

GOVERNMENT COLLEGE FOR GIRLS, PALWAL (KURUKSHETRA)
Session 2025-26 (ODD SEMESTER)

Name of Professor: Dr. SAPNA KHUDIA
Subject: Java OOP Foundations
Course Type: CC

Designation: Assistant Professor
Course Code: B23- CAP-301
Class: BCA-Semester III

Course Learning Outcomes:

1. Implement simple Java programs.
2. Implement multiple inheritance using Interfaces
3. Implement Exception Handling and File Handling.
4. Use AWT to design GUI applications.
5. Develop the project using Java

LESSON PLAN

S.No.	Date	Topics To Be Covered	Remarks, If Any
1.	22-30 July 2025	Object Oriented Programming and Java Fundamentals	
2.	1-8 August 2025	Data types, Type Casting, Looping Constructs.	Group Discussion in Week-III
3.	11-14 August 2025	Structure of Java programs	
4.	18-23 August 2025	Classes and Objects,	
5.	25-30 August 2025	Interfaces: Interface basics; Defining, implementing	Assignment in Week-III
6.	1-6 September 2025	Extending interfaces; Implementing multiple inheritance using interfaces	
7.	8-13 September 2025	Packages: Basics of packages, Creating and accessing packages, System packages, Creating user-defined packages	
8.	15-20 September 2025	Exception handling using the main keywords of exception handling	
9.	24-30 September 2025	Try, catch, throw, throws, and finallyNested try	
10.	1,3,4,6 October 2025	Multiple catch statements, creating user-defined exceptions.	
11.	8-11 October 2025	File Handling Byte Stream, Character Stream	Unit Test in Week-I
12.	13-18 October 2025	File I/O Basics, File Operations	
13.	19-26 October 2025	Diwali Vacations	
14.	27-31 October 2025	AWT and Event Handling: The AWT class hierarchy,	Presentation in Week-I
15.	3,4,6-8 November 2025	Events, Event sources, Event classes, Event Listeners	
16.	10-15 November 2025	Relationship between Event sources and Listeners	
17.	17-22,24 November 2025	Delegation event model, Creating GUI applications using AWT	
18.	25 November 2025 onwards	Examinations	

*Vacation as per university calendar

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GOVERNMENT COLLEGE FOR GIRLS, PALWAL (KURUKSHETRA)**Session 2025-26 (ODD SEMESTER)****Name of Professor: Dr. SAPNAKHUDIA****Subject: Back-end Development****Course Type: CC****Designation: Assistant Professor****Course Code: B23- CAP-502****Class: BCA-Semester V****Course Learning Outcomes:**

1. Understand the principles of back-end development.
2. Gain proficiency in back-end programming languages and frameworks.
3. Learn to design and manage databases.
4. Develop skills to create and use back-end applications.
5. To equip with the knowledge of back-end programming.

LESSON PLAN

S. No.	Date	Topics To Be Covered	Remarks, If Any
1.	22-30 July 2025	Introduction to back-end Development: Overview of backend	
2.	1-8 August 2025	Client-server architecture, Introduction to web servers and database	Group Discussion in Week-III
3.	11-14 August 2025	Programming Languages and Tools: Introduction to server-side languages (e.g., Node.js, or PHP)	
4.	18-23 August 2025	Syntax and semantics of chosen server-side language	
5.	25-30 August 2025	Programming Languages: Version control with Git	
6.	1-6 September 2025	Introduction to IDEs (Integrated Development Environments) of chosen language	Assignment in Week-II
7.	8-13 September 2025	Writing and executing basic server-side scripts	
8.	15-20 September 2025	Performance Optimization and Security: Caching strategies, Query optimization	
9.	24-30 September 2025	Database Management: Introduction to databases and DBMS (SQL and NoSQL)	
10.	1,3,4,6 October 2025	Designing a database schema, CRUD operations (Create, Read, Update, Delete)	Unit Test in Week-I
11.	8-11 October 2025	Connecting applications to a database	
12.	13-18 October 2025	Server-Side Frameworks: Overview of popular server-side frameworks (e.g., Express.js, or Laravel)	
13.	19-26 October 2025	Diwali Vacations	
14.	27-31 October 2025	Building a simple application using a framework.	Presentation in Week-I
15.	3,4,6-8 November 2025	API Development: RESTful API concepts	
16.	10-15 November 2025	Designing and documenting APIs, Authentication and authorization basics	
17.	17-22,24 November 2025	Web security best practices (SQL injection, XSS, CSRF)	
18.	25 November 2025 onwards	Examinations	

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GOVERNMENT COLLEGE FOR GIRLS, PALWAL (KURUKSHETRA)
Session 2025-26 (ODD SEMESTER)

Name of Professor: Dr. SAPNAKHUDIA
Subject: Logical Organization of Computers
Course Type: CC

Designation: Assistant Professor
Course Code: B23- CAP-103
Class: BCA-Semester I

Course Learning Outcomes:

1. Understand number systems, error detecting correcting code, and representations of numbers in a computer system.
2. Understand computer arithmetic and Boolean algebra and simplification of Boolean expressions.
3. Understand the working of logic gates and design various combinational circuits using these logic gates.
4. Understand the working of different types of flip-flops and design different types of registers
5. Understand the practical aspects of the logical organization of computers.

