

Practice 04

Operator overloading, friends, initializer list, const methods, constructor with default parameters

1. Implement class `Virus` that has a name (*string*), severity (*real number*) and a constructor to create a virus with a given name and severity. *Use exact memory for the name*. Overload operators `<`, `<=`, `>` and `>=` for the class, using its severity to compare.
2. For the class `Vector` from Practice 03 use the class `Virus` as the array element and overload the following operators:
 - a. `+=` - given an element to add it to the back of the vector
 - b. `+=` - given another vector to add all the elements from the other vector
 - c. `<<` - to print all the elements of the vector
 - d. `[]` - to act as the operator `[]` for arraysAdd a `sort` method to sort the viruses based on their severity.
3. Implement class `Person` with age, name (*max 63 characters*), copy constructor, `operator=` and a `Vector` of viruses to indicate which viruses have infected him. Method `infect(const Virus&)` to add a virus to the vector. If there is already a virus with that name, just add severities instead of adding a new element in the array.