RELATE DATA

Data Analysis

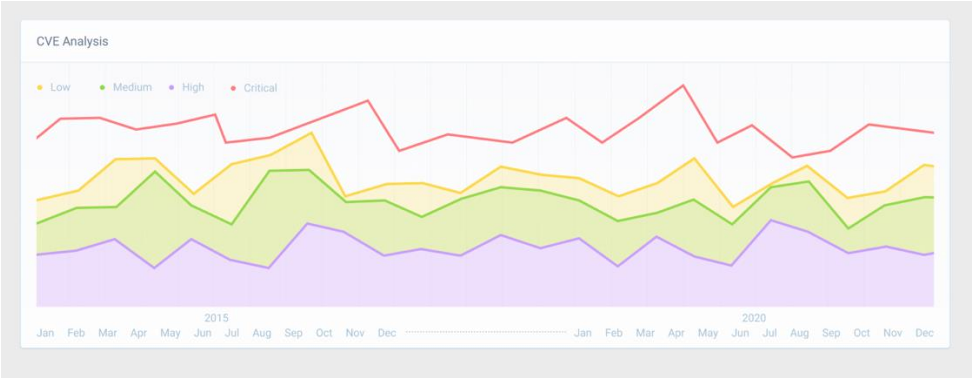
Using Spring framework Analyse CVE.json (attached) file to calculate the following information:

a. Number of CVE's published per month using information contained in "publishedDate":"publishedDate" : "**2012-02**-16T20:55Z"

b. CVE's by severity published per month using information contained in "severity":
"severity": "**HIGH**"

Data representation

a. Using any libraries of your choice create a chart representing monthly data per year in the format as illustrated in the graph below.



b. Display a table below the chart that shows analysed information from the Json file in the following format:

Year	Low	Medium	High	Critical
2015	10	20	30	40
2016	40	50	60	70
2017	80	90	100	110
2018	120	130	140	150
2019	160	170	180	190
2020	200	220	240	260

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Requirements

The solution should demonstrate the following if it can be applied:

- Dao / Repository / Service / Controller pattern
- Any functional programming aspects such as Java8 streams
- Any design patterns like Builder, Decorator, Factory, Command
- Usage of any collection's API (Map, List, Set etc)
- Object serialization / deserialization
- Usage of Kafka (optional but good to demonstrate skills)

Result

- Package the code into a single zip file with instructions on how to run the project including any dependencies that need to be installed.
- Create a docker image to containerise the application.
- Include a class and sequence diagrams to explain your components and working process.
- The application must use "Spring framework" and applicable requirements mentioned above.
- Documentation that explains the components (UML, sequence or other architectural diagram that explains the services/logic)

Evaluation criteria

- Usage of design patterns and requirements mentioned above
- Code quality (reusability, readability and comments)
- Documentation
- Time taken to finish the test task