PDS Lab 6
Section 3
Date: 10.06.2021

Question 1

Define a structure to represent a student's information (name, roll number,cgpa). Take a positive integer N as input. Read the data corresponding to N students and store in a structure array, and find out the students with the highest and lowest cgpa values. Using a function printStudent(…), print the names of these students and their corresponding roll number and cgpa.

Question 2

Recall the datatype POLY from the tutorials. This datatype is for storing polynomials of degree at most 10 and which may have floating point numbers as coefficients.

Write the C functions:

(a) readPoly() which reads a polynomial and returns a pointer
(b) addPoly(POLY A, POLY B) which returns the sum A+B
(c) multPoly(POLY A,POLY B) which returns the multiplied polynomial A.B only if it is of type POLY. If the degree is larger then the function returns the constant polynomial 0.
(d) printPoly(POLY A) which prints the polynomial A.

Write a main function to take in two polynomials of type POLY A and B as input, and print A+B and A.B (as defined above).

Question 3

Create a structure to store details of an employee so as to compute the net salary using the following rule –

(1) basic_pay BP = wages*days
(2) If BP > 1000, HRA=12% of BP, else it is 20% of BP
(3) If number of days present is greater than 19, TA=10% of BP, else TA=0
(4) Finally calculate net_salary=BP+HRA+TA

Take as input a positive integer n and the details (employee name, wages per day and number of days present) of n employees. Output using the function netPay(...) the name and net pay of each employee.

Example:
Input: Enter the total number of employee(s) = 1
Enter name of employee[1] =abc
Enter wages/day and number of days present for employee[1] = 150 21
Output: Name:abc Netpay:4095.00