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| **Project Abstract Submission** | | |
| **Year & Sem: III-I** | **Section: AIML-B** |  |
| **Subject: CN(computer networks) Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | |

**IP Based Patient Monitoring System**

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***Abstract:***

The "IP-Based Patient Monitoring System Using C" project demonstrates a simple yet effective method for remotely monitoring patients' vital signs using TCP/IP protocol. The system is implemented in C and involves two main components: a client-side program and a server-side program. The client, simulating a patient-side device, generates and sends data such as heart rate and body temperature over a TCP/IP network to the server. This data represents the readings of physiological parameters from medical sensors.The server, acting as a central monitoring system, receives and displays the data in real-time, allowing healthcare providers to observe the patient's condition remotely. The communication between the client and server is established using sockets, ensuring reliable data transfer over the network. The server continuously listens for incoming data from the client, while the client periodically sends updates, simulating continuous monitoring.

This project offers a foundation for understanding the basics of network programming in C, including socket programming and data transmission between devices. It serves as a useful model for telemedicine applications, where real-time monitoring is essential for timely interventions, especially in rural or remote areas with limited healthcare access.The project can be expanded by adding features such as multi-client support, threshold-based alerts for abnormal readings, and data storage for trend analysis. This system illustrates the potential for integrating networking concepts with healthcare, offering a low-cost solution for basic remote patient monitoring, thus enhancing accessibility and responsiveness in patient care.

**Keywords:**

1.⁠ ⁠IP-based monitoring

2.⁠ ⁠Socket programming

3.⁠ ⁠Patient data transmission

4.⁠ ⁠Remote healthcare

5.⁠ ⁠TCP communication

6.⁠ ⁠Embedded systems

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