

Lesson Plan

Name of the Faculty:		Mr. Sumit Saini	
Discipline:		BCA	
Semester:		3rd	
Subject:		Java OOP Foundations	
Work-Load (Lecture/Practical) per week (In hours):		Lecture-4	
S. No	Lecture No.	Theory	
		Topic (Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1	L1.	Introduction to Java, Features of Java, JVM, JDK, JRE	Chalk and Board
2	L2.	Structure of a Java Program, Compilation and Execution Process	Chalk and Board
3	L3.	Java Variables, Identifiers, Keywords, Comments Primitive Data Types and Literals	Chalk and Board
4	L4.	Operators and Expressions	Chalk and Board
5	L5.	Type Casting (Implicit & Explicit), Command Line Arguments	Chalk and Board, PPT
6	L6.	Decision Making Statements (if, if-else, switch)	Chalk and Board, PPT
7	L7.	Looping Statements (for, while, do-while)	Chalk and Board, PPT
8	L8.	Arrays and Enhanced for Loop	PPT
9	L9.	Classes and Objects: Creating Classes, Objects, Methods	Chalk and Board
10	L10.	Constructors and Object Initialization	Chalk and Board
11	L11.	Practical Session & Unit-I Revision	Chalk and Board
12		Assignment 1	On Paper

13	L12.	Introduction to Interfaces, Need and Advantage	PPT
14	L13.	Defining and Implementing Interfaces	Chalk and Board and PPT
15	L14.	Extending Interfaces	PPT
16	L15.	Multiple Inheritance using Interfaces	PPT
17	L16.	Interface vs Abstract Class	Chalk and Board
18	L17.	Package Concept and Types of Packages	Chalk and Board
19	L18.	Creating User-defined Packages	PPT
20	L19.	Accessing Packages using import Statement	Chalk and Board and PPT
21	L20.	Java System Packages (java.lang, java.util, java.io)	Chalk and Board and PPT
22	L21.	Practical Session on Interfaces and Packages	Chalk and Board
23	L22.	Unit-II Revision & Quiz	Chalk and Board
24		Assignment 2	On Paper
25	L23.	Introduction to Exception Handling	Chalk and Board and PPT
26	L24.	try and catch Blocks	PPT
27	L25.	Multiple catch and Nested try Blocks	Chalk and Board and PPT
28	L26.	throw and throws Keywords	Chalk and Board and PPT
29	L27.	finally Block and Exception Propagation	Chalk and Board
30	L28.	Creating User-defined Exceptions	Chalk and Board
31	L29.	File Handling Basics and File Class	Chalk and Board and PPT
32	L30.	Byte Stream Classes (FileInputStream & FileOutputStream)	Chalk and Board and PPT
33	L31.	Character Stream Classes (FileReader & FileWriter)	Chalk and Board
34	L32.	Buffered Streams and File Operations	PPT

35	L33.	Practical Session on Exception Handling & File I/O	Chalk and Board and PPT
36	L34.	Unit-III Revision	Chalk and Board and PPT
37		Assignment 3	On Paper
38	L35.	Introduction to AWT and GUI Programming	Chalk and Board, PPT
39	L36.	AWT Components: Label, Button, TextField, TextArea	Chalk and Board
40	L37.	Containers: Frame, Panel, Dialog	Chalk and Board
41	L38.	Layout Managers (Flow, Border, Grid)	Chalk and Board, PPT
42	L39.	Event Handling Fundamentals	Chalk and Board, PPT
43	L40	Event Sources and Event Classes	Chalk and Board
44	L41	Event Listeners and Delegation Event Model	Chalk and Board
45	L42	Building GUI Applications using AWT	Chalk and Board, PPT
46	L43	Practical Session on AWT and Event Handling	Chalk and Board, PPT
47	L44	Complete Course Revision, Doubt Session & Internal Assessment	Chalk and Board, PPT

