Input and Sharing of Infectious Disease Data at the Grassroots Level
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Abstract

This project creates a user-friendly database and interface which can be used to enter, manipulate, and view pertinent data on individual patient case reports. The goal is to make meaningful patient data easily available both for doctors in the field and scientists studying disease outbreaks.

Background

This project involves manipulating a MySQL database via a user interface programmed in Java. Development of the program was guided by a series of principles. These included that all software used by open source and in common usage, that the program be efficient to use and have a small footprint, that the system be user friendly and useful to all users, and that there be consistency throughout the program.
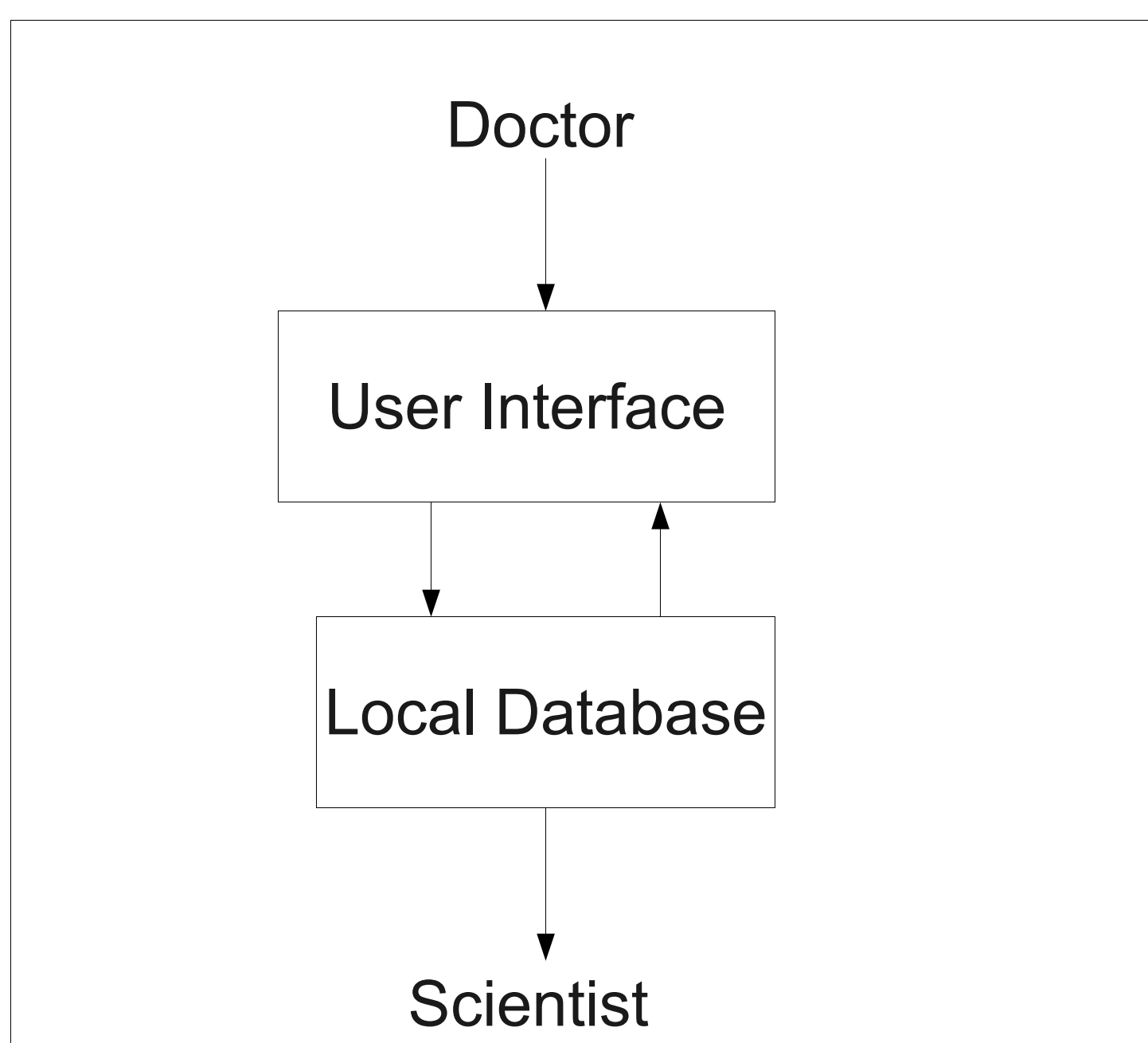
Discussion

Three major phases were involved in the development of this project. The first phase created a user interface in PHP and HTML, which accessed a MySQL database. In the second phase, the interface was recreated in Java, and redesigned in order to better comply with specified project goals. In the third phase, a NetLogo model was used to investigate the potential networking capabilities and limitations of the system.

Diagram of NetLogo results will go here

Results and Conclusions

The program complies with design goals for a useful, straightforward system. Use of Java to generate the interface makes it possible to implement the system on virtually any machine with minimal installation requirements. The use of linked tables in the database prevents data entry from encumbering medicals workers and reducing the quality of patient care. Finally, the program's simple design makes use of this system intuitive for individuals who have had little or no previous contact with a computer.

Doctor
↓
User Interface
↓ ↑
Local Database
↓
Scientist

Figure 2: A basic flow chart for the communication of information