



School of Computing & Information Sciences

Spring 2023 Senior Design Project

AmLight-Learning OpenFlow/SDN network Research and Experimentation

Student: Kenny Afonin

Mentor: Vasilka Chergarova

Instructor/Faculty: Dr. Masoud Sadjadi, Florida International University

PROBLEM

Display Human friendly ID's when displaying interfaces/switches on screen. The state of the prior version had only switches or interfaces showing, which took some time to comprehend when knowing the full path through which the data travels.

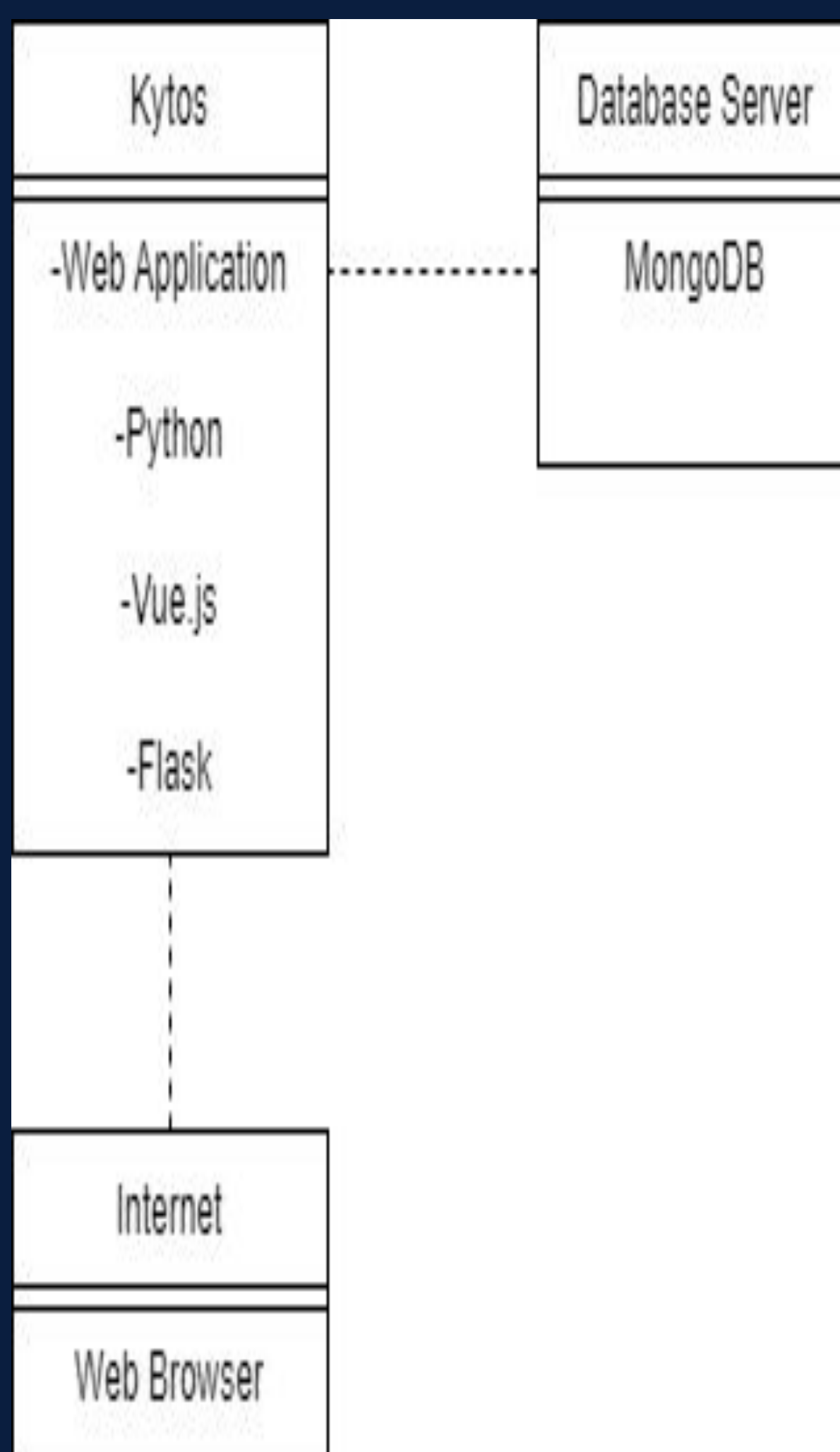
CURRENT SYSTEM

Vue.js Front-End. The web-page allows a user to set a beginning and end point for interfaces and switches. All paths are shown once a call to the API is made and data is retrieved. The method takes the data and figures out if it is a switch or an interface, once it is known, it returns that value back.