Lesson Plan

Name of the Faculty:		Er. Savedna	
Discipline:		BCA	
Semester:		3 rd	
Subject:		Linux and Shell programming	
Subject Code:		B23-CAP-302	
Work Load per week (In hours):		Lecture-4	
Sl No.	Lecture No.	Theory	Pedagogy (PPT& Chalk-Board and Board/Video Recording /Activity/Case Study)
		Topic (Including Assignment/Test/Quiz)	
1	L1	Unit 1- Introduction to Linux	PPT & Chalk-Board
2	L2	Linux Distributions	PPT & Chalk-Board
3	L3	Overview of Linux operating system	PPT & Chalk-Board
4	L4	Linux Architecture, Features of Linux	PPT & Chalk-Board
5	L5	Accessing Linux System	PPT & Chalk-Board
6	L6	Starting and shutting down system	PPT & Chalk-Board
7	L7	Logging in and logging out	PPT & Chalk-Board
8	L8	Comparison of Linux with other operating systems.	PPT & Chalk-Board
9		Query Session Unit-1	Offline
10		Assignment -1	Offline
11	L9	Unit-2-Commands in Linux: General Purpose commands	PPT & Chalk-Board
12	L10	File oriented commands	PPT & Chalk-Board
13	L11	Linux File Permissions	PPT & Chalk-Board
14	L12	File oriented commands	PPT & Chalk-Board
15	L13	Directory oriented commands	PPT & Chalk-Board
16	L14	Communication oriented commands	PPT & Chalk-Board
17	L15	Process oriented commands- ps, kill,batch	PPT & Chalk-Board

18	L16	Process oriented commands- top,fg,bg, jobs,w	PPT & Chalk-Board
19	L17	Network Related Commands	PPT & Chalk-Board
20	L18	Other commands in Linux- st, set	PPT & Chalk-Board
21	L19	Regular expressions	PPT & Chalk-Board
22	L20	Input-output redirection	PPT & Chalk-Board
23	L21	Filters in Linux: wc, more, less	PPT & Chalk-Board
24	L22	Filters in Linux: diff, sort, uniq, grep	PPT & Chalk-Board
25	L23	Filters in Linux: cut, paste, pr,tr	PPT & Chalk-Board
26		Query Session Unit-2	Offline
27		Class Test Unit 2	Offline
28	L24	Unit 3- Linux File System: Linux files	PPT & Chalk-Board
29	L25	Inode and structure and file system	PPT & Chalk-Board
30	L26	File system components	PPT & Chalk-Board
31	L27	Standard file system	PPT & Chalk-Board
32	L28	File system types	PPT & Chalk-Board
33	L29	Processes in Linux: Starting and stopping processes	PPT & Chalk-Board
34	L30	Intialization Processes	PPT & Chalk-Board
35	L31	Mechanism of process creation	PPT & Chalk-Board
36	L32	Job control in Linux using at, batch, cron and time.	PPT
37		Query Session Unit-3	Offline
38		Class Test Unit -3	Offline
39	L33	Unit 4- Shell Programming: Vi editor	PPT & Chalk-Board
40	L34	Creating and Editing a file	
41	L35	Shell Variables	PPT & Chalk-Board
42	L36	I/O in shell	PPT & Chalk-Board
43	L37	Control structures	PPT & Chalk-Board
44	L38	Loops	PPT & Chalk-Board
45	L39	Subprograms	PPT & Chalk-Board
46	L40	Creating and executing shell scripts in Linux	PPT
47		Query Session Unit-4	Offline

48		Assignment -2	Offline
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Lesson Plan

Name of the Faculty:		Er. Nishi Midha	
Discipline:		BCA	
Semester:		3rd	
Subject:		Database Technologies	
Work Load (Lecture/Practical) per week (In hours):		Lecture-4	
S.No.	Lecture No.	Theory	
		Topic (Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1	Data, Information, Records, Files, Schema & Instances, Limitations of File Based Approach	Chalk and Board
2.	L2	Characteristics of Database Approach, DBMS	Chalk and Board
3.	L3	Components of DBMS, DBMS functions & components	Chalk and Board
4.	L4	Database Interfaces, Advantages & Disadvantages of DBMS	Chalk and Board
5.	L5	Database Users: Data & Data Administrator, Role & responsibility of DBA	Chalk and Board
6.	L6	Database Designer, Application Developer	Chalk and Board, PPT
7.	L7	Database Architecture-1 tier, 2 tier & 3 level Architecture	Chalk and Board, PPT
8.	L8	Three level schema- External, Conceptual & Internal	Chalk and Board

