Text Formatting and saving file**

- New, Open, Close, Save, Save As
- Formatting Text: Font Size, Font Style
- Font Color, Use the Bold, Italic, and Underline
- Change the Text Case
- Line spacing, Paragraph spacing
- Shading text and paragraph
- Working with Tabs and Indents

##### **Module 3: Working with Objects**

- Shapes, Clipart and Picture, Word Art, Smart Art
- Columns and Orderings - To Add Columns to a Document
- Change the Order of Objects
- Page Number, Date & Time
- Inserting Text boxes
- Inserting Word art
- Inserting symbols
- Inserting Chart

##### **Module 4: Header & Footers**

- Inserting custom Header and Footer
- Inserting objects in the header and footer
- Add section break to a document

##### **Module 5: Working with bullets and numbered lists**

- Multilevel numbering and Bulleting
- Creating List
- Customizing List style
- Page bordering
- Page background

##### **Module 6: Tables**

- Working with Tables, Table Formatting

- Table Styles

## **Module 7: Styles and Content**

- Using Build-in Styles, Modifying
- Styles Creating Styles, Creating a list style.

- Alignment option
- Merge and split option

- Table of contents and references  
Adding internal references
- Adding a Footnote

## **Module 8: Merging Documents**

- Typing new address list
- Importing address list from Excel file
- Write and insert field
- Merging with outlook contact

- Preview Result
- Merging to envelopes
- Merging to label
- Setting rules for merges
- Finish & Merge options

## **Module 9: Sharing and Maintaining Document**

- Changing Word Options
- Changing the Proofing Tools
- Managing Templates
- Restricting Document Access

- Using Protected View
- Working with Templates
- Managing Templates
- Understanding building blocks

## **Module 10: Proofing the document**

- Check Spelling As You Type.
- Mark Grammar Errors As You Type.
- Setting AutoCorrect Options

## **Module 11: printing**

- Page Setup, Setting margins
- Print Preview, Print.

# MS EXCEL

## Module 12: Introduction to Excel

- Introduction to Excel interface
- Understanding rows and columns, Naming Cells
- Working with excel workbook and sheets

## Module 13: Formatting excel work book:

- New, Open, Close, Save, Save As
- Formatting Text: Font Size, Font Style
- Font Color, Use the Bold, Italic, and Underline
- Wrap text, Merge and Centre
- Currency, Accounting and other formats
- Modifying Columns, Rows & Cells

## Module 14: Perform Calculations with Functions

- Creating Simple Formulas
- Setting up your own formula
- Date and Time Functions, Financial Functions
- Logical Functions, Lookup and Reference
- Functions Mathematical Functions
- Statistical Functions, Text Functions.

## Module 15: Sort and Filter Data with Excel

- Sort and filtering data
- Using number filter, Text filter
- Custom filtering
- Removing filters from columns
- Conditional formatting

## Module 16: Create Effective Charts to Present Data Visually

- Inserting Column, Pie chart etc.
- Chart styles
- Create an effective chart with Chart Tool
- Editing chart data range
- Design, Format, and Layout options
- Editing data series
- Adding chart title
- Changing chart
- Changing layouts

## **Module 17: Analyze Data Using Pivot Tables and Pivot Charts**

- Understand PivotTables, Create a PivotTable
- Framework Using the PivotTable and PivotChart
- Create Pivot Chart from pivot Table.
- Inserting slicer
- Creating Calculated fields

## **Module 18: Protecting and sharing the work book**

- Protecting a workbook with a password
- Allow user to edit ranges
- Track changes
- Working with Comments
- Insert Excel Objects and Charts in Word Document and Power point Presentation.

