

Greetings! We invite you to take a test assignment for the position of Java developer at NC1 company.
We are looking for a real professional. Good luck with the assignment!

Task:

Write a CRON application that will parse news from a selected website every 20 minutes. The application should save the news to a MySQL database and display them in a JavaFX window. The window should contain two arrows for switching between news. The condition is to store only news for one day and also have the ability to select a time period: morning, day, evening.

Requirements:

1. The application should be implemented in Java using the Spring framework, use JavaFX for the user interface, and MySQL database for data storage.
2. The candidate chooses the website from which news will be collected every 20 minutes, saved, and displayed according to the user's choice.
3. Create a table in the MySQL database to store news. The table should have the following fields: news headline, news description, publication time.
4. Implement CRUD functionality to work with news: add, read, update, and delete.
5. Develop a user interface using JavaFX that will display a list of news and allow switching between them using arrows. Add functionality to select a time period: morning, day, evening. The application should display only news published within the selected time period.
6. If you do not use Docker to run the database, make it possible to test the code with H2 - this is an in-memory database (in build.gradle -> dependencies -> runtimeOnly 'com.h2database').
7. The client should not directly access the database; all work with information should go through your API (server). It should be possible for a developer to easily replace the server with another one (with the same API) and easily connect it to the client (change the host address).
8. Place the code on GIT, or if you provide a link to Google Drive, do not forget to provide access via the link.

Notes:

- Do not use microservices architecture.
- The code should be well-commented and readable.
- You can parse any news website, but do not use RSS.
- Make the code modular to clearly separate the client and server parts.
- Try to create a common interface for communication between the client and the server - the ideal example of modular code is when the client code does not have server imports and vice versa.
- Try to use only widely accepted libraries and avoid third-party libraries (we want to see your code). Don't forget to provide instructions for running and using the application.