9.	L9	Revision	Chalk and Board, PPT
10.	L10	Mapping & Instance	Chalk and Board, PPT
11.	L11	Data Independence- Logical & Physical Data Independence	Chalk and Board
12.	L12	Class Test	On Paper
13.	L13	Data Models: Hierarchical, Network & Relational Model.	Chalk and Board, PPT
14.	L14	E-R Model: entity, entity set, entity type	Chalk and Board , PPT
15.	L15	Attribute: Types, Keys	Chalk and Board
16.	L16	Integrity constraints, Designing E-R Diagram	Chalk and Board
17.	L17	Notation for Designing E-R Diagram	Chalk and Board , PPT
18.	L18	Revision	Chalk and Board
19.	L19	SQL: Meaning, Purpose & need of SQL	Chalk and Board
20.	L20	Data types, DDL, DML	Chalk and Board
21.	L21	DCL & DQL, Basic Queries	Chalk and Board
22.	L22	Join operation & Sub Queries, views	Chalk and Board
23.	L23	Specify indexes, constraints & Implementation in SQL	Chalk and Board
24.	L24	Revision	Chalk and Board
25.	L25	Relational Algebra: Basic operation: Select, project	Chalk and Board
26.	L26	Join, Union, Intersection	Chalk and Board, PPT
27.	L27	Difference & cartesian product	Chalk and Board, PPT

28.	L28	Revision	Chalk and Board
29.	L29	Relational Calculus: Tuple Relational Calculus	Chalk and Board, PPT
30.	L30	Domain Relational Calculus	Chalk and Board, PPT
31.	L31	Relational Algebra vs Relational Calculus	Chalk and Board, PPT
32.	L32	Revision	Chalk and Board, PPT
33.	L33	Relational Model: Functional Dependency	Chalk and Board, PPT
34.	L34	Characteristics, Inference rule for FD	Chalk and Board, PPT
35.	L35	Types of FD	Chalk and Board, PPT
36.	L36	Revision	Chalk and Board, PPT
37.	L37	Normalization: Benefit & Need	Chalk and Board, PPT
38.	L38	1NF	Chalk and Board, PPT
39.	L39	2NF	Chalk and Board, PPT
40.	L40	3NF, BCNF	Chalk and Board, PPT
41.	L41	Multi-valued Dependencies 4NF	Chalk and Board, PPT
42.	L42	Join Dependencies 5NF	Chalk and Board, PPT
43.	L43	Revision	Chalk and Board, PPT
44.	L44	Doubt Session	Chalk and Board, PPT

Lesson Plan

Name of the Faculty:		Ms. Nancy	
Discipline:		BCA	
Semester:		3rd	
Subject:		Basic of Data Science using Excel	
WorkLoad (Lecture/Practical) per week (In hours):		Lecture-4	
S.No	Lecture No.	Theory	
		Topic (Including Assignment/Test/ Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
2.	L1.	Introduction to Data Science:	Chalk and Board, PPT
3.	L2.	Definition, importance, and applications	PPT
4.	L3.	Interface of Excel	Chalk and Board, PPT
5.	L4.	basic functions, and features of Excel	Chalk and Board
6.	L5.	Data Types and Formats in Excel	Chalk and Board, PPT
7.	L6.	Text, numbers in Excel	Chalk and Board, PPT
8.	L7.	Dates, and custom formats in Excel	Chalk and Board, PPT
9.	L8.	Basic Data Manipulation	PPT, Chalk and Board
10.	L9.	Sorting, filtering	PPT
11.	L10.	basic formulas (SUM, AVERAGE, COUNT).	Chalk and Board