## **Module 19: Use Macros to AutomateTasks**

- Creating and Recording Macros
- Assigning Macros to the work sheets
- Saving Macro enabled workbook

## **Module 20: Proofing and Printing**

- Page setup, Setting print area, Print titles
- Inserting custom Header and Footer
- Inserting objects in the header and footer
- Page Setup, Setting margins, Print Preview, Print
- Enable back ground error checking
- Setting AutoCorrect Options

# MS POWER POINT

## Module 21: Setting Up Power Point Environment

- New, Open, Close, Save, Save As
- Typing the text, Alignment of text
- Formatting Text: Font Size, Font Style
- Font Color, Use the Bold, Italic, and Underline
- Cut, Copy, Paste, Select All, Clear text
- Find & Replace
- Working with Tabs and Indents

## Module 22: Creating slides and applying themes

- Inserting new slide
- Changing layout of slides
- Duplicating slides
- Copying and pasting slide
- Applying themes to the slide layout
- Changing theme color
- Slide background
- Formatting slide background
- Using slide views

## Module 23: Working with bullets and numbering

- Multilevel numbering and Bulleting
- Creating List
- Page bordering
- Page background
- Aligning text
- Text directions
- Columns option

## Module 24: Working with Objects

- Shapes, Clipart and Picture, WordArt, SmartArt
- Change the Order of Objects
- Inserting slide header and footer
- Inserting Text boxes
- Inserting shapes, using quick styles
  - Inserting Word art
- Inserting symbols
- Inserting Chart

## **Module 25: Hyperlinks and Action Buttons**

- Inserting Hyperlinks and Action Buttons
- Edit Hyperlinks and Action Button
- Word Art and Shapes

## **Module 26: Working With Movies and Sounds**

- Inserting Movie From a Computer File
- Inserting Audio file
- Audio Video playback and format options
- Video options, Adjust options
- Reshaping and bordering Video

## **Module 27: Using SmartArt and Tables**

- Working with Tables, Table Formatting
- Table Styles
- Alignment option

## **Module 28: Animation and Slide Transition**

- Default Animation, Custom Animation
- Modify a Default or Custom Animation
- Reorder Animation Using Transitions
- Apply a Slide Transition, Modifying a Transition, Advancing to the Next Slide

## **Module 29: Using slide Master**

- Using slide master
- Inserting layout option
- Creating custom layout
- Inserting place holders
- Formatting place holders

## **Module 30: Slide show Option**

- Start slide show
- Start show from the current slide
- Rehearse timing
- Creating custom slide show

## **Module 31: Proofing and Printing**

- Check Spelling As You Type
- Setting AutoCorrect Options

- Save as video
- Save as JPEG files
- Save as PowerPoint Show file
- Print Preview, Print

## **INTERNET & E-MAIL**

- What is Internet? Receiving Incoming Messages
- Sending Outgoing Messages, Email addressing
- Email attachments, Browsing, Search engines
- Text chatting, Job Searching
- Downloading video and Music
- Uploading Video or Music, Voice chatting, Webcam Chatting etc.
- Introduction to Blogging, Facebook.



# **Course -02 : HTML SYLLABUS**

## **Basics to Advance**

- Basic knowledge in HTML tags & skill of creating web pages should be known

## **Introduction to HTML & Setting Up the Environment**

- Overview of HTML and its role in web development. .
- Basic HTML structure: DOCTYPE, HTML, head, and body tags

## **.Understanding HTML Tags & Elements**

- Explanation of tags and elements.
- Creating paragraphs, headings to, and using the tag.

## **Working with Text and Formatting**

- Formatting text with tags.
- Adding line breaks and horizontal rules.
- Using comments and introducing semantic HTML.

## **Links and Images in HTML**

- Creating hyperlinks with the tag.
- Adding images using the Error! Filename not specified.tag.
- Linking to external websites and internal pages.

## **Working with Tables**

- Setting up table rows, columns, and headers.
- Merging cells using colspan and rowspan for complex table layouts.
- Forms in HTML:

## **Creating User Input Namaste**

- Basic structure of HTML forms.
- Working with input types like and implementing radio buttons, checkboxes, and submit buttons.

## **.Marquee Tag in HTML**

- Exploring attributes like behavior, direction, scroll amount, and background color.

## **Adding Multimedia in HTML**

- Embedding audio with and video with tags.

## **Creating a Time-Table Using HTML(project)**

- Build a time-table layout using HTML table structures.

## **Creating a Registration Form(project)**

- Learn how to build a registration form with text fields, radio buttons, and checkboxes.

# **Course-03 : ADOBE PHOTOSHOP SYLLABUS**

## **Introduction Variations in Photoshop applications**

### **History of Photoshop**

- Adobe Photoshop cs2
- Adobe Photoshop cs3
- Adobe Photoshop cs4
- Adobe Photoshop cs5
- Adobe Photoshop cs6

### **About Photoshop, Photoshop Features**

Advertisement Creation, Animations& 3d Effects, software development, and designs, Photo modification purpose.

