

ООО «Натлекс»

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Test Task for backend developer

1) Add REST CRUD API for Sections and GeologicalClasses. Each Section has structure:

```
{
  "name": "Section 1",
  "geologicalClasses": [
    { "name": "Geo Class 11", "code": "GC11" },
    { "name": "Geo Class 12", "code": "GC12" }, ...
  ]
}
```

2) Add API GET /sections/by-code?code=... that returns a list of all Sections that have geologicalClasses with the specified code.

3) Add APIs for importing and exporting XLS files. Each XLS file contains headers and list of sections with it's geological classes. Example:

Section name	Class 1 name	Class 1 code	Class 2 name	Class 2 code	Class M name	Class M code
Section 1	Geo Class 11	GC11	Geo Class 12	GC12	Geo Class 1M	GC1M
Section 2	Geo Class 21	GC21	Geo Class 22	GC22		
Section 3	Geo Class 31	GC31			Geo Class 3M	GC3M
Section N	Geo Class N1	GCN1	Geo Class N2	GCN2	Geo Class NM	GCNM

Files should be processed asynchronously, results should be stored in DB.

- API POST /import (file) returns ID of the Async Job and launches importing.
- API GET /import/{id} returns result of importing by Job ID ("DONE", "IN PROGRESS", "ERROR")
- API GET /export returns ID of the Async Job and launches exporting.
- API GET /export/{id} returns result of parsed file by Job ID ("DONE", "IN PROGRESS", "ERROR")
- API GET /export/{id}/file returns a file by Job ID (throw an exception if exporting is in process)

Requirements:

- Technology stack: Spring, Hibernate, Spring Data, Spring Boot, Gradle/Maven.
- All data (except files) should be in JSON format.
- In export and import use Apache POI for parsing.
- (Optional) Basic Authorization should be supported.