SMART INDIA HACKATHON 2024

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DocentDesk

- ✓ **Problem Statement ID – 1648**
- ✓ **Problem Statement Title - Online Chatbot based ticketing system**
- ✓ **Theme - Travel & Tourism**
- ✓ **PS Category - Software**
- ✓ **Team ID - 13**
- ✓ **Team Name - 405 HEXADS**

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Proposed Solution:

1. **Voice-Interactive Multilingual Chatbot**: Integrates **voice input** with text confirmation, supporting multiple languages for a personalized user experience[3].

2. **3D Virtual Museum and Interactive Navigation**: Offers a **3D museum tour** with live **directions** to key spot (statues, restrooms, food areas) and **artifact history** on request.

3. **Event & Booking System**: **DocentDesk** also supports direct booking with **ticket issuance**, allowing users to view the **museum calendar**, **book tickets**, and receive them directly within the chat interface. To enhance **efficiency**, we're developing our own **payment gateway** without relying on any third-party services, ensuring a seamless and integrated experience for the users[1].

4. **Feedback & Social Sharing Integration**: **DocentDesk** enables visitors to submit **feedback**, share **artifacts** or **events** on social media platforms, and even **scan artifacts** to retrieve their **history** through the chatbot, offering an interactive and informative experience[5].

5. **Instant Visitor Support**: **Provides instant answers to FAQs** (opening hours, prices, etc.) and connects users to a contact form or phone number submission for further inquiries.

6. **Crowd Management with City-Wide Notifications**: Features an engaging **3D animated video** showcasing the entire museum, offering users a **virtual tour** before their visit, enhancing the experience.

TECHNICAL APPROACH

Chatbot

Automate responses and offer instant support with an intelligent, real-time chatbot.

Website

A user-friendly website providing easy access to services and information.

Payment Gateway

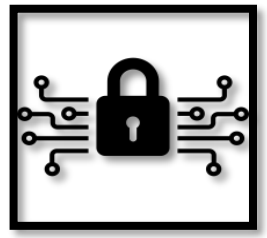
Fast, encrypted transactions for seamless online payments.

Database MySQL

Database for storing Data on users, different roles, complaints ,communication channels, etc.

Data Analysis

Multi – Lingual



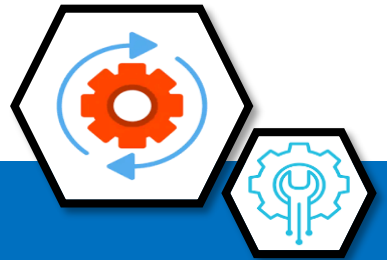
Data Encryption

CHATBOT

Ticket Booking

Payment Gateway

Data Storage



FEASIBILITY AND VIABILITY

Feasibility

1. Seamless visitor experience
2. Multilingual Support
3. Ticketing & Payment Integration
4. Security & Integration
5. 24/7 Support

Challenges

1. Complexity of Multilingual support
2. System Downtime
3. Maintenance Costs
4. Security Breaches
5. Technical complexity

Viability

1. Scalability
2. Cost Savings
3. Instant-Response Time
4. Improved Marketing
5. Data-driven decision-making

IMPACT AND BENEFITS

IMPACT:

1. **Multilingual Support :** Automatic language detection and response generation using **API**[3].
2. **Reduced Staffing Costs :** From managing **database** to booking **tickets** and processing **payments**, lightening the **staff's** workload by **multitasking** seamlessly[4].
3. **Personalization Opportunities : Feedbacks** can guide future customization and improvements, making the experience even better.
4. **Fewer Human Errors :** ensuring consistent **accuracy** and reducing the chance of mistakes caused by manual booking[2].
5. **Reduction in Paper Usage :** Cutting paper **waste** by going fully **digital** with seamless bookings and **instant ticket delivery**!

BENEFITS:

1. **Handling High Volume :** managing high-volume data with smart **automation** and **robust database integration**!
2. **Higher Ticket Sales : 3D visuals and enhanced features** will attract visitors and boost purchases!.
3. **Adaptable for Future Growth: DocentDesk scale**s effortlessly, **integrates** new features easily, and handles growing user demands
4. **Data Collection and Insights : DocentDesk** collects user data, **tracks preferences**, and **analyzes** behavior for actionable insights and targeted **improvements**.

RESEARCH AND REFERENCES

1. *Kasinathan, Vinothini, Aida Mustapha, and Chow Khai Bin. "A customizable multilingual chatbot system for customer support." Annals of Emerging Technologies in Computing (AETiC) 5.5 (2021): 51-59.*

2. *SINGH, MAISNAM AKASH. "DEVELOPMENT OF CHATBOT USING AI/ML TECHNOLOGIES." (2024).*

3. *WIJAYA, ALVIAN SHANARDI, and TANTY OKTAVIA. "MACHINE LEARNING APPROACHES FOR HELPDESK TICKETING SYSTEM: A SYSTEMATIC LITERATURE." Journal of Theoretical and Applied Information Technology 102.5 (2024).*

4. *Skuridin, Alexander, and Martin Wynn. "Chatbot Design and Implementation: Towards an Operational Model for Chatbots." Information 15.4 (2024): 226.*

5. *Cassani, Alexio, et al. "Personalized Conversational Travel Assistant powered by Generative AI." arXiv preprint arXiv:2407.11830 (2024).*