### **Key Board practice**

Shortcut keys & commands

### **Editing Photo in camera raw**

Photo Lightings, Temperature and Color Options for Background Shades

### **Creating Web Galleries, PDF converts**

- PDF Presentation, Slide show presentation

### **Opening and importing images, Creating Documents with different sizes**

New document properties inserting of images

### **Move tool, magic wand tool, quick selection tool, lasso tool, polygonal lasso tool, and magnetic lasso tool**

Use this to select a color range

- Tolerance to make your selections more/less precise
- The movements to vertical/horizontal

### **Crop tool, slice tool, slice select tool, eyedropper tool, color sampler tool, ruler tool, note tool, count tool**

- The Crop Tool works similarly to the Rectangular Marquee tool • It crops your image to the size of the box • This is used mostly for building websites • splitting up one image into smaller ones when saving out 1 Day 10 Spot healing brush tool, healing brush tool, patch tool, red eye tool, brush tool, pencil tool, color replacement tool, mixer brush tool

## **Clone stamp tool, pattern tool, history brush tool, art history tool**

### **• This is very similar to the Healing Brush Tool**

This tool works just like the Brush Tool information that it

Eraser tool, background eraser tool magic eraser, gradient tool paint bucket tool

This is the anti-Brush tool erases with whatever secondary color

use this to make a gradiation of colors foreground color and background color

## **Pen tool, freeform pen tool, add anchor point tool, delete anchor point tool, convert to point tool, horizontal type tool, vertical type tool, horizontal type mask tool, vertical type mask tool**

• Paths can be used in a few different ways

- shape the path for accurate selections
- There's a lot of options for the Type Tool • to make a bounding box

## **Blur tool, sharpen tool, smudge tool, dodge tool, burn tool, sponge tool**

• It makes things blurry

• long as it is not absolute black. Absolute black won't lighten

## **About color information, Color Modes**

- Bitmap, • RGB, • CMYK, • Grayscale

## **Course -04 : TALLY ERP -09**

### **1. Company creation**

- a) Company Create
- b) Security Creation
- I. Accounting Features
- II. Inventory Features
- c) Company Features
- III. Statutory & Taxation

### **2. Account & Inventory Master**

#### **a. Group & Ledger Creation**

- Single & Multiple - Create / Alter of Groups & Ledger

#### **b. Chart of Accounts b. Stock Group & Item Creation**

- Single & Multiple - Create / Alter of Stock
- Godown & Category creation

#### **c. Voucher Creation**

- New Voucher Creation /Alteration

### **3. Accounting & Inventory Voucher**

#### **A. Accounting Transaction**

- Contra
- Payment
- Receipt
- Journal
- Sales
- Purchase
- Purchase and Sales Entries
- Account Invoice b. Item Invoice
- Receivable and Payable management
- Voucher mode
- Invoice mode
- With GST

### **5. TDS**

- a. Introduction
- b. TDS Process
- c. TDS in Tally
- d. TDS Payment

### **6. GST**

- a. Introduction
- b. Activation of GST

# **Course -05 : COREL DRAW SYLLABUS**

## **BASICS OF CORELDRAW**

### **Introduction-Getting Started-Creating**

A New File - Title Bar-Menu Bar-Work Area-Printable Page-Property Bar-Page Counter Bar-Colour Palette-Toolbox-Status Bar-Drawing Figures Lines-Ellipse-Circles-Rectangle-Square-Polygon-Saving-Closing-Opening-Views-Normal View-Preview-Wire Frame View-Draft View-Zoom-View Manager-Creating a View.

### **DRAWING**

- Toolbox-Selecting an Object-Resizing an Object-Moving an Object-Changing the Shape-Combining Two Objects-Skewing-Welding the Objects-Blending-Curve Lines Straight Lines-Continuing a Line-View Mode-Changing-Media Tool-Rotating An Object Grouping-Fill Tool Fly Out-Filling-Spray Mode.

