

## Development of abstract data types in Python



### Objectives

*Using Python to solve complex problems*

- Implement simple programs using Python
- Implement functions
- Use test-driven development
- Use object-oriented programming



### Requirements

Address all requirements from Seminar 04 using object oriented programming. Develop a class for the abstract data type Student and a class for managing a list of Student objects (the repository).

- i. Class *Student* – information about id, name, grade
- ii. Class *StudentRepository* – manage a list of Student objects

Features – CRUD operations on student list:

1. Add student
2. Insert student
3. Get the number of students in the repository
4. Get index of student by id
5. Get all students
6. Get student by index
7. Get student by id
8. Get students with grade less than a given value
9. Update student by index
10. Update student by id
11. Delete student by index
12. Delete student by id