

Softs Skill training sessions of Campus credential Module 5 Curriculum

Topic	Subtopic	Hours
<p style="text-align: center;">Quantitative Aptitude</p>	Algebra	<p>25 hrs.</p>
	Profit & Loss	
	Average & Allegation / Mixture	
	Time and Work	
	Geometry Mensuration	
	Numbers	
	Percentage	
	Permutation and Combination	
	Probability	
	Ratios & Proportion	
	Time and Distance	
<p style="text-align: center;">Reasoning</p>	Analytical	<p>10 hrs.</p>
	Puzzles	
	Blood relationship	
	Data Interpretation	
	Data sufficiency	
	Logical Deductions	
	Logical Sequence of Words	
	Logical Venn Diagrams	
	Statement and Arguments	
	Statement and Assumptions	
	Statement and Conclusions	
Syllogism		




Nutan Maharashtra Institute
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 "Samarth Vidya Sankul" Vishnupuri
 Talegaon Dabhade, 410507

Program Curriculum

Topic	Subtopic	Hours
English	Reading Comprehension	10 hrs.
	Para Jumbles	
	Cloze Test	
	Tenses/ Voice/ Speech	
	Prepositions/ SVA/ Articles	
	Vocab /Verbal Analogy	
	Sentence completion	
	Sentence Correction	
Company Specific Training / Doubt Clearing Session / Mock / Mock Discussion	TCS, L&T, COGNIZANT, INFY, Amazon, INFY etc. Personal Interview, Group discussion, Resume Essay writing	15 hrs.
TOTAL		60 Hours per batch




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Program Content (Programming Fundamental-Module)

Topic	Sub-Topic	Topic	Sub-Topic
Variables	Local variables, Global variables, 'global' keyword, Rules of Identities	Try with multiple except blocks	Handling exceptions using Exception class, Finally, block, Releasing resources using Finally block, Raise, Creating a user exception class., Raise exception manually, Exceptions based application
Functions	Introduction, Prototype, Classification of functions, No arguments and No return values, With arguments and With return values	Multithreading	Introduction, Multitasking, Multi-tasking v/s Multithreading, threading module, Thread class introduction, Creating thread, The life cycle of a thread, Single-threaded application, Multi-threaded application, Sleep() method. Sleep() v/s run(), Join() v/s Sleep(), Multiple custom threads creation, The execution time of single-threaded application, The execution time of multi-threaded application, Synchronization of threads.
No arguments and With return values	With arguments and No return values, Recursion, Argument type functions, Default arguments functions, Required arguments functions, Keyword arguments functions, Variable arguments function	Inner classes	Basic syntax of inner class, Advantages of Inner classes, Access class level members of inner classes, Access object level members of inner classes, Local inner classes, Complex inner classes, Accessing data of inner classes.
Operators	Arithmetic Operators, Relational operators, Logical operators, Bitwise operators, Shift operators	Regular expressions	're' module, Match(), Search(), find() etc, and actual projects web scrapping
Control Statements	Conditional Control Statements, if, if-else, if-elif-else, nested-if, Loop Control Statements, While, For	Expressions using operators and symbols	Split string into characters, Split string into words, Lambda expressions
Branching Statements	Break, Continue, pass, return, exit	String handling using regex	Introduction to Strings, Indexing and Slicing, Special operators in String handling, Old style String formatting, String library methods, Quotes and Escape characters in a String representation, String Immutability, Logical programs using Strings



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Program Content (DSA-Module)