### **TEXT**

Introduction-Text Tool-Entering Artistic Text-Entering Paragraph Text-Converting Text Formatting Text-Changing the Font Size-Arranging Objects-Ordering The Objects-Changing the Font-Bullets-Decorating the Text-Webdings-Text Editor-Opening-Changing the Alignment Type Style-Spell Checking-Grammer-Searching Synonyms-Find-Replace-Editing-Kerning Formatting Characters.

### **IMAGE Bitmap Images**

-Vector Image-Resizing-Rotating-Skewing-Moving-Cropping-Importing Images-Adding Special Effects-Converting to Bitmap-Exporting Images.

### **PAGE LAYOUT NAMASTE**

Changing the Page Size-Changing the Layout-Applying Styles-Applying Bitmaps to the Background - Changing the Background-Adding a Page Frame-Moving Between Pages.

## **Course -06: PAGEMAKER SYLLABUS**

### **Unit 1: PageMaker Basics**

Starting PageMaker, about the work area, using the toolbox, working with palettes, viewing pages, working with text and graphics, moving between pages, adding and deleting pages, working with multiple open publications.

### **Unit 2: Constructing a publication**

Creating and opening publication, naming and saving a publication, closing a publication, setting up pages, changing document setup options, setting up rulers, creating running headers and footers.

### **Unit 3: Drawing tools and text tools**

Different drawing tools, text tools, character formatting, paragraph formatting, controlling windows and orphans, controlling page breaks, tabs and hyphenation, grid manager, printing a document. Unit 4: Importing Graphics Placing graphics, sizing and cropping graphics, OLE, Embedding an OLE object.

### **Unit 4: Importing Graphics**

Placing graphics, sizing and cropping graphics, OLE, Embedding an OLE object. Unit 5: Master Pages Creating a master page, numbering pages, setting up ruler guides, applying master page design Unit 6: Utilities Using a table editor, create keyline, bullets and numbering, creating PDF file with acrobat, story editor, spell checker. Group B Photoshop Unit 1: Photoshop Environment Raster and Vector graphics, Photoshop environment Elements

# Course -07 : 'C' LANGUAGE -SYLLABUS

## 1. Introduction to C language

History of C, Features of C, Importance of C, About Procedural Language, Role of Compiler, Role of Interpreter, Compiling & Linking, Algorithm and flowchart.

## 2. Basics

Character set, tokens, keywords, identifier, datatype, constant, punctuator, variable, operator, input output methods.

## 3. Operator

Arithmetic, assignment, shorthand, relational, logical, unary, increment and decrement, ternary etc.

## 4. Input-Output function

Formatted input-output function (scanf (), printf ()) Unformatted input-output function – getchar(), getch(), getche(), puchar() , gets() puts() etc.

## 5. Data Types

Basic data type, size and derived data type, sizeof () etc.

## 6. Control Statement (conditional and branching) Conditional

selection –if, if else, else if ladder, nested if, switch, nested switch, goto, break, continue etc. ∞

## 7 Control Statements

(Looping) While, do while, for, nested loop, nested for etc.

## 8-Array

Definition, declaration, initialization, types of array, one dimensional, two dimensional, searching, sorting, insertion, deletion etc.

## 9-String

Definition, declaration, initialization, string and array, string library function as- strlen(), strcmp(), strcpy(), strcat() etc.

## 10-Structure and Union

Definition, declaration, initialization, multiple variable concept, array of structure, array within structure, structure and string function, nested structure, union and structure etc.

**11-Function** Definition, declaration ,initialization, types of function ,prototype, definition, function call, library



## **12-Storage**

Classes Definition,declaration,localvariable,globalvariable,auto,static,register,extern etc.

## **13-Pointer**

Definition, declaration, initialization ,pointer to pointer ,pointer arithmetic ,pointer and array, array of pointer, pointer and structure, pointer and function ,call by value ,call by reference ,pointer and string etc.

## **14-The preprocessor**

Macros, #define ,macro without argument ,macros with argument ,conditional macros etc.

## **15-Dynamic**

memory allocation Definition, types ,dynamic memory allocation function –malloc() ,calloc() ,realloc(),free() etc.

## **16-File Handling**

Interoduction,file operation opening ,reading/writing ,closing ,filemode, filehandlng function ,fgetc(),fputc(),fgets(),fputs(),getw(),putw(),format function fprintf(),fscanf(),fread(),fwrite(),random access file etc.

