Customer Ninja Rationale document #2

For the project the group has chosen the topic of an all in one Point-of-Sale system for retail environment. In choosing this particular type of software we are presented with several challenges such as how to isolate the users of the software based on their permissions and how to keep sensitive customer information stored.

The decision to create this type of system will allow us to gain valuable experience using databases and handling sensitive information such as customer and sales data in a development and software engineering environment. In a real world software engineering job the integrity of the program from a design and implementation standpoint is crucial. To prevent tampering with sensitive information it is key that we follow design principles that utilize separation of privileges and securely store sensitive information using encryption and secure objects in memory.

Several alternatives were considered such as a mobile or more web based systems however these would complicate the development process by necessitating the use of emulators and depending on web services to work when the project is tested live. In order to make the first software engineering process as streamlined as possible for the group we settled for a standalone Windows program that will interface with a local SQLite database. This combination of dependability and familiarity with the operating system will allow the group to focus on the engineering portion of the project.

When brainstorming for ideas about features needed for the system in question some of the most important features were centered around customers and inventory. Being able to control and store information about both are key to the operation of the system. This necessitates the use of a database.

The importance of an easy to use graphical interface is extremely high in the retail environment and this was the rationale for focusing a great deal of attention on an intuitive and elegant GUI which allows access to all the functionality of the software quickly and easily.

From a hardware standpoint, the use of a magnetic card reader is to allow us to validate a customer's identity and track their purchases. This will give us the chance to work with a real world physical hardware that will require interfacing to our program and allow us to implement this robust feature to the software.

These are just some of the justifications for the program and requirements we have selected however it gives a great deal of insight into how much experience can be gained from this specific piece of software design.