

INDIAN STATISTICAL INSTITUTE

COMPUTING LAB 2026 CLASS WORK

Date: 27.01.2026

1. The file `inps.dat` contains student records. The first line specifies the number of records, and each of the subsequent lines contains a student's name, roll number, and marks. Perform the following tasks:
 - (a) Define a structure with fields for the student's name, roll number, and marks, and create an array of such structures.
 - (b) Write a routine to populate the array by reading input from `stdin` in the same format as `inps.dat`.
 - (c) Write a routine to print the contents of the array in the format of `inps.dat`.
 - (d) Use a generic bubble sort to sort the array based on each of the three fields.
 - (e) Use a generic linear search to determine whether the array contains a given input value.
 - (f) Use `qsort` and `bsearch` to perform the same sorting and searching operations.
2. Repeat all of the above tasks assuming that the array stores pointers to structures instead of structures themselves.