Topic	Sub-Topic	Topic	Sub-Topic
Linked Lists	The Deque ADT, Linked Lists, Implementing a Queue with a LinkedList, Storing the length, Testing Against the ADT, The Main Lessons, Design Patterns: The Wrapper Pattern	Advanced Algorithms	Strand Sort, pancake Sort , Binary Insertion Sort, Bogo Sort, Gnome, Stooge, Tree, Odd/Even, B Tree, B + Tree, Graph data structure,adjacency matrix,adjacency list,DFS,BFS
Stacks and Queues	Abstract Data Types, The Stack ADT, The Queue ADT, Dealing with errors	Advanced Algorithms	Red Black Tree, Detect cycle in undirected and directed graph, bipartite graph, Strongly connected components,kosaraju's algo, Spanning Tree, Minimal ST, Prims algo
Binary Search	Ordered List ADT, The Ordered Mapping ADT, Binary Search Tree Properties and Definitions, Balanced Binary Search Trees, Weight Balanced Trees, Height-Balanced Trees (AVL Trees)	Advanced Algorithms	Strand Sort, pancake Sort , Binary Insertion Sort, Bogo Sort, Gnome, Stooge, Tree, Odd/Even, B Tree, B + Tree, Graph data structure,adjacency matrix,adjacency list,DFS,BFS
Sorting	Comparison-Based Sorting, Merge-Sort, Quicksort, Heap-sort, A Lower-Bound for Comparison-Based Sorting, Counting Sort and Radix Sort, Counting Sort, Radix-Sort	Graphs	Implementation, Graph Search, Depth-First Search, Breadth-First Search
Heap	Divide and Conquer, String Algorithms, Recursion, Backtracking		



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Program Content (DBMS-Module)

Topic	Sub-Topic	Topic	Sub-Topic
DBMS Using Python	Introduction to Mysql, Mysql – Python connectivity, Execute DDL commands, Execute DRL commands, Execute DML commands, Transaction management examples (rollback and commit), GUI – Database connectivity.	Distributed Database	DDBMS architectures, Homogeneous and Heterogeneous databases, Distributed data storage, Advantages of Data Distribution, Data Replication, Data Fragmentation, distribution transparency
Concurrency Control Serializability	Enforcing, Serializability by Locks, Locking Systems With Several, Lock Modes, Architecture for a Locking Scheduler Managing Hierarchies of Database Elements, Concurrency Control by Timestamps, Concurrency Control by Validation	Object Relational and Extended Relational Databases	RDBMS, extension techniques in RDBMS, ODMG-93 standards, Storage and access methods, Implementation issues for extended type, OODBMS & ORDBMS
Transaction processing	advantages and disadvantages of transaction processing system, online transaction processing system, distributed locking, long duration transaction, high-performance transaction system	Advance DBMS	RDBMS and SQL Normalization Query Optimization



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Program Content (OOps-Module)

Topic	Sub-Topic	Topic	Sub-Topic
Object-Oriented Programming	Introduction to OOPs, Classes, Objects, Structure to OOP application, Contexts of OOP application, Class level members, Object level members, self variable, Constructor and Initialization of object	List	Create a list, Adding elements, Deleting elements, Pre-defined functionality of List, Nested List, Immutability and Mutability of List
Access modifiers	Private, Protected, Public, Program codes.	Set	The functionality of Set object, Frozen set, Dictionaries, Create a dictionary, Adding elements
Encapsulation	Rules, Implementation, Abstraction, Polymorphism	Dict	Pre-defined functions of Dict class, Programs using Collection types,
Inheritance	Introduction, Types of Inheritance, Single inheritance, Multi-Level inheritance, Method overriding, Object initialization using constructor, Multiple inheritances, Hierarchical inheritance, Method overriding in Multi-level inheritance	Garbage collection	Introduction, Importance of manual GC, Self-referenced objects, 'gc' module, Collect() method, Threshold function
Modules	Introduction, Importance of Modularity programming, Import keyword, User defined modules creation, Function based modules, Classes based modules, Connecting modules, 'from' keyword.	Exception Handling	Introduction, The need of exception handling, Getting exceptions, Default exception handler, Handling exception, Try, Except
Collections Framework	Introduction to collection of data types, Importance of Data processing, DS algorithms introduction		



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Program Content (Miscellaneous)

Topic	Sub-Topic	Topic	Sub-Topic
Files Handling	Reading file char by character, Reading file line by line, Modes of files, Writing into file, Append data to a file, Reading CSV file, Pickling and Un pickling	Mail extraction	Date extraction, Mobile number extraction, Vehicle number extraction, zoom chat analysis realtime.
Online Coding Platform	<ol style="list-style-type: none"> 1. Infyq, 2. Hacker rank, 3. Hacker earth, 4. Coding competition with google 	Company Specific Problem Solution	Covering All Mass recruiter Companies (Capgemini , LnT , Cognizant, Accenture, Infy, TCS etc..)
For more Practice Online Coding Platform	Campus credential Online Coding Platform	Covering Product based	Company (Adobe, Amazon, Microsoft, Oracle, PayPal, Google, SAP, IBM, Cisco)



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