Indian Institute of Information Technology Allahabad

Assignment - Arrays & Link List (Oct 2021)

M.Tech

e Name	Course Code	Deadline
mming Practices	—-	Oct. 11, 2021, 11:59 P.M. IST

***ant Instructions**: This is an individual assignment i.e., not to be done in a team/ e to submit a zip file of the programs. Submit the assignment files on Google classroo missions will not be entertained. These are very basic problems and it is easy to fi to this assignment on the Internet as well. However, during evaluation we may ask the code and also solve any related problem on the spot. Hence, practising these so is the best option. So please use your ethics and do the assignment to improve your lea*

e theory class, we discussed arrays and link list and there implementations. In this assig use these two data structures to solve some problems.

plement basic functions for creation, insertion, deletion, traversing, searching etc. in a cular link list with dynamic memory allocation. Please make sure that every opera plemented as a separate function. Distribute your code in three files: main.c (call lity function), list.h (write all declarations), list.c (define all the functions).

peat the previous problem with contiguous memory allocation for the list as discus e class. Now, you should also maintain the free node list as well. Assume that the m number of elements in the list are 1024. Compare the memory utilization of bo ts. Also, comp ation and cont presentations.

rite a program perations like ultiplication, determinant, inverse of a matrix, displaying a matrix etc. For every ope