**FACILITATOR’S MANUAL**

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| Facilitator’s manual is a guideline to facilitator. Guideline for which all topics /sub-topics to be covered and their sequence. When to go recap or hands-on and with which assignment (mapping of lab assignments with topics)  Basically WHAT–WHEN-HOW  Here, Whole session will be in multiple iteration of 3 steps;  1. What to facilitate, 2. Relevant LAB assignments, 3. Recap and leanings from LAB  Also, there are TIPS (extract from facilitator’s learning) – objective of TIPS is to incorporate best practice and individual’s innovation in facilitating a particular topic. It is desirable that new tips should continue to add/update in this manual.  At last, this is not a rulebook, so it is upto facilitator to follow it or use his/her own style |

**TOPIC - Java.io package**

**Objective -**  To understand various classes of IO package and how to use them for date input and output. Various type of Streams and related classes.

**ROUND 1**

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| Topics to be facilitated (teach) | * Streams * input stream, output stream * Type of stream * Byte stream * Character stream |
| LAB assignment | **LAB 7.1**  *Write a program, where system will read data form one text file and will write it on other text file using byte stream.*  **LAB 7.2**  *Do the 7.1 using character stream (in place of byte).* |
| Recap (learning from the LAB assignment) | How byte and character stream works for physical I/O operation  Difference between them |

**ROUND 2**

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| Topics to be facilitated (teach) | * Buffer Stream * Benefit of buffer stream over un-buffered |
| LAB assignment | **LAB 7.3**  *Convert FileReader and FileWriter into BufferReader and BufferWriter*  **LAB 7.4**  *Use BufferReader (create it with the help of InputStreamReader) to read data from keyboard and display (write) it on console* |
| Recap (learning from the LAB assignment) | Buffer stream – How and when to use it |

**ROUND 3**

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| Topics to be facilitated (teach) | * Standard I/O streams * Data streams * Object streams |
| LAB assignment | **N/A** |
| Recap (learning from the LAB assignment) |  |

**ROUND 4**

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| Topics to be facilitated (teach) | * File streams |
| LAB assignment | **N/A** |
| Recap (learning from the LAB assignment) | File stream |