12.	L11.	Data Import and Export	Chalk and Board
13.	L12.	CSV to TXT	Chalk and Board and PPT
14.	L13.	TXT to CSV	Chalk and Board and PPT
15.	L14.	CSV to Excel Files	Chalk and Board and PPT
16.	L15.	Excel file to CSV	Chalk and Board and PPT
17.		Assignment 1	On Paper
17.	L16.	Data Cleaning Techniques	Chalk and Board
18.	L17.	Handling missing values	Chalk and Board
19.	L18.	duplicates, and errors	Chalk and Board
20.	L19.	Data Transformation	Chalk and Board and PPT
21.	L20.	Text-to-columns	Chalk and Board and PPT
22.	L21.	concatenation	Chalk and Board
23.	L22.	Data Validation	Chalk and Board
24.	L23.	Data Visualization	Chalk and Board and PPT
25.	L24.	Creating and customizing charts (bar, line, pie)	Chalk and Board and PPT
26.		Assignment 2	On Paper
27.	L26.	Descriptive Statistics	Chalk and Board and PPT
28.	L27.	Mean, median, mode,	Chalk and Board and PPT

29.	L28.	Standard deviation, and Variance	Chalk and Board
30.	L29.	Inferential Statistics	Chalk and Board
31.	L30.	Hypothesis testing	Chalk and Board and PPT
32.	L31	t-tests, and chi-square tests	Chalk and Board and PPT
33.		Assignment 3	On Paper
34.	L32.	Regression Analysis	Chalk and Board
35.	L33.	Simple linear regression and multiple regression	Chalk and Board
36.	L34.	Predictive Modeling	Chalk and Board and PPT
37.	L35.	Introduction to basic predictive models and their implementation in Excel.	Chalk and Board and PPT
38.	L36.	Advanced Excel Functions	Chalk and Board, PPT
39.	L37.	VLOOKUP, HLOOKUP	Chalk and Board
40.	L38	INDEXMATCH	Chalk and Board
41.	L39	PivotTables	Chalk and Board, PPT
42.	L40	Data Analysis ToolPak	Chalk and Board, PPT
43.	L41	Using Excel's built-in data analysis tools	Chalk and Board

44.	L42	Descriptive Statistics	Chalk and Board
45.	L43	Histograms	Chalk and Board, PPT
46.	L44	Correlation, and Regression	Chalk and Board, PPT
47.	L45	What-If Analysis Tools	Chalk and Board, PPT
48.	L46	Scenario Manager	Chalk and Board
49.	L47	Goal Seek	Chalk and Board
50.	L48	Data Tables	Chalk and Board, PPT

Lesson Plan

Name of the Faculty	Ms. Venus Arora
Discipline	BCA
Semester	III
Subject	English Language and Communication Skills: Level 3
WorkLoad (Lecture/Practical) per week (In hours)	Lecture-3

S.No.	Lecture No.	Theory Topic (Including Assignment/Test/Quiz)	Pedagogy
1	L1	Introduction to Close Reading	Chalk & Board
2	L2	Reading Comprehension: Concepts and Strategies	PPT
3	L3	Practice on Reading Comprehension Passages	Worksheet
4	L4	Summarizing: Concept and Techniques	Chalk & Board
5	L5	Paraphrasing: Rules and Practice	Activity
6	L6	Summarizing and Paraphrasing Exercises	Worksheet
7	L7	Revision of Unit I	Discussion
8		Assignment 1	On Paper
9	L8	Interview Skills: Meaning and Types	Chalk & Board
10	L9	Preparing for an Interview	PPT
11	L10	Seminar Skills	Activity
12	L11	Presentation Skills	PPT
13	L12	Presentation Practice	Role Play
14	L13	Data Interpretation: Introduction	Chalk & Board
15	L14	Bar Graph	Worksheet
16	L15	Pie Chart	Worksheet
17	L16	Tree Diagram	Worksheet
18	L17	Revision of Unit II	Discussion
19		Class Test 1	Written Test
20	L18	Vocabulary Building	Chalk & Board
21	L19	Homonyms	PPT

