

Mini Project Report On
“SUGGESTION MANAGEMENT SYSTEM”

**submitted in partial fulfillment of the requirements for the award of
the degree of**

BACHELOR OF ENGINEERING
(Computer Engineering)

By

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CERTIFICATE

This is to certify that the project entitled

“SUGGESTION MANAGEMENT SYSTEM”

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is a bonafide account of the work done by him/her under our supervision.

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Acknowledgment

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Lastly, I thank almighty, my parents and my classmates for their constant encouragement without which this assignment would not have been possible.

Abstract

When you talk of a system you actually mean things working together or that there is a standard to it. One Example of a system may be any Organization. System is basic for anything that's combinely around. But here we won't be studying about any General System but a specific one which we named as "SMS (Suggestion Management System).

In this project the readers and users have various scope for learning about many java function's application, connecting to MySQL database via java, using a protocol such as TELNET to achieve project's goal. At the end if user is faithfully able to implement this system and understand every bit and byte of it then they have applied the knowledge of subjects such as Database, Advance Java and Computer Networks all together to achieve this specific goal.

Table of Content

Sr.No	Name	Page No
1	Introduction	6
2	Objectives	7
3	Methodology	8
4	Software / Hardware requirement	9
5	Implementation Details	10
6	Conclusion	12
7	Future Scope	13

Introduction

What is Suggestion Management System about?

Basically when you about suggesting you talk about either writing your suggestion on a piece of paper or that expressing it verbally, and let us not be afraid to say that these are most outdated ways since the human evolution. This way of solving queries which move from one level to other till resolved, has been in practice for quite some time this is what is up to today called as SMS(Suggestion Management System).

So, what is the Alternative?

We have implemented the same System using the gift known as technology. You just need telnet service and valid credentials to suggest to any department concerned in a network.

What did we Use?

Three Old School but powerful tools:

- Java
- MySQL
- Telnet

What do they do?

Pretty much a lot of stuff. Combinedly they have done a perfect job to implement a very reliable and fast Suggestion Management System as a project. Remember one employee sending you to another and that one to next one, well those days will be long gone.

Objectives

1. To suggest the Management and Departments as how to improve company's or Institute's efficiency. Providing Decision-Making Data.
2. To encourage the submission of complaints.
3. Meeting the goals of the college in better way.
4. Improving Quality of the campus by taking suggestions from students and faculty
5. Using eco friendly and reliable technology to take suggestions
6. Use Technology to Simplify things and also to Simply the Technology used since many decades.
7. See towards Networking, Databases, Programming as a future scope for simplified application of inventions.

Methodology

The major technology used in this project is telnet, it is a protocol used on the Internet or local area network to provide a bidirectional interactive text-oriented communication facility using a virtual terminal connection.

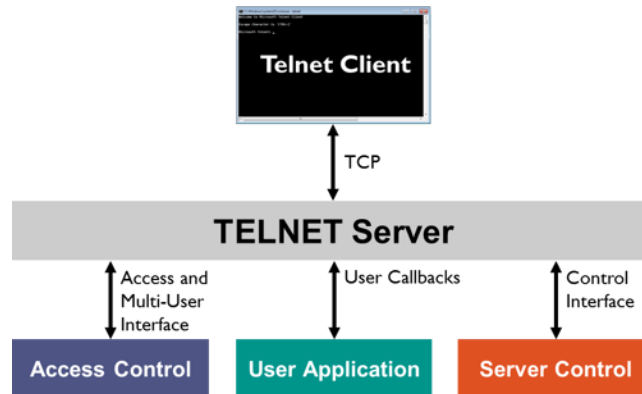


Fig. 1:Telnet Architecture

User data is interspersed in-band with Telnet control information in an 8-bit byte oriented data connection over the Transmission Control Protocol(TCP).

The PC which contain the source code is the “Host”. The whole project will only work when the host server is on.

This is a Client-Server architecture system, there is one host many clients architecture.

This creates a local area network, with the use of Android application user can get connected to the network.

The basic requirements of the application to get connected to the network is that, it requires port number(common port number given by the host, to use the telnet service) and ip address of the router.

Software / Hardware requirements

Software Requirements for Server Side:

- Operating System able to use concept of Threading at best.
- Network Interface Card or similar Equipment.
- Operating System that can support and work combined with:
 - Java
 - MySQL
 - Telnet

Software Requirements for Client Side:

- Just an OS which supports the Telnet with NIC.
- Client side is independent of any device platform.
- eg. Android, iOS, Windows or Linux

Hardware Requirements for Server Side:

- Minimum 512 MB RAM PC
- Internal or external Hardware that supports Threading concept
- Personal Network or Hotspot
- Hardware to support Networking capabilities

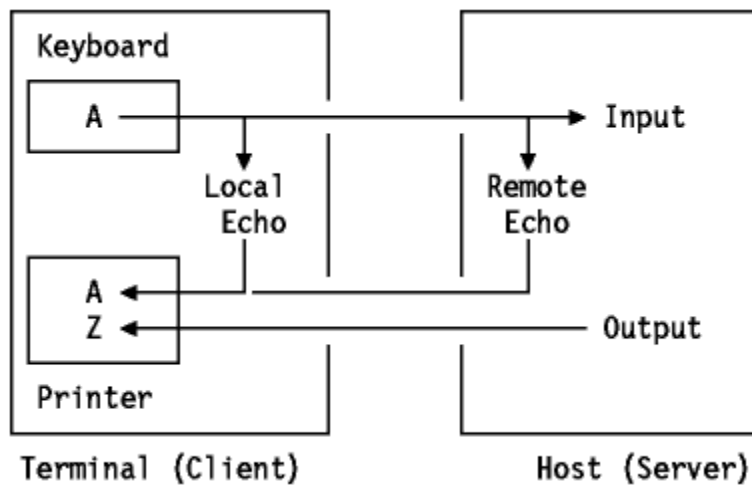
Hardware Requirements for Client Side:

- Minimum 256 MB RAM PC
- Hardware to support Networking capabilities

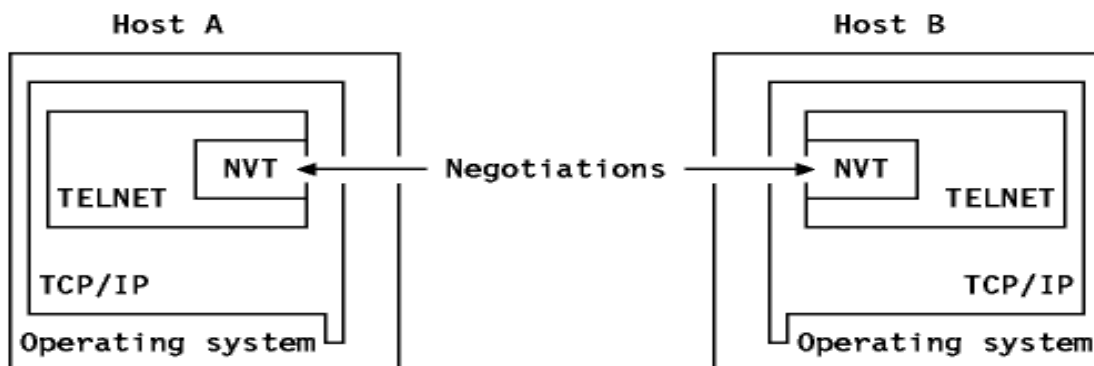
Implementation Details

- The TELNET protocol is based on three ideas:
 - The Network Virtual Terminal (NVT) concept. An NVT is an imaginary device having a basic structure common to a wide range of real terminals. Each host maps its own terminal characteristics to those of an NVT, and assumes that every other host will do the same.
 - A symmetric view of terminals and processes .
 - Negotiation of terminal options. The principle of negotiated options is used by the TELNET protocol, because many hosts wish to provide additional services, beyond those available with the NVT. Various options may be negotiated. Server and client use a set of conventions to establish the operational characteristics of their TELNET connection via the ``DO, DON'T, WILL, WON'T" mechanism discussed later in this document.
- The two hosts begin by verifying their mutual understanding. Once this initial negotiation is complete, they are capable of working on the minimum level implemented by the NVT.
- After this minimum understanding is achieved, they can negotiate additional options to extend the capabilities of the NVT to reflect more accurately the capabilities of the real hardware in use.
- Because of the symmetric model used by TELNET, both the host and the client may propose additional options to be used.
- The set of options is not part of the TELNET protocol, so that new terminal features can be incorporated without changing the TELNET protocol (mouse?).
- The NVT has a "printer" (or display) and a "keyboard".
- The keyboard produces outgoing data, which is sent over the TELNET connection. The printer receives the incoming data.
- The basic characteristics of an NVT, unless they are modified by mutually agreed options are:
 - The data representation is 7-bit ASCII transmitted in 8-bit bytes.
 - The NVT is a half-duplex device operating in a line-buffered mode.
 - The NVT provides a local echo function.

- All of these may be negotiated by the two hosts.



- An NVT Printer has an unspecified carriage width and page length. It can handle printable ASCII characters (ASCII code 32 to 126) and understands some ASCII control characters such as:
- All TELNET commands and data flow through the same TCP connection.
- Commands start with a special character called the Interpret as Command escape character (IAC).
- The IAC code is 255.
- If a 255 is sent as data - it must be followed by another 255
- Each receiver must look at each byte that arrives and look for IAC. If IAC is found and the next byte is IAC - a single byte is presented to the application/terminal.
- If IAC is followed by any other code - the TELNET layer interprets this as a command.



Conclusion

This project has been a success in combining the 3 major fields of Technology which Databases, Networks and Programming Language(Java). Individuals who have completely got the complete picture and idea behind any function used would find the project very interesting. The idea to combine and work on this great idea took a lot of effort in terms of time, energy and eye-strains. It is all fine in the end and at last we've come up with something that's truly built by us and only us. This project has taught us to revisit and strategize our way of approaching towards the way Industry and Institutions both combinely would try to solve.

Future Scope

Telnet has always been seen something as outdated and insecure. Your security only matters when you are sending the information which is highly sensitive or in other words which can cause World War 3 but we rarely need that level of security. We are just out there increasing traffic on the Internet unnecessarily, Telnet just avoids that!

Any intranet wants speed and reliability and that is what the combination of this components which are implemented above can achieve.

All the components used are free and Open-Source and implemented in such a mannerism that even a 7th Standard boy will be able to understand and implement the same for any system he wants.

Due to Time Constraints we only used MySQL database, but the user can use any Relational DBMS for this purpose provided the individual has the knowledge to do so and the softwares are that capable same can be said for the use of another Programming Language or Network Protocol provided they can achieve the goal in the end.

So, pretty much we can implement any kind of free system for any kind of information retrieval and storage with just the knowledge used in building this project. All we, as a group, can say is that our Project is the future foundation for what many organisation will work on and implement in the future until they admire the word “free and Open-Source”.