Return instructions for your final work:

* Return your assignment as a packaged as a .zip -file. Name the .zip -file as following:
  + programming4\_njit\_yourname.zip.
* Inside the zip -file, have a following folder structure:
  + coursework <- put all your source code files in this folder
  + design documents <- put your design documentation in to this folder
  + report <- fill the report document and remember to include it to your zip package
* Remember to fill the report as accurately as possible! Your work will be checked based on your report!
* Return the .zip file to moodle to the course return box before the deadline, returns after the deadline are not accepted.
* In case you want feedback from your coursework, you must contact your course teacher via email ([markus.kelanti@oulu.fi](mailto:markus.kelanti@oulu.fi)), the assignments will be checked within 2-3 weeks after the deadline.

# Programming 4 assignment report - <Student name>

**Implemented features (list what features you completed, you can include also any quality improvement you did to your code):**

All the minimum features with All additional features:

- Users can search observations based on their identifier, date range and owner (and the search can utilize any combinations of the previous filters)

- User can edit and remove observations made by the user. If the observation have been modified, a modified timestamp must be shown with additional reason for the modification (user can leave the reason field empty)

* + User go to “observation by you” to see all the records made by them and they will be able to edit and remove records there

- User can create a custom collection of observations that user can view and print as pdf

* + User add records from the home or all observations page

- User interface tracks how many times observations have been accessed and shows 5 most popular observations in the front page

- Users can comment and rate observations and most commented and rated observation is shown in the front page.

* + The front page needed to also show observations with most view, so I decided to let the user choose which criteria to show the popular records.

Quality improvement:

- Accessibility requirements are taken into an account where applicable (All the requirements requested by the assignment are fulfilled)

- User interface graphical and visual implementation

- Code/document readability and style

- The backend is supported with java written Server that support scaling and implement more features if needed

**Provide a short description how to use your user interface (user guidance on how to use your coursework, including configurations, settings or anything needed to run the coursework):**

- Backend: in folder ObservationRecord\_backend in cmd prompt

Have maven and run “mvn exec:java -Dexec.mainClass="com.o3.server.Server"” on “\coursework return template\ObservationRecord\_backend”

Or use any editor available (such as vscode) and run Server.java

- Fronend: make sure you have nodeJS installed

First run npm install at “coursework return template\coursework” in cmd

Then run “node .\Server\_front.js” or “npm run start”  
You should be able to access the UI at http://localhost:3000

**Known bugs and limitations:**

**Other issues and feedback:**

* I think it is a good idea if this course have a prebuilt server that students can access with api and build frontend for it. Most of my time spend was tweaking the backend from programming 3 to so it work with new features on programming 4