REPORT ON SYSTEM DEMONSTRATION AT ST JOSEPH'S HOSPITAL MARACHA

Date of Visit: 12th September 2024
Location: St. Joseph's Hospital Maracha
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Developed at: Muni Labs, Muni University

1 Introduction

On September 12, 2024, a team from Muni Labs visited St Joseph's Hospital Maracha to demonstrate the data digitization system we developed as part of a project at Muni Labs. This system is designed to digitize patient records, streamline access to health data, and facilitate more efficient management of health records. The primary objective of the visit was to conduct an internal demonstration of the system, evaluate its performance on the hospital's infrastructure, and assess its suitability for adoption within the hospital.

1.1 Objective of the Demonstration

The main aim of the demonstration was to:

- Showcase the system's capabilities in digitizing and managing patient records.
- Test the system in a real hospital environment using their existing IT infrastructure.
- Provide hospital staff with hands-on experience in navigating the system.

2 The System Setup

The system was designed to be hosted on a central server within the hospital and accessed through workstations connected via the hospital's Local Area Network (LAN). It requires a server with adequate computing power and storage to handle real-time data processing, as well as efficient handling of patient records, files, and other health-related documents.

3 Events on September 12, 2024

Upon arrival at St Joseph's Hospital Maracha, the team was provided with a PC to serve as the central server for the demonstration. Unfortunately, the system could not be tested as intended due to the limitations of the machine provided. The specifications of the PC were:

- 4GB RAM
- 500GB Hard Drive Space
- 3.6 GHz Speed

3.1 Issues Encountered

The provided PC was unable to meet the system requirements due to the following limitations:

1. Insufficient RAM: The system, designed to handle large datasets, requires higher memory to process the data efficiently. With only 4GB of RAM, the PC struggled to run the system smoothly, leading to slow performance.

2. Limited Storage Space: While 500GB of storage was provided, the size of medical files, images, and patient records necessitates a larger storage capacity for long-term usage and testing.
3. Outdated Operating System. The PC assigned for this work was running an outdated Windows 10 Professional OS. It encountered different kind of errors in hosting and configuring the different system required files.
4. Performance Bottleneck: The overall performance of the machine was not sufficient for hosting a server that could support multiple workstations accessing the system simultaneously.

Due to these limitations, the system's performance could not be tested in real-time, and the demonstration had to be postponed.

4 Recommendations

To ensure a successful demonstration and deployment of the system, the following recommendations are proposed:

1. **Upgrade the PC or Server**: The hospital should provide a machine with at least **8GB of RAM** and **1TB of storage** to allow for proper testing and demonstration of the system. Higher specifications will be required for large-scale deployment.
2. **Assess the Network Infrastructure**: Ensure that the hospital's LAN is robust enough to handle multiple workstations accessing the central server simultaneously.
3. **Reattempt the Demonstration**: Once the necessary hardware upgrades are made, the team can return to conduct the demonstration and test the system in real-world conditions.

5 Conclusion

The inability to conduct the demonstration at St Joseph's Hospital Maracha was due to inadequate hardware resources provided for the server. The system's requirements exceeded the specifications of the PC, resulting in performance bottlenecks that hindered the testing process. With the proposed upgrades and adjustments, a future demonstration can successfully showcase the capabilities of the data digitization system.

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