# **Course -08 “C++” LANGUAGE -SYLLABUS**

## **Introduction to C++**

History of C++, Overview of Procedural Programming and Object-Orientation Programming, Using main() function, C vs. C++, Compiling and Executing Simple Programs in C++.

## **Data Types, Variables, Constants, Operators and Basic I/O**

Declaring, Defining and Initializing Variables, Scope of Variables, Using Named Constants, Keywords,

Data Types, Casting of Data Types, Operators (Arithmetic, Logical and Bitwise), Using Comments in programs, Character I/O (getc, getchar, putc, putchar), Formatted and Console I/O (printf(), scanf(), cin, cout), Using Basic Header Files (stdio.h, iostream.h, conio.h)

## **Expressions, Conditional Statements and Iterative Statements**

Simple Expressions in C++ (including Unary Operator Expressions, Binary Operator Expressions), Understanding Operators Precedence in Expressions, Conditional Statements (if construct, switchcase construct), Understanding syntax and utility of Iterative Statements (while, do-while, and for loops), Use of break and continue in Loops, Using Nested Statements (Conditional as well as

## **Functions and Arrays**

Utility of functions, Call by Value, Call by Reference, Functions returning value, Void functions, Inline Functions, Return data type of functions, Functions parameters, Differentiating between Declaration and Definition of Functions, Command Line Arguments/Parameters in Functions, Functions with variable number of Arguments, friend function, template function. Creating and Using One Dimensional Arrays (

Declaring and Defining an Array, Initializing an Array, Accessing individual elements in an Array, Manipulating array elements using loops), Use Various types of arrays (integer, float and character arrays / Strings) Two-dimensional Arrays (Declaring, Defining and Initializing Two Dimensional Array, Working with Rows and Columns), Introduction to Multi-dimensional arrays

## **Derived Data Types (Structures and Unions)**

Understanding utility of structures and unions, Declaring, initializing and using simple structures and unions, Manipulating individual members of structures and unions, Array of Structures, Individual data members as structures, Passing and returning structures from functions, Structure with union as members, Union with structures as members

## **Pointers and References**

C++ Understanding a Pointer Variable, Simple use of Pointers (Declaring and Dereferencing Pointers to simple variables), Pointers to Pointers, Pointers to structures, Problems with Pointers, Passing pointers as function arguments, Returning a pointer from a function, using arrays as pointers, Passing arrays to functions. Pointers vs. References, Declaring and initializing references, Using references as function arguments and function return values

## **Memory Allocation in C++**

Differentiating between static and dynamic memory allocation, use of malloc, calloc and free functions, use of new and delete operators, storage of variables in static and dynamic memory

## **File I/O, Preprocessor Directives**

Opening and closing a file (use of fstream header file, ifstream, ofstream and fstream classes), Reading and writing Text Files, Using put(), get(), read() and write() functions, Random access in file Understanding the Preprocessor Directives (#include, #define, #if etc.), Macros

# Course -09 : PYTHON SYLLABUS

## Module 1: An Introduction to Python

- What can Python do?
- Why Python?
- Good to know
- Python Syntax compared to other programming languages
- Python Install

## Module 2: Beginning Python Basics

- The print statement Comments
- Python Data Structures & Data Types
- String Operations in Python
- Simple Input & Output
- Simple Output Formatting

Operators in python

## Module 3: Python Program Flow

- Indentation
- The If statement and its' related statement
- An example with if and it's related statement
- The while loop
- The for loop
- The range statement
- Break &Continue
- Assert
- Examples for looping

## Module 4: Functions& Modules

- Create your own functions
- Functions Parameters
- Variable Arguments
- Scope of a Function
- Function Documentations
- Lambda Functions& map
- Exercise with functions
- Create a Module
- Standard Modules

## **Module 5: Exceptions Handling**

- Errors
- Exception handling with try
- handling Multiple Exceptions
- Writing your own Exception
- Module 6: File Handling

- File handling Modes
- Reading Files
- Writing& Appending to Files
- Handling File Exceptions
- The with statement

## **Module 6: Classes In Python**

- New Style Classes
- Creating Classes
- Instance Methods
- Inheritance
- Polymorphism
- Exception Classes & Custom Exceptions

## **Module 7: Generators and iterators**

- Iterators
- Generators
- The Functions any and all
- With Statement
- Data Compression

## **Module 8: Generators and it erators**

- Integrators
- Generators
- The Functions any and all
- With Statement
- Data Compression

# **Course -10 : VISUAL BASIC SYLLABUS**

## **VISUAL BASIC CONCEPTS**

**UNIT 1** -Introduction to GUI - Visual Basic: Starting and Exiting Visual Basic Project Explorer, Working with Forms, Properties Window.

