MALNAD COLLEGE OF ENGINEERING

(An Autonomous Institute Affiliated to VTU, Belagavi)

Under the auspices of the MTES®, Hassan

Department of Computer Science & Engineering

Main Project Phase – 1 (22CS605)

Project Domain: Artificial intelligence

Project Topic: AI chatbot for college event reminder

Problem Statement:

Traditional reminder systems, such as manual announcements, emails, and notice boards, can lead to missed deadlines, reduced engagement, and scheduling conflicts. Faculty members may struggle to keep track of lectures and meetings, while students often forget exam dates, assignment deadlines, and extracurricular activities.

Abstract:

In the ever-evolving landscape of artificial intelligence, chatbots have emerged as pivotal tools across various sectors, enhancing user engagement and operational efficiency. This project introduces a sophisticated chatbot endowed with advanced memory storage capabilities, specifically tailored for departmental event management and personalized reminders. By integrating natural language processing (NLP) with a robust memory architecture, the chatbot can store, retrieve, and manage event-related information based on user-specified dates, thereby ensuring that students and faculty remain informed about pertinent departmental activities. Furthermore, the system offers personalized reminders, adapting to individual user preferences and schedules. This initiative draws inspiration from recent advancements in chatbot memory structures, particularly the incorporation of narrative memory, which has been shown to enhance conversational coherence and contextual awareness. By leveraging these insights, the project aims to develop a chatbot that not only disseminates information but also fosters a more interactive and personalized user experience within the academic environment

Objectives:

- Develop a Memory-Enhanced Chatbot: Construct a chatbot capable of storing and retrieving departmental event information, utilizing advanced memory structures to maintain context and continuity in conversations. This approach aligns with findings that emphasize the importance of memory retention in sustaining meaningful dialogues over multiple interactions.
- Implement Personalized Reminder Systems: Design a system that delivers tailored reminders to users about upcoming events, assignments, and deadlines, thereby enhancing individual time management and organizational skills. The effectiveness

of personalized reminders has been demonstrated in various applications, including support for individuals with cognitive impairments.

- Enhance User Engagement through Context Awareness: Integrate context-aware functionalities that allow the chatbot to adapt responses based on the user's interaction history and preferences, fostering a more engaging and intuitive user experience. Studies have shown that context-aware chatbots significantly improve user satisfaction and engagement.
- Ensure Data Security and Privacy: Implement robust data protection measures to safeguard user information, adhering to best practices in data security and privacy regulations.
- Evaluate Performance and User Satisfaction: Conduct comprehensive testing and user feedback sessions to assess the chatbot's performance, accuracy in event retrieval, effectiveness of reminders, and overall user satisfaction, ensuring continuous improvement and alignment with user needs.

Project Team Members	**Signature**
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Interdisciplinary Project:	**Yes ☐ / No ☐**
Signature of the Panel Members	
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