22	L20	Homophones	Activity
23	L21	Pairs of Words	Worksheet
24	L22	Rearranging Jumbled Sentences	Activity
25	L23	Practice Exercises	Worksheet
26	L24	Revision of Unit III	Discussion
27		Assignment 2	On Paper
28	L25	Common Errors in English	Chalk & Board
29	L26	Errors in the Use of Nouns	PPT
30	L27	Errors in the Use of Pronouns	Chalk & Board
31	L28	Errors in the Use of Articles	PPT
32	L29	Editing and Error Correction	Worksheet
33	L30	Grammar Practice	Activity
34	L31	Revision of Unit IV	Discussion
35		Class Test 2	Written Test
36	L32	Integrated Practice: Reading and Vocabulary	Worksheet
37	L33	Integrated Practice: Communication Skills	Role Play
38	L34	Presentation Assessment	Activity
39	L35	Mock Interview	Role Play
40	L36	Model Question Paper Discussion	Discussion
41	L37	Comprehensive Revision	Interactive
42	L38	Doubt Clearing and Course Wrap-up	Discussion

Lesson Plan

Name of the Faculty:		Er. Priyanka Chauhan	
Discipline:		BCA	
Semester:		3rd	
Subject:		Advance IT Skills	
Work Load (Lecture) per week (In hours):		3	
S.No	Lecture No.	Theory	
		Topic (Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1.	Unit-1 Website Address and URL	Chalk and Board
4.	L2.	Introduction to IP, Address	Chalk and Board
5.	L3.	ISP and Role of ISP, Internet Protocol	Chalk and Board
6.	L4.	Identifying and uses of IP/MAC/IMEI of various devices,	Chalk and Board
7.	L5.	Downloading Web Pages, Printing Web Pages	Chalk and Board, PPT
8.	L6.	Introduction to Blogs, Basics of E-commerce	Chalk and Board, PPT
9.	L7.	Overview of e-Governance Services like Railway Reservation, Passport	Chalk and Board, PPT
10.	L8.	eHospital [ORS], Accessing e-Governance Services on Mobile	PPT, Chalk and Board
11.	L9.	Class Test	
12.	L10.	Assignment Questions: 1. Modes of Connecting Internet	

		2.Types of e-Governance Schemes	
13.	L11.	Unit-2	Chalk and Board
14.	L12.	Digital Financial Tools	Chalk and Board
15.	L13.	Understanding OTP and QR Code, UPI Payment, AEPS.	Chalk and Board and PPT
16.	L14.	Understanding USSD, eWallet, PoS [Point of Sale], Internet Banking	Chalk and Board and PPT
17.	L15.	National Electronic Fund Transfer (NEFT), Real Time Gross Settlement (RTGS)	Chalk and Board and PPT
18.	L16.	Immediate Payment Service (IMPS)	Chalk and Board
18.	L17.	Online Bill Payments	Chalk and Board
19.	L18.	Assignment Questions: 1. Applications of Digital Financial Tools 2. Cards [Credit / Debit]	
20.	L19.	Class Test	
21.	L20.	Unit-3 Cyber Security	Chalk and Board and PPT
22.	L21.	Defining Cyberspace	Chalk and Board and PPT
23.	L22.	Architecture of cyberspace	Chalk and Board
24.	L23.	Regulation of cyberspace, Concept of cyber security	Chalk and Board
25.	L24.	Classification of cybercrimes	Chalk and Board and PPT
26.	L25.	Legal perspective of cybercrime	Chalk and Board and PPT
27.	L26.	Organizations dealing with Cybercrime and Cyber security in India	PPT

