**3.5 Software System Attributes**

Reliability:

* Any information that is stored on the database must remain correct when being transferred to the user interface.
* The services offered by the system should be available to users except for when the system is undergoing maintenance.
* The system should reply to user requests in the shortest time interval possible.
* The system must be fault tolerant, it needs to maintain a certain level of performance and offer other services that are not affected by this fault to the users.
* In the event of a fault the system must be able to recover within the shortest time period possible and recover any data that may have been lost.
* The system should be able to respond appropriately if it receives bad input data from the user.

Scalability:

* The system must be able to cater for increases in the work load, for example large number of users or activities at any given time, without impacting the performance of the system.
* If the system does not cater for increases in workload it should at least provide the ability to be readily enlarged.

Maintainability:

* The system must be designed in a modular fashion that provides high cohesion and loose coupling, this will allow parts of the system to be easily maintained without affecting the rest of the system.
* Maintenance should be able to be carried out by different maintenance teams, therefore the system must be easy to learn and understand.

Integrability:

* Since we are following a modular design, components of the system that are separately developed should work correctly together.
* Follow coding standards specified by the client to allow for easy integration and employ continuous integration in our design process.

Usability:

* The system must be easy to learn.
* System must cater for user mistakes, by providing the user with the undo or roll back options.
* The user interface must be easy to use and must be intuitive.
* The system should display options in a logical manner.
* Incorporate widgets and icons that the target users may be familiar with.
* The user manual should have a detailed description of the system.
* A help option must be provided to the users.

Interoperability:

The system must be able to communicate with the University of Pretoria WiFi system, because the WiFi access points will be used for the navigation.