Solve complex problems in Python

Objectives

Using Python to solve complex problems

- Implement complex programs using Python
- Solve problems using abstract data types
- Implement classes and methods
- Use test-driven development
- Use object-oriented programming

Requirements

Address all requirements from **Seminar 4** 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.