

# Assignment 04

## Abstract Class & Interfaces

Submission Deadline: April 24, 2021

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Design a System of Abstract classes, Interfaces and Classes that fulfil the following criteria:

1. An abstract class called Person with Full name, NID and date of birth and appropriate getter and setter methods. Should override toString method for Object class. May or may not contain an abstract method - your choice. However, explain your choice in comments for the class definition.
2. An interface called Teacher which has an abstract method returning a String containing the teacher ID for the teacher. The teacher ID format can be different for teachers from different institutions.
3. An interface called Student which has an abstract method returning a String containing the Student ID for the teacher. The Student ID format can be different for teachers from different institutions.
4. A normal (non-abstract class) called NSUer - which is a person and a student.
5. A normal (non-abstract class) called NSUTeachers - which is a person and a teacher.
6. A normal (non-abstract class) called NSUStaff. NSU Staff can teach at NSU and also enroll in different classes as a student at NSU.
7. For point 4,5 and 6 - implement appropriate getter and setter method and override appropriate methods. Add extra data or static fields if necessary.
8. Create a main method in a **Runner** class that creates objects of the three non-abstract classes and exercises the overridden methods from the abstract class and interface.

In the submission PDF, submit the UML diagram of the Abstract classes, interfaces and non-abstract classes. Show the relationship between the Abstract classes, interfaces and non-abstract classes in the UML diagram.

Submit the UML diagram in the PDF, and associated code in google classroom with output snapshot.