**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: 2019-2020** | **Batch: 2018-2022** |

**Exercise 2: Polynomial manipulation using Linked List**

Create a PolynomialADT with the following fields

Exponent, Coefficient and a pointer to the next node

Polynomial ADT has the implementations for the following operations to

1. Input a polynomial through insertion at the front

void insertFront(polyADT p,term t)

1. Input a polynomial through insertion at the end

void insertEnd(polyADT p,term t)

1. Input a polynomial after a term

void insertAfterTerm(polyADT p, term t, int exp)

1. Add two polynomials

polyADT polyAdd(polyADT p1, polyADT p2)

1. Multiply two polynomials

polyADT polyAdd(polyADT p1, polyADT p2)

1. Find the degree of polynomial

void polyDegree(polyADT p)

1. Evaluate a polynomial

int polyEvaluate(polyADT p)

1. Simplifying the polynomial – Combining like terms

polyADT polySimplify(polyADT p)

In order to implement this polynomial manipulation,

* It is necessary to create a file that has polyADT 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 polyADT

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