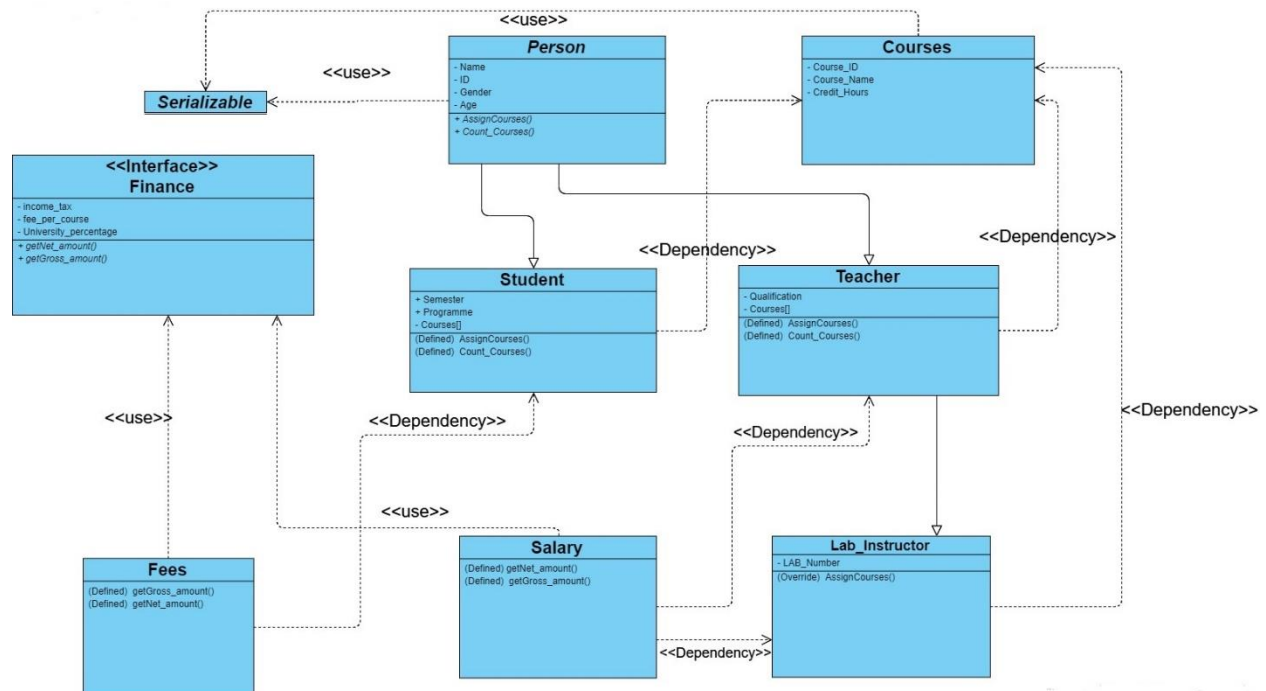


# University Management System

## Project Scope

The scope of this project is to have a management system for a university with major focus on Students and Teachers. This is a GUI based project and even the GUI has been implemented in the form of classes to reflect OOP concepts. This program shall also be able to generate Fee slips for students and Payroll for teachers.

## Class Diagram



## Class Diagram Explanation

Person is a abstract class which contains the attributes of a human being and as we are aware that Students and Teachers would be human beings their classes are extended by the person class. The Teacher class further extends the Lab Instructor class as a LAB instructor contains all the attributes of a teacher along with a specific LAB assigned to them.

Both Person and courses are using the serializable interface to assist in saving the objects into a .ser file which would be created for both Students and teachers.

Students ,Teachers and Lab Instructors are dependent on the courses class because the student needs to be assigned the courses that he/she will study and the teacher/Lab Instructors need to be assigned the courses that he/she will teach. The difference is in the amount of courses Students , teachers and Lab instructors are allowed to select to study in the case of students and teach in the case of teachers.

Furthermore, an interface named Finance has been made which is implemented on the classes of Fees and Payrolls. The classes of fees is dependent on Student as an object of the student class would be required to be sent to the fees class to generate the amount. Similarly the Salary class is dependent on the Teacher class and the LAB\_Instructor as their objects would have to be sent to the Salary class to generate the payroll. The attributes of the objects sent into Fees and Salary would be used to calculate to amount .