

COMP-1410 Intersession 2020
Assignment #3
(Due End of Sunday, August 16, 2020)

OBJECTIVES:

- To practice File Processing and Data Structures in C.

Problem 1: (100 marks)

We are going to create a Family Tree using everything we have learned so far in C, especially Pointers, Data Structures, and File Processing. We assume that every given person, having a name, age, and life status (alive or dead), can have two parents, zero or one partner, and up to five children. Write a C program to receive information from some persons, using the following functionalities:

- Add a new person
- Set a person as a parent of another person
- Set a person as the partner of another person
- List a person with all their relatives, including their parents, siblings, partner, and children, if any
- Change the profile information of a person, including their age and life status
- Remove a person from the family tree. All the related connections should be updated
- List all the persons.
- Save the family tree in a text file
- Load a family tree from a text file

Note that if we set a person as a parent of a second person, we should also set the second person as the child of the first person.

Submission Instruction:

You have to submit your solutions as **A SINGLE ZIP FILE** into Blackboard before the deadline. The zip file name is your student id (for instance, if your id is 1234567, the zip file name would be 1234567.zip) that includes c files for the programs. **PLEASE DO NOT** submit any other types of files, such as compiled files, files associated with specific software, etc.

Cheers