

DENTAL CLINIC APPOINTMENT SYSTEM USING A WEB-BASED APPLICATION INTEGRATED WITH WHATSAPP MESSENGER

Siti Nuruljannah Sulaiman and Mohd Nizam Osman
*College of Computing, Informatics and Mathematics,
Universiti Teknologi MARA, Perlis Branch
sitinuruljannah00@gmail.com and mohdnizam@uitm.edu.my*

ABSTRACT - The Dental Clinic Appointment System is a web-based application to manage appointments for patients and admins at a non-government clinic. The purpose of implementing this system is to develop a web-based application enabling patients to request appointments online before they get dental services in the clinic (face to face) and manage the appointment information such as schedule, rating, and notification through the system. The Clinic Appointment system also aims to reduce the time taken by patients to get an appointment with dentist services. Furthermore, The Dental Clinic Appointment system is integrated with WhatsApp Messenger API technology to notify the patient about the appointment status update. The system uses the System Development Life Cycle (SDLC) by implementing the waterfall model as the methodology. Usability testing has been conducted to determine user acceptance by using a set of questionnaires where thirty participants were chosen to test and evaluate the Dental Clinic Appointment system. From the findings and analysis results, it was shown that the system was manageable, usable, and reached the participant's achievement. Hence, the system helps the appointment management between admin and patient to be more effective and smoother to complete the process.

Keywords: Dental appointment, web-based, WhatsApp messenger, notification, reminder.

1. INTRODUCTION

Efficient appointment management is crucial for dental clinics to provide quality care and maintain patient satisfaction. Traditional appointment booking methods often suffer from inefficiencies and communication challenges. To overcome these issues, this extended abstract proposes a solution that combines a web-based application and integration with WhatsApp Messenger to streamline the dental clinic appointment system. This innovative solution simplifies appointment booking for patients and enhances communication channels between patients and dental clinics. By leveraging technology, dental practices can improve efficiency, patient experience, and overall productivity, leading to better oral healthcare outcomes. The proposed integrated system has the potential to revolutionize the way dental clinics manage appointments, ensuring a seamless and satisfactory experience for both patients and dental professionals.

2. METHODOLOGY

Usability Testing is used to acquire data. The usability testing consists of 15 questions, and each question is represented by a question that has the opposite value of what it asks. Admin and patient of Klinik Pergigian Batrisya are the target users for this Usability Testing. After finishing an attempt to use the Dental Clinic Appointment System, respondents were given ten minutes to answer the questionnaire.

3. RESULTS AND DISCUSSION

From the results of a questionnaire conducted consisting of admin and patients aged 18 to 30 and above, the system is very good to implement into the current health system. The scale on the questionnaire gives a full picture of how the user feels. Among the aspects that measure are attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty of the system. The Usability Testing consists of a five-point Likert scale and fifteen items representing the main characteristic. The benchmarking scale was measured, analyzed, and recorded. The results show that attractiveness was above average, perspicuity was below, efficiency and dependability along with stimulation was excellent benchmark and lastly for novelty was above average.

4. NOVELTY OF RESEARCH / PRODUCT

This project will produce a web-based system named Dental Clinic Appointment System using a Web-Based Application Integrated with WhatsApp Messenger. Using this web-based system can help patients to make an appointment easily and faster without the need to queue at the counter. The term "appointment" denotes a period designated in the schedule for special patient visits, and time spent with the dentist is expressed early to allow the dentist to fully concentrate on the patients (Mayor, 2021). Furthermore, it will allow users to choose the date and time they want to get the treatment from the dentist, and the admin will accept the appointment follow up send reminders through WhatsApp. Aside from that, WhatsApp chatbots have made it possible for humans and robots to communicate in natural language (Ramaditiya et al., 2021). Other than that, this system will help users to prevent Covid-19 because did not have to queue at the counter. The Organization of World Health Organization (WHO) for emergency preparation education is centered on consultations and lessons gained with international stakeholders (Anjum et al., 2018).

5. CONCLUSION

In conclusion, the dental clinic appointment system with user-friendly interface and get reminders through WhatsApp Messenger that can encourage users to make an appointment through the system. With this system, users do not queue at the counter to make an appointment and the user will not be able to forget the appointment.

REFERENCES

- Anjum, F., Shoaib, A. S. M., Hossain, A. I., & Khan, M. M. (2018). Online health care. *2018 IEEE 8th Annual Computing and Communication Workshop and Conference, CCWC 2018, 2018-January*, 580–583. <https://doi.org/10.1109/CCWC.2018.8301617>
- Mayor, J. J. M. (2021). EC Health Medical Clinic and Diagnostic Center Appointment System. *2021 IEEE 13th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management, HNICEM 2021*. <https://doi.org/10.1109/HNICEM54116.2021.9731815>
- Ramaditiya, A., Rahmatia, S., Munawar, A., & Samijayani, O. N. (2021, June 29). Implementation chatbot whatsapp using python programming for broadcast and reply message automatically. *Proceeding - 2021 International Symposium on Electronics and Smart Devices: Intelligent Systems for Present and Future Challenges, ISESD 2021*. <https://doi.org/10.1109/ISESD53023.2021.9501523>