**Java Sessions**

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| Session 1 | What is Java  Flavours of Java (ME, SE, EE)  Compilation of a .java file  JDK, JRE, JVM, bytecode  Naming conventions to be followed throughout the course, Hello World, Primitives in Java, Operators in Java – All, Implicit, Explicit Casting. Math Library. 3 Practice sums + 2 bonus sums Home assignments - 5 |
| Session 2 | Revision, Arrays, Control structures. Practice Problems in class - hackerRank – 4 sums, Recursion and iteration. Introduction to memorization. Applications of recursion. Fibonacci, factorial and 2D arrays. Home assignment – 5 sums |
| Session 3 | Algorithms, understanding complexity, Sorting – all sorts. Linear search, Binary search. Arrays utility class, Introduction to dynamic programming. 2 practice sums. Home assignments – 7 sums |
| Session 4 | String class, OOP in java. Inheritance models. Data Structures – Stacks and queues. Java modifiers. Java memory architecture. Final keyword |
| Session 5 | Object Heap and call stack revision. Using bufferedReader. Linked List problems. 10 operation linkedList problem. Dynamic Programming problems. |
| Session 6 | Interfaces and abstract classes. Dynamic Method dispatch, Shadowing. Throwable hierarchy. Exceptions. Try catch finally – all variations. Edge cases. Try with resources in Java 7 |
| Session 7 | Collections framework – Part 1. HashCode and equals. CFW hierarchy, list and set. Detailed application of the CFW. |
| Session 8 | Collections Framework part 2: Maps. Practice problems for CFW 2 – Introduction to the Challenge environment |
| Session 9 | Trees and traversals (Implementation and Theory) Graphs – Implementation and Theory, Garbage collection |
| Session 10 | Multithreading – application and practice problems. Thread safety and deadlock. Nested classes in java – Implementation. |
| Session 11 | Class initialization, Java 8 recipes for common task. |

Soft skills sessions:

**Session 1:**

Group Discussions: Abstract topics in a GD test your creativity and the ability to put forward interesting pointers. The entire procedure for the GD's would be taken up by us. This includes the parameters such as body language, vocabulary, presence of mind etc. on which a student is judged.

Along with this we would be explaining the types of topics which could come up in a GD and how to tackle or counter argue a valid point.

We will be assigning groups of students (8-10 per group). The students would then be graded and there would be a complete feedback session highlighting their strengths and areas of improvement.

Trending Topics: Trending topics are generally news or controversy related topics which gauge your general knowledge and social awareness. Also these topics show how you perceive such issues.

Eg: Maggi controversy

Company - Specific Topics: These topics are more company specific and evaluate you on the basis of an ideal response you would give in a hypothetical situation.

Eg: Bharti Airtel

**Session 2:**

Resume building – The all you need to know guide for what to do and what not to do to create an impressive and not so boring resume.

**Session 3:**

Personal Interviews – Get a flavour of how it feels like to be seated on the very famous hot seat. Be prepared as we start to bombard you with questions – Technical and HR.

Aptitude – Cracking the first round requires you to master the aptitude section. Here we give insights on which books and sections should you be focussing on