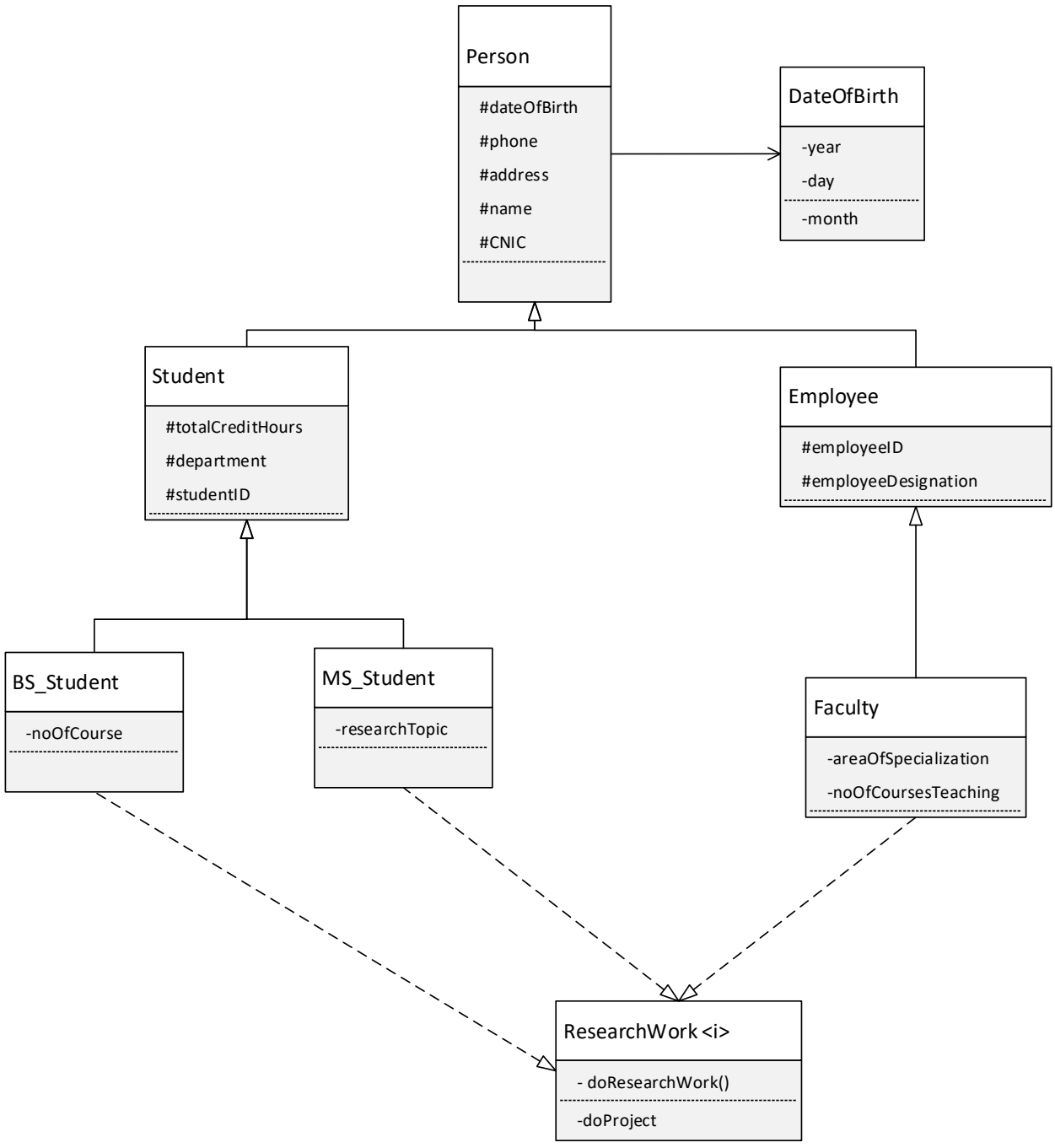
Assignment No.1



The UML diagram is given in the above image. You are requirement to implement this structure into C++ code. There are some classes which are declared as **Abstract**. You will make them **abstract**.

Abstract class **Person** also implementing association, and it contain **DateOfBirth** object (from **DateOfBirth** class). You are given member variables in the diagram. You will write mutators and accessors in all the classes. You will further implement the following methods.

int getAge()

You will save date of birth of all person using the class **DateOfBirth**. For this you will write corresponding mutators and accessors and an object of **DateOfBirth** consists of **year**, **month** and **day**. To calculate the age you will subtract year of dateOfBirth object to currect year (2021). You must decide whether to declare this method as virtual (or pure virtual methods).

void display()

This method is common to all the classes, every class will display its own data. So, if someone want to display BS_Student object then if will call Student **display** method to display its data and Student class further call Person display method to display it corresponding data. You must decide yourself whether to declare this method as virtual or pure virtual methods.

In main you will create atleast two object of BS_Student, MS_Student and Faculty. Then you will display them.

Also, there is an interface which is implemented by three classes (BS_Student, MS_Student, Faculty). You will write method according to the following rules.

BS_Sudent can take a reseach project or implement a programming project

MS_STduent have to take research project (No programming project)

Faculty must write a paper, so Faculty must also do Research work.

Now according to the above requirement you will implement the interface methods for these three classes.

Warning: The assignment must be done individually, if two (or more) persons found copying each other assignment then both will be awarded zero point, regardless who made the assignment and who copied it. So, keep your assignment to yourself only.