# 3.1External Interface Requirements

## 3.1.1User Interfaces

**Basic Layout:** Every user Interface should include the following format. But this format can be violated in reasonable occasions.

**Header:**

Position: Top of the page

Description: Should Include the application title and relevant styles and background images should be static.

**Main Navigation Panel**:

Position: Top of the Page right after the Header

Description: Includes the main categories of the site map. At login this should be invisible items in navigation panel are static.

**Sub Navigation Panel:**

Position: Left hand side of the page

* Description: Web application for users with controls to customize statistics
* Graphical representation of data using Charts and Graphs

**Application Body:**

Position: Right side of page begins after Sub Navigation Panel

* Description: Used to present data and take input from user content of this part can change rapidly. User can set time period and disease and see affected areas over the map GIS system to plot informative maps according to the set time period and disease.

**Footer:**

Position: Bottom of the page

Description: Provide useful links and display copyright statements.

## 3.1.2Hardware Interfaces

To run the software’s mentioned following no special hardware component is needed. Normal pc with following specification would be able to run the system.

Processor: 1GHz

RAM: 254MB

HDD: 60GB

Network Card

## 3.1.2Software Interfaces

Windows 2007 will be the operating system. GIS system and data Warehouse maximizes efficiency of decision making and planning.

Data cube, Data mining,ARP GIS

## 3.1.3Communication Interfaces

Communication protocol mainly used is HTTP. For secured connection HTTPS will be used.

# 3.2Classes and Object Diagrams

# 3.3Performance requirements

* Must not use all the processing power of the computer and should give processing time for other applications.
* Should not take long time to load the system.
* The system is required to support to retrieve information with sufficient speed.
* Used memory must be released after when they are not being used.

# 3.4: Designing Constraints:

* User interface should make simple as possible to be understandable by users with basic computer knowledge – system user interfaces should be contain related data and should be organized to increase reachability and readability.
* White space should be used wisely to increase the readability.
* User interface final size should not exceed 657KB.
* Since project addressing a real world problem object oriented approach is used. Because of that core language would be an object oriented language.
* The proposed web system should be cross browser compatible. Cross-browser refers to the ability for a website, web application, HTML construct or client-side script to support all the web browsers Cross-browser is a support that allows a website or web application to properly rendered by all browsers.

# 3.5: Software System Attributes

## 3.5.1Reliability requirements

* System design should include the fail safe procedures which handles the possible exceptions in the systems flow of processes to minimize the application crashes on the runtime and when an defined exception occurs system should be able to recover from that and continue the flow of procedure.
* Input data entered by a user must not be mixed with the data of other users.

## 3.5.2Availability requirements

## 3.5.3Security requirements

* The stored data cannot be able to access by other application such as viruses.
* Ensuring security and access control to sensitive data – industrial standard security procedures and access control should be implemented to control the availability of sensitive data to users.

## 3.5.4Maintainability requirements

* Server administrator should be able to maintain the application server and database. A client application will be provided with the system to do that.

## 3.5.5Other requirements

### Quality requirements

* The GUI must not be very complex to use the system.
* User should be notified only with the data related to his/her work when using the software. Internal exceptions and errors should be handled internally and when showing them to the user they should be presented in a non-technical manner to be understandable by the general user.
* The system should not make the users angry, depressed and terrified when using it.

**Safety Requirements**

* Provide an accurate system.