**Description**

The project is a service that can listen to all incoming requests to a web service and log it into a matrix. It will essentially be a log reading tool that sends the data out to the web service. This project can be broken down into three main sections: Logger, Importer, Viewer.

The first part, the Logger, will write the call info into a log file. This will be a piece of middleware that lives in the client’s application. The second part, the Importer, will read the output of the Logger and import it into a database. This could be a command line tool or a REST API. It could also be something as simple as a RAKE task. The API will only need one endpoint that lets us write to the table. The last part, the Viewer, is what visualizes the data. This is what the user sees.

There will be different databases per tenant and a cap on the number of records that are written to the table, in order to guarantee performance. I will be using Ruby on Rails to build both the user interface and the database. Ultimately the log tables will need to be stored in something like Amazon RedShift .

**Justification**

There are multiple reasons as to why I chose this as my project. The idea was brought to me by Dr. Toal. It is a piece of software that is wanted by Daniel Ice, the founder of Commerce.io and CTO of Friendbuy. The idea of a company backing my project was very interesting to me. It seemed like a great opportunity to simulate a work experience in this project. This is a chance for me to learn an area of computer science that I have little experience with. I feel like this will be a challenging project, but also something that I can accomplish. Dr. Toal assured me that there is a market need for software like this as well. I am excited to learn, and be able to say that I built, technology that is in need.

Another reason I chose this as my project is that it is a mixture of both frontend and backend. I have taken several courses in web development and designing user interfaces. This will help me when designing the UI and web application. After taking Introduction to Databases, I am excited to be able to use that new knowledge when dealing with the backend part of this project. Often my classes do not tie the backend into the frontend. This is a good project that combines both ends and will allow me to really see how they interact and work together.

Since I have never built something quite like this before, I was originally skeptical on whether or not it would be doable in a semester. After speaking to both Daniel Ice and Dr. Toal, they assured me that it is challenging enough for a semester’s worth of work, but that I have the skills to complete it.