**SSN College of Engineering, Kalavakkam**

**Department of Computer Science and Engineering**

**III Semester - CSE**

# UCS 1312 Data Structures Lab Laboratory

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| **Academic Year: 2021-2022** | **Batch: 2020-2023** |

**Exercise 1: Student Information System using Array Implementation of list ADT**

Create a StudentADT with the following fields

Set of students where each student contains Regno. Name, Mark1, Mark2, Mark3,

Total, Result

StudentList ADT has the implementations for the following operations

1. Insert a record in the front of the list

void insertFront(listADT l,student s)

1. Insert a record at the end of the list

void insertEnd(listADT l,student s)

1. Insert a record after a given Regno in the list

void insertRegNo(listADT l, student s, int regNum)

1. List the details of students based on name of the student

listADT searchName(listADT l, char name[])

1. Delete record given a register number

void delete(listADT l, int regNum)

1. Calculate the Total and update the Result field about whether he / she is passed or not

void computeResult(listADT l)

1. List the students who have passed

student\* listResult(listADT l)

1. List the students how many have secured First Class

int listClass(listADT l)

In order to implement this Student Information System,

* It is necessary to create a file that has StudentList ADT and implementation of above-mentioned functions
* Another file will be created with only function prototypes
* One more file will be created to write the Student Information System using the StudentList ADT

**Note: Submit the code along with the output within the deadline**