**System Architecture**

The architecture adopted by the application will be standalone. Standalone means that the application will operate independently by itself without having to rely on or being a part of another system. Since the main purpose of the application is to secure the user’s data, standalone would be the best option to have the best security and reliability. It is because the data stays within the application itself and it does not have to depend on other system to operate.

Other architecture that have been considered are client-server and web-based. Client-server opens more possibilities for the application to have more interesting features, however it also raise more threats such as network attacks. In addition, there would be a cost to set up the server and maintenance of the server itself. All of this can apply for web-based architecture too since it uses a server. Additionally, web-based is less desirable due to its performance issue because there is no local storage for the application so the performance is very dependent on network connection to access the data.

**Design principles of the application:**

**Modularity:** separating the functionality of a program into independent, interchangeable modules, such that each contains everything necessary to execute only one aspect of the desired functionality.

**High Cohesion:** each module have functions and elements that are strongly related, only to fulfill one particular purpose or task

**Low Coupling:** modules are loosely coupled and independent so that a change in one module do not affect the other modules

**Standardization:** implementation will conform to standard that has been established and agreed by different parties, this is crucial for things like security

**The proposed application will have the following quality:**

**Extensibility**

The proposed application can add additional functionality without changing or damaging much of the current system. New data types can be added as long as it is supported by the android

**Maintainability**

Following the design principles of high cohesion and low coupling, small modifications will not be a problem. Changing one module will not affect other modules significantly.

**Performance**

The response time will be in acceptable manner even with the huge amount of data that are processed. Efficient encryption algorithm are used as well as other processing algorithm

**Usability**

Adapting KISS (Keep It Simple Stupid) principle in designing interfaces will give user easier times in learning and figuring out the proposed application. It lets user to take less time to perform a certain task.

**Compatibility**

The proposed application will be able to run in various type of android devices as well as different version of android.

**Security**

Data are kept safe by encryption and login is required to have access. Security measures like protection against sql injection or encryption algorithm will follow standard.