Final Internship Report
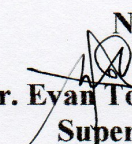**Evangelista, Kidd Jason C.**
2013-74917

This midyear I worked for a project that is under the supervision of Prof. Katrina Joy Magno Abriol-Santos, Mr. Evan Tolorio and Ms. Charlene Arkaina. The whole project is based in Los Baños which I find very convenient because I only live here inside the campus. I chose to work here because I am aware of how dangerous it is in Metro Manila. I also want to experience to work here because I needed to take a GE subject to compensate for the units I did not take last semester. Here, I learned so many things while enjoying LB's relaxing and safe environment.

The project we worked on is an E-Commerce System that will centralize the Swine industry's transactions through the integration of communication modules in the system like the text messaging app and the chat app. It is my responsibility to finish the tasks given and deliver a professional output that will satisfy my supervisors so I gave my time and effort to study what I needed to learn in order for me to deliver an expected output. I was given the task of doing the system's chat module. With no background whatsoever in working with chat applications or communication modules, I have to study and do research on how I am going to do my job.

The initial plan was to use the AJAX long polling technique on implementing chat. But as I searched through the internet, I read that it is not ideal to use it. The reasons being, first, Long Polling is considered to be an HTTP Request, complete with unnecessary information. For the chat module, it is critical that we only send the messages themselves to the client and the server because it will affect the processing overhead. Second, it is not ideal for real-time applications, such as chat, because Long Polling sends and retrieves messages in a given interval. Third, Long Polling is not bidirectional. And fourth, the connection between server and client in Long Polling is not kept alive for long. Thus, some messages might not get to their respective destinations and will need to be resent. We need a stable connection to send our messages with.

So what is the answer to my problem? WebSockets. WebSockets establishes persistent connections so that both the client and the server can send information at any time, ideal for low-latency applications such as chat. Since we used Laravel in the development of the project, I used RatchetPHP in the application of WebSockets. The only real problem I encountered which I found frustrating was where to begin and how I should design the WebSocket server. I think discpline really is an important factor to be efficient in coding because you need it to start something you aren't sure of to begin with.

Through this practicum I have learned some key values that is needed in the outside world as a professional. I learned the value of time and deadlines and how to respect it. I also learned to cooperate and share my knowledge with my fellow team members so that we can be effective in delivering an expected output. Overall, it is a fun and educating experience.

Noted:

Mr. Evan Tolorio
Supervisor