# **Portfolio B**

# OmniChem

# Overview:

In our daily life, data comes in many forms, such as: numbers, patterns or even symbols. Data are also used in many different fields to improve our economy, enhance technologies and research. However, in order to be able to use these data efficiently, a paramounted tool like data management – acquiring, storing, and processing data – is inevitable. Moreover, using data management to work with big data in research fields would make the researcher task easier. For instance, acquiring a huge collection of data and store them in a database, where the researcher can simply view or export them into a readable and understandable format.

With the lack of easy access and user-friendly tool in working with big data and data management, suitable for a specific type of researching field, we planned to implement a software that answers our client’s need. As, our client is Dr. Ella Gale, a chemistry machine learning doctor at the University of Bristol. Let along with chemistry researchers at the University of Bristol and other institutes, pharmaceutical research companies and others with a stake hold in easily managing chemistry datasets. The software must be able to aid the research procedures, as well as, assisting in new development, which could bring the clients success and fame.

In this sense, our system is a Chemistry Dataset management and search tool with the intent of being used for passing, storing, and organizing chemistry data from the lab machine. Our system will also come along with the capability to easily data mine in searching for the existing Chemistry related data, for instance, chemical bonds or chemical formula. In addition, the system must have an intuitive and well-designed GUI system, in exporting unreadable machine format, for the non-computer literate Chemistry research community. Most importantly, for security and privacy of the users’ information and their data, we also want this database to be held securely by using a unique username and password to access not only remote systems but also local files.

Such that, we intend to build this core database and data management system using an SQL and Java, while the GUI will be built using HTML, CSS and JavaScript. This thoughts in implementing the system are attentively planned by taking the future development into consideration, where the programing language for implementation are widely used in the computation fields. Thus, once the system is launched and used, not only us, but people with programming background would be able to keep enhancing the software to the better version

Chart, waterfall chart

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