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## TOPIC PRESENTATION

**Topic No. 1**

### I. Title

Toothfile: Dental Profiling system with Appointment

### A. Background of the Study

According to Ahuja (2019), technology has become increasingly significant in the medical industry. The profession has greatly improved and seen significant innovation because of the development of information technologies created especially for the medical industry. Jayatissa (2023) mentions that the health information systems (HIS) have become increasingly important in dental practice as they offer benefits such as improved quality of care, increased efficiency, and reduced medical errors. The development of a HIS for primary care dental practice involves several steps, including requirements gathering, system design, implementation, and testing. According to Whear (2020), In 2002, the World Health Organization (WHO) published a report highlighting the need for a model of

care that more readily meets the needs of people with chronic conditions. Patient initiated appointment systems may be able to meet this need at the same time as improving the efficiency of hospital appointments.

According to Statista Research Department (2024), In the Philippines in 2022, there was one dentist for every 57.63 thousand inhabitants. In contrast, the Philippines had one dentist for every 55.29 thousand residents the year before. As of October 31, 2021, there were approximately 4.28 thousand dentists across the Philippines. This reflected a slight decrease from the previous year. Overall, the total number of healthcare professionals in the country amounted to 188.2 thousand as of this date.

The National Survey on Oral Health's preliminary data from 2018, 43% of Filipinos have gum disease and 72% had dental cavities. To improve the well-being of Filipinos, integrated health promotion programs and feeding strategies must prioritize the prevention of dental decay and basic oral hygiene, (nnc.gov.ph, 2020).

However, every organization, whether big or small, experiences challenges when handling patient data, dental clinic information, and appointment scheduling. There must be people who require the dental clinic's services every day. Customers using the traditional way must manually enter their information in the registration form, and it will only be stored in files. Files will be placed in the rack following registration, which could lead to issues like misplaced files, errors in writing, or longer times to access information. (Proc, 2017).

A customized Profiling management system with appointment was created to give the clinic staff access to highly effective management tools, electronic patient records that are organized, and detailed treatment records. Additionally, this system has an appointment feature that lets staff members see appointments that dentist have already set. The clinic's present system will be replaced with this new one, which will certainly improve services and streamline every day operations in San Jose Public Health and

Diagnostic Center. The patient treatment module includes details on dental examinations, records, and a list of completed treatments.

## B. Research Description

- ***Objectives (General and specific)***

This study aims to develop a Dental Clinic Profiling System with Appointment called Tooth File.

Specifically, this study aims to:

1. Design a profiling system of the dental clinic and appointment features such as:
    a. Generates a profiling system for patients.
    b. Integrates an all records appointment.
    c. Manages the information of the dental clinic.
    d. Increase efficiency of the dental clinic
    e. Allows the admin sign in their Email account.
    f. This system aims using Cloud based system
2. Create a system using Visual Basic and MySQL.
3. Test and improve develop system
4. Evaluate performance of a developing system.

- ***Scope and Limitations***

This study aims to create and monitor the profiling system with appointments in dental clinics. The dental clinic can use faster searching and add new clients to appoint. This system also generates reports according to the records clinic and can view previous and current patient records.

The admin can only run this application on how they manage and monitor the profiling system. The system does not accept online reservation or booking, it is only for viewing services and appointments in the clinic. Furthermore, the system does not accept cash payments or other outflows. It only serves as a monitoring tool and appointment for the dentist. The application program can be coded in Visual Basic and MySQL. The application can run 4gb Ram and Windows 8 to 11 version.

- ***Schedule of Activities***

| ACTIVITY | M1 | M2 | M3 | M4 | M5 | M6 | M7 |
|---|---|---|---|---|---|---|---|
| 1. Acquisition and organization of information. | | | | | | | |
| 2. Preparation and writing the content of the Toothfile: Dental Profiling system with appointment | | | | | | | |
| 3. Internal assessment of the Toothfile: Dental Profiling system with appointment | | | | | | | |
| 4. Designing the system | | | | | | | |
| 5. Coding and testing the system | | | | | | | |
| 6. Try-out/Revision of the Toothfile: Dental Profiling system with appointment based on the analysis of feedback. | | | | | | | |
| 7. Finalization of the Toothfile: Dental Profiling system with appointment | | | | | | | |

***Resource Requirement***

Software:

Web-system, Visual Basic and MySQL

Reading resources:

YouTube, Related in the Internet articles

Hardware:

Desktop or laptop with at least 4gb ram

Android Mobile with at 4gb ram

- ***Expected Output***

## IV. LITERATURE CITED

Jayathissa, P., Sareban, M., Niebauer, J., & Hussein, R. (2023). Patient-Generated Health Data Interoperability Through Master Patient Index: The DH-Convener Approach. In Studies in Health Technology and Informatics. IOS Press. https://doi.org/10.3233/shti230413

Melo, E.A., Probst, L.F., Guerra, L.M. et al. Indicators for dental appointment scheduling in primary health care: a national cross-sectional study. BMC Public Health 21, 2234 (2021). https://doi.org/10.1186/s12889-021-12319-x

Whear R, Thompson-Coon J, Rogers M, Abbott RA, Anderson L, Ukoumunne O, Matthews J, Goodwin VA, Briscoe S, Perry M, Stein K. Patient-initiated appointment systems for adults with chronic conditions in secondary care. Cochrane Database Syst Rev. 2020 Apr 9;4(4):CD010763. doi: 10.1002/14651858.CD010763.pub2. PMID: 32271946; PMCID: PMC7144896. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7144896/

*Ratio of population to a dentist Philippines 2019-2022*. (2024). philippines-ratio-of-population-to-a-dentist/. Retrieved January 13, 2024, https://www.statista.com/statistics/1415360/philippines-ratio-of-population-to-a-dentist/

Adibuzzaman M, DeLaurentis P, Hill J, Benneyworth BD. Big data in healthcare - the promises, challenges and opportunities from a research perspective: A case study with a model database. AMIA Annu Symp Proc. 2018 Apr 16;2017:384-392. PMID: 29854102; PMCID: PMC5977694. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5977694/

Amlung J, Huth H, Cullen T, Sequist T. Modernizing health information technology: lessons from healthcare delivery systems. JAMIA Open. 2020 Sep 3;3(3):369-377. doi: 10.1093/jamiaopen/ooaa027. PMID: 33215072; PMCID: PMC7660948.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7660948/

https://www.nnc.gov.ph/regional-offices/mindanao/region-x-northern-mindanao/3516-oral-health-promotion-a-yes-to-a-healthier-nation?fbclid=IwAR0xR-3eXHQepDzoy9OLU3I4UgFhMHjC46KyGMsh5znitAWl4sQT1MozceM

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