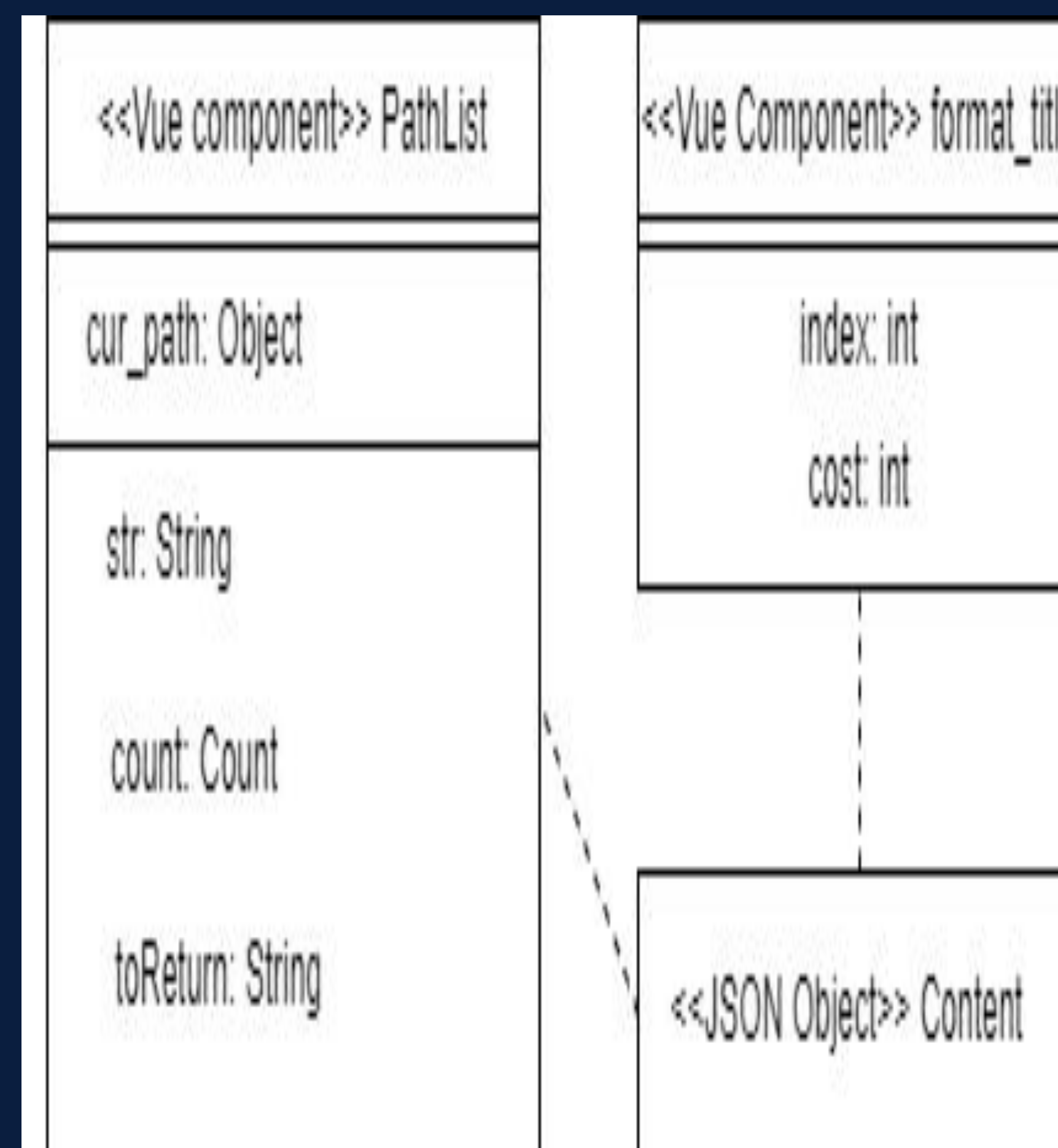
REQUIREMENTS

- Ubuntu 22.xx or later
- Vue.js
- Flask
- Docker
- Oracle VM
- MongoDB

SYSTEM DESIGN



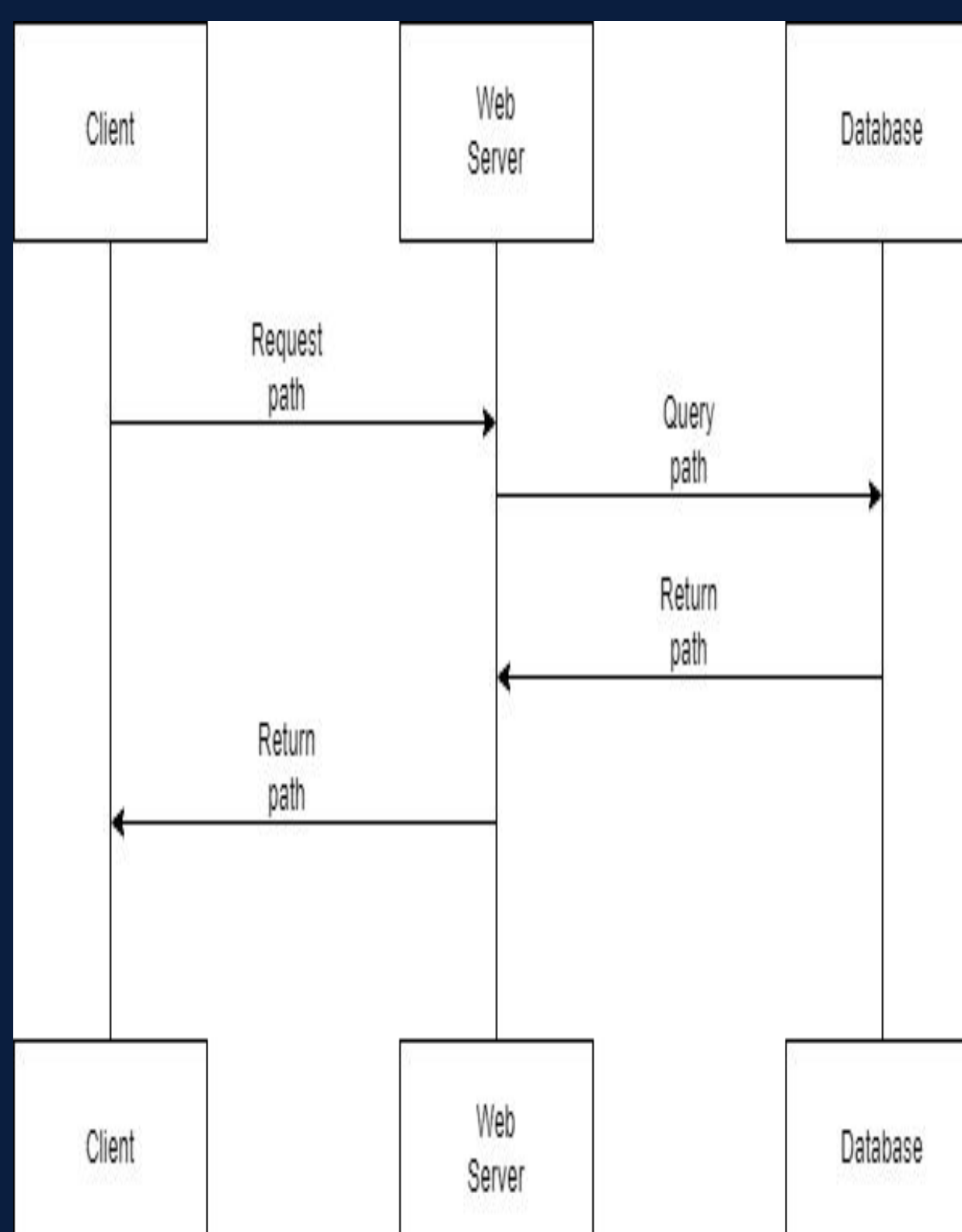
OBJECT DESIGN



IMPLEMENTATION

- Vue.js
- JavaScript
- Python 3.0
- Docker
- Oracle VM
- MongoDB

VERIFICATION



SUMMARY

Created a new method to render queried data in a friendlier way onto the browser. This method runs in the same file, making it easy for editing in the future.

REFERENCES

AmLight team for support and review, as well as guidance while creating the program.

ACKNOWLEDGEMENT

The material presented in this poster is based upon the work supported by Vasilka Chergarova. I thank Vasilka Chergarova for her assistance and mentorship that I/we received throughout the senior design project.