LESSON PLAN

S. No.	Date	Topics To Be Covered	Remarks. If Any
1.	22-30 July 2025	Number Systems: Binary, Octal, Hexadecimal etc.	
2.	1-8 August 2025	Conversions from one number system to another	Unit Test in Week-IV
3.	11-14 August 2025	BCD Number System. BCD Codes: Natural Binary Code Weighted Code, Self Complimenting Code, Cyclic Code.	
4.	18-23 August 2025	Error Detecting and Correcting Codes. Character representations: ASCII, EBCDIC and Unicode.	
5.	25-30 August 2025	Number Representations: Integer numbers: sign-magnitude, 1's & 2's complement representation. Real Numbers: normalized floating point representations.	
6.	1-6 September 2025	Binary Arithmetic: Binary Addition, Binary Subtraction, Binary Multiplication, Binary Division using 1's and 2's Compliment representations, Addition and subtraction with BCD representations	Assignment in Week-II
7.	8-13 September 2025	Boolean Algebra: Boolean Algebra Postulates, basic Boolean Theorems, Boolean Expressions	
8.	15-20 September 2025	Boolean Functions, Truth Tables, Canonical Representation of Boolean Expressions: SOP and POS, Simplification of Boolean Expressions using Boolean Postulates & Theorems	
9.	24-30 September 2025	Karnaugh-Maps (up to four variables), Handling Don't Care conditions, Logic Gates: Basic Logic Gates – AND, OR, NOT	
10.	1,3,4,6 October 2025	Universal Gates – NAND, NOR, Other Gates – XOR, XNOR etc. Their symbols, truth tables and Boolean expressions	Group Discussion in Week-II
11.	8-11 October 2025	Combinational Circuits: Design Procedures, Half Adder, Full Adder, Half Subtractor, Full Subtractor	
12.	15-18 October 2025	Multiplexers, Demultiplexers, Decoder, Encoder, Comparators, Code Converters	
13.	19-26 October 2025	Diwali Vacations	
14.	27-31 October 2025	Sequential Circuits: Basic Flip- Flops and their working, Synchronous and Asynchronous Flip –Flops, Triggering of Flip Flops	
15.	3,4,6-8 November 2025	Clocked RS, D Type, JK, T type and Master-Slave Flip-Flops	Seminar in Week-I

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16.	10-15 November 2025	State Table, State Diagram and State Equations, Flip-flops characteristics & Excitation Tables.	
17.	17-22,24 November 2025	Sequential Circuits: Designing registers Serial-In Serial-Out (SISO), Serial-In Parallel-Out (SIPO), Parallel-In Serial-Out (PISO) Parallel-In Parallel-Out (PIPO) and shift registers	
18.	25 November 2025 onwards	Examination	

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GOVERNMENT COLLEGE FOR GIRLS, PALWAL (KURUKSHETRA)
Session 2025-26 (ODD SEMESTER)

Name of Professor: Dr. SAPNAKHUDIA
Subject: Office And Spreadsheet Tools Learning
Course Type: SEC

Designation: Assistant Professor
Course Code: B23- SEC-10
Class: BCOM-Semester I

Course Learning Outcomes:

1. Understand the basic concepts of operating systems
2. Do the basic editing and formatting in a document
3. Create basic spread-sheets for different purposes
4. Create basic presentations for different applications
5. To understand the working of operating system and various office tools practically.

LESSON PLAN

S.N o.	Date	Topics to be Covered	Remarks, if Any
1.	22-30 July 2025	Operating system, definition, function, types, basics of operating system	
2.	1-8 August 2025	User interface, exploring computer icons, taskbar, desktop	
3.	11-14 August 2025	Using menu and menu selection, managing files,	
4.	18-23 August 2025	control panel- display properties, add/remove software and hardware	
5.	25-30 August 2025	Common utilities	
6.	1-6 September 2025	Word processor- introduction, menu creating, editing, formatting,	Assignment in Week-II
7.	8-13 September 2025	Spell checker, printing, views Tables, Word art, Mail merge	
8.	15-20 September 2025	Macros, inserting hyperlink, search for text, Page setup,	
9.	24-30 September 2025	Document themes, document style set, header, Footer	
10.	1,3,4,6 October 2025	Spread Sheet: Elements of Electronics Spreadsheet, applications	Unit Test in Week-I
11.	8-11 October 2025	Creating and opening of spreadsheet, Menus, Manipulation of cells, enter texts numbers and dates	Quiz in Week-IV
12.	13-18 October 2025	Cell height and widths, copying of cells, Drawing different type of charts	
13.	19-26 October 2025	Diwali Vacations	
14.	27-31 October 2025	Mathematical, Financial and statistical function, sort and filter data	
15.	3,4,6-8 November 2025	Presentation software: creating, modifying and enhancing a presentation	Presentation in Week-III
16.	10-15 November 2025	Types of presentation views, using sound, animation	
17.	17-22,24 November 2025	Working with object, Printing	
18.	25 November 2025 onwards	Examination	

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