Dear Candidate,

We want you to write a scraper for all the job postings at https://www.cermati.com/karir

As you can see there are multiple departments/teams in cermati.com for example: engineering department, product department, people ops department, etc. Please create a code that can explore each department and scrape the job opening using **code written in Python 3/ Java. We prefer Java. Use python only if you don't know java.** Do not hard code the URL in your code for each job posting. Your code should parse the HTML on https://www.cermati.com/karir and explore the link dynamically. You're only allowed to hard code this URL https://www.cermati.com/karir as the starting point.

We want you to get all the information about the job openings that cermati.com has. So explore the jobs in each department and get all the job and job details in that department. For example: In the Engineering department there is a "Software Quality Assurance" job. If you explore the link, you can get the Job Location, Job Description, Job Qualification. The ordering of the job or department doesn't matter. **Please parallelize the scraping so it can scrape faster.**

Please assume that the number of departments, the number of jobs, the type of jobs can change in the future so your code must scrape and parse the html in anticipation of that (but you can assume that the structure of the html should still be the same)

After your code finishes scraping all the job openings, your code should put all the info in a single json file.

The JSON file has a format like this:

```
{
  "<Department name>": [
    {  "title": "<job title>",
       "location": "<job location>",
       "description": ["<job desc>", "<job desc>", "<job desc>"],
       "qualification": ["<qualification>", "<qualification>",
"<qualification>"],
       "job_type": "<job type>",
       "postedBy" : <posted by>
     },
  ]
}
```

So the example is something like the this:

```
{
   "Engineering": [
```

```
        {
            “title”: “Software Quality Assurance”,
            “location”: “Jakarta, Indonesia”,
            “description”: [“Create detailed, comprehensive and
              well-structured test plans and test cases.”, “Create &
              manage bug reports and communicate with the team”, etc],
            “qualification”: [“Bachelor's degree in Computer Science or
              Information Systems or other similar fields”, “Minimum 1
              year experience in Quality Assurance (Manual or
              automation)”, etc],
            “job_type” : “Full-time”,
            “postedBy”: “Aldo Winata”
        },
        {
            “title”: “Software Engineer - Jogja”,
            “location”: “Jogjakarta, Indonesia”,
            “description”: [“Contribute to all aspects of the software
              development lifecycle including design, development,
              documentation, testing and operations”, “Write clean and
              testable code, as well as optimal code”, etc],
            “qualification”: [“Knowledge on how to build scalable
              system as well as maintainable system”, “Minimum 1 year
              experience in Quality Assurance (Manual or automation)”,
              etc],
            “job_type” : “Full-time”,
            “postedBy”: “Aldo Winata”


        },
    ],
    “Product”: [
       etc
    ],
    Other department etc....
}
```

How to submit the solution (PLEASE READ THIS IS IMPORTANT)

Please don’t send your solution using github, bitbucket or other open source place. But use email.

Please zip your entire solution directory and attach it into this email. Don’t include the result json into this solution.

Your code should be named ‘solution.java’ or ‘solution.py’ and please include the jar file as well into ‘solution.jar’. Your solution should be compatible with Python 3 / Java 8. The solution should create a file named solution.json which has all the job postings formatted according to the specification above.

The following are the things that we’re going to check from your solution:
1.) We will check for correctness of the scraper when launched. We will use Python 3/ Java 8 to run the jar file and we expect that it will return the correct result in the json file.
2.) We will check for code structure and readability
3.) We will check if your code parallelizes the scraping to make things more performant.

Thanks, let us know if you have questions. And if you want to know more about our engineering team, please visit engineering.cermati.com