**UNIT 2**- Using the Toolbox, Toolbars, Working with Projects, Programming Structure of Visual Basic Applications, Event and Event Driven Procedures.

**UNIT 3**- Program Design: Form and Controls, Writing the Code, Saving,Running and Testing, Making EXE File, Printouts

**UNIT 4** - Adding Code and Using Events: Using Literals Data Types, Declaring and Using Variables, Using the Operator Subroutines and Functions.

**UNIT 5** - Looping and Decision Control Structures: If...Then...Else, Structure, Select Structure, For...Next, Do...Loop and While...Wend.

**UNIT 6** - using intrinsic visual basic controls with methods and properties: label, text box, command button, frame, check box, option button, list box, combo box, drive list box, directory list box and file list box, formatting controls, control arrays, tab order. unit 4: adding code and using events

## **VISUAL BASIC PROCEDURES, FUNCTIONS AND ARRAYS**

**UNIT 7** – Creating Procedures, Functions, String Functions, Date and Time Function, Numeric Functions, Recursive Functions.

**UNIT 8** - Multiple Forms, Startup Forms, Sub Main Procedure.

**UNIT 9** - Arrays, Control Arrays, Indexing and Event Handling, Graphics

## **MENUS AND MDI FORMS**

**UNIT 10**- Menus: Creating Menus, Adding Code to Menus.

**UNIT 11** - Using MDI Forms: MDI Form, Basic Building MDI Form, Creating MDI Child Forms.

## **DATA ACCESS OBJECT (DAO) AND PROPERTIES**

**UNIT 12** - Database Object (DAO) and Properties: Accessing Recordset Objects; MoveFirst, MoveLast, MovePrevious and MoveNext Methods; Begin, Commit and Rollback Transaction, Accessing Microsoft Access Files.

**UNIT 13** -Active Data Objects (ADO): ADO and OLE DB and ADO Primer, What are OLE DB and ADO? ADO Object Model, Converting DAO Code to Use ADO.

**UNIT 14** - Connecting to the Database, Retrieving a Recordset, Creating a Query Dynamically, Using a Parameterized Query, Using Action Queries, Adding Records, Editing Records, Closing the DatabaseConnection.

# Course -11 : CORE JAVA SYLLABUS

## Java introduction

- History
- Features

## Java Basics & Introduction to Eclipse

- Post-install configuration
- Writing a simple program
- Compiling and executing
- Data types
- Variables and arrays
- Using Eclipse
- Create packaged classes
- Eclipse shortcuts

## Operators & Expressions

- Arithmetic operators
- Logical operators
- Boolean operators
- Binary operators

## Control statements

- Branching statements
- For
- Iterative statements
- Do..While
- Break &Continue with enhancements
- Goto Statement
- While
- Break and Continue statement

## Java Object Oriented Programming

- Basics of OOPs
- Reference variables
- Fundamentals of class & object
- Member methods of a class
- New keyword

## Constructors

- Finalize method
- Static methods
- Overloading member methods
- Static variables
- Overloading contractors
- Static block
- Passing and returning objects with methods
- Using final keyword
- Access control
- Unit testing using Junit-5

## Inheritance

- Basics of inheritance
- Members accessibility in inheritance



- Using super keyword
- Multilevel inheritance
- The sequence of execution of constructors in inheritance
- Method overriding
- Dynamic method dispatch
- Abstract classes
- Preventing overriding
- Preventing inheritance

## **Exception handling**

- Fundamentals of exceptions
- Types of exceptions
- Using try and catch keywords
- Multiple catches
- Nesting of try blocks
- Using throw keyword
- Using throws keyword
- Finally block
- Some predefined exceptions and their usage
- User defined exceptions

## **Interfaces**

- Purpose of interface
- Defining an interface
- Implementing interfaces
- Interface reference variables
- Interface with variables
- Extending interfaces