28.	L27.	Assignment Questions: 1. Issues and challenges of cyber security 2. Common cybercrimes 3. IT Act 2000 and its amendments, Cybercrime and offences,	
29.	L28.	Unit-4 Overview of Futureskills	Chalk and Board and PPT
30.	L29.	Introduction to Internet of Things (IoT),	PPT
31.	L30.	Big Data Analytics	Chalk and Board
32.	L31.	Cloud Computing	PPT
33.	L32.	Blockchain Technology	Chalk and Board and PPT
34.	L33.	Robotics Process Automation	Chalk and Board and PPT
35.	L34.	Assignment 1. Artificial Intelligence 2. 3D Printing/ Additive Manufacturing, 3. Social & Mobile	
36.	L35.	Class Test	
37.	L36.	Revision 1	Chalk and Board and PPT
38.	L37.	Revision 2	Chalk and Board and PPT
39.	L38.	Revision 3	Chalk and Board, PPT
40.	L39.	Revision 4	Chalk and Board

Lesson Plan

Name of the Faculty:		Ms. Pooja Yadav	
Discipline:		BCA	
Semester:		3rd	
Subject:		Electronics in Smart World	
Work Load (Lecture/Practical) per week (In hours):		Lecture-3	
S. No	Lecture No.	Theory	
		Topic (Including Assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording /Activity/Case Study)
1.	L1.	Introduction to Smart Homes and their Evolution	Chalk and Board
5.	L2.	Generations and Development of Smart Homes	PPT + Chalk & Board
6.	L3.	Video Monitoring Systems: Introduction and Components	PPT
7.	L4.	Working of Video Monitoring Systems	Discussion + PPT
8.	L5.	Security Alarm Systems: Types and Working	Chalk and Board
9.	L6.	CCTV: Components, Installation and Working	PPT & Video
10.	L7.	Applications of CCTV in Homes, Offices and Public Places	Case Study & PPT

11.	L8.	Integration of Smart Home Technologies	Discussion & PPT
12.		Assignment/Quiz – Unit I	On Paper/Google Form
13.	L9.	Role of Electronics in Modern Education	Chalk and Board
14.	L10.	Smart Classrooms and Digital Learning Technologies	PPT
15.	L11.	Role of Electronics in Agriculture	PPT
16.	L12.	Drones for Agricultural Survey: Working and Applications	PPT & Video
17.	L13.	Smart Irrigation Systems: Components and Working	PPT
18.	L14.	Applications of Smart Agriculture Technologies	PPT
19.		Assignment 2	On Paper
17.	L15.	Introduction to Wearable Electronics	PPT, Chalk and Board
18.	L16.	Smart Watch: Features and Components	PPT
19.	L17.	Working and Applications of Smart Watches	PPT, Chalk and Board
20.	L18.	Electronics in Modern Automobiles	PPT

21.	L19.	Electronic Control Systems in Automobiles	PPT
22.	L20.	Introduction to ATM Machines	PPT
23.	L21.	Working Principle of ATM	PPT
24.	L22.	Introduction to RFID Technology	Chalk and Board
25.	L23.	Working Principle of RFID Cards	Chalk and Board and PPT
26.	L24.	Applications of RFID Technology	Discussion
27.	L25.	Recent Developments in Smart Electronic Devices	PPT
28.		Assignment 3	On Paper
29.	L26.	Introduction to Healthcare Electronics	PPT
30.	L27.	Digital Thermometers: Construction and Working	PPT
31.	L28.	Digital Blood Pressure Measurement System	PPT
32.	L29.	Digital X-Ray: Basic Principle and Applications	PPT
33.	L30.	MRI: Basic Principle	PPT & Video
33	L31.	MRI Applications and Advantages	PPT

34.	L32.	Ultrasonography (USG): Basic Principle	PPT
35.	L33.	Applications of USG in Healthcare	Discussion
36.	L34.	ECG: Basic Principle and Components	PPT
37.	L35.	Applications of ECG in Diagnosis	PPT
38.	L36.	Overview of Healthcare Electronic Devices and Recent Trends	Discussion & PPT
39.	L37.	Revision + Final Assignment	On Paper