

**BORANG PENGESAHAN STATUS TESIS\***

JUDUL: DENTAL CHARTING WEB

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**DENTAL CHARTING WEB**

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**This report is submitted in partial fulfillment of the requirements for the  
Bachelor of Computer Science (Media Interactive)**

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA  
2010**


## DECLARATION

I hereby declare that this project report entitled

### DENTAL CHARTING WEB

is written by me and is my own effort and that no part has been plagiarized  
without citations.

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## **DEDICATION**

I dedicate special thanks to my parents who giving me support and motivation throughout my PSM. This dedication are also to my PSM supervisor, Madam Norazlin Binti Mohammed for the consultation, advices, comments and support just to make sure that I can finish this PSM successfully. I also want to thanks to my all my friends that always are by my side as I working on this project.

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## **ABSTRACT**

This project is named Dental Charting Web and that is Web based for Health which that developed specially for dentist to easier to do the treatment for their patient. Also for nurses easier to insert data and search data from database. Beside that, this system also can help dentistry student to easier and more understand how to do the tooth charting treatment. This system developed based on interactive web for easier and interact user to more comfort and easier to use this system. This system developed with two part which are for system used php programming and for tooth charting treatment used action script and import to Adobe Dreamweaver software for saved to the .php format. This system based on online web for easier dentist to do the treatment.

## ABSTRAK

Projek ini dinamakan sebagai Dental Charting Web dan ia berasaskan kesihatan yang mana utamanya dibangunkan untuk doktor gigi bagi memudahkan membuat rawatan kepada pesakit. Juga kepada pembantu atau jururawat memudahkan untuk memasukkan data dan mencari data dalam database. Di samping itu, sistem ini juga membantu pelatih doktor gigi untuk lebih memahami cara dan rawatan carta gigi. Sistem ini dibangunkan berteraskan web interaktif untuk memudahkan dan menarik pengguna supaya lebih selesa dan lebih mudah menggunakan sistem ini. Sistem ini dibangunkan dengan 2 bahagian yang mana untuk sistem dengan menggunakan aturcara php dan untuk rawatan carta gigi dengan menggunakan action script dan di masukkan ke perisian Adobe Dreamweaver untuk di simpan ke dalam format .php. Sistem ini akan di onlinekan untuk memudahkan doktor gigi membuat rawatan.

## TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	<b>DECLARATION</b>	<b>i</b>
	<b>DEDICATION</b>	<b>ii</b>
	<b>ACKNOWLEDGEMENTS</b>	<b>iii</b>
	<b>ABSTRACT</b>	<b>iv</b>
	<b>ABSTRAK</b>	<b>v</b>
	<b>TABLE OF CONTENTS</b>	<b>ix</b>
	<b>LIST OF TABLES</b>	<b>x</b>
	<b>LIST OF FIGURES</b>	<b>xii</b>
<b>CHAPTER I</b>	<b>INTRODUCTION</b>	
	1.1 Project Background	1
	1.2 Problem Statement(s)	3
	1.3 Objective	4
	1.4 Scope	5
	1.4.1 User Scope	5
	1.4.2 System Scope	5
	1.5 Project Significance	7
	1.6 Conclusion	8



## **CHAPTER II LITERATURE REVIEW AND PROJECT METHODOLOGY**

2.1	Introduction	9
2.2	Domain	10
2.3	Existing System	11
	2.3.1 Article	11
	2.3.2 Case Study 1	11
	2.3.3 Case Study 2	12
	2.3.4 Comparison of Existing System	13
		19
2.4	Project Methodology	22
2.5	Project Requirement	22
	2.5.1 Software Requirement	23
	2.5.2 Hardware Requirement	23
	2.5.3 Other Requirement	24
2.6	Conclusion	

## **CHAPTER III ANALYSIS**

3.1	Current Scenario Analysis	25
3.2	Requirement Analysis	30
	3.2.1 Project Requirement	30
	3.2.1.1 Requirement Gathering	30
	3.2.1.2 Requirement Analysis	31
	3.2.1.3 Technical Analysis	34
	3.2.1.4 Requirement Gathering	35
	3.2.2 Software Requirement	40
	3.2.3 Hardware Requirement	41

	3.2.4 Other Requirement	42
3.3	Project Schedule and Milestone	43 43
3.4	Conclusion	
<b>CHAPTER IV DESIGN</b>		
4.1	Introduction	44
4.2	System Architecture	45
4.3	Preliminary Design	46
	4.3.1 Storyboard Design	47
4.4	User Interface Design	47
	4.4.1 Navigation Design	48
	4.4.1.1 Navigation Flow	49
	And Charts	52
	4.4.2 Input Design	58
	4.4.3 Output Design	62
	4.4.4 Database Design	66
	4.4.5 Template Design	67
4.5	Conclusion	
<b>CHAPTER V IMPLEMENTATION</b>		
5.1	Introduction	68
5.2	Media Creation	69
	5.2.1 Production of Texts	69
	5.2.2 Production of Graphic	71
	5.2.3 Production of Audio	75
	5.2.4 Production of Animation	76 78
5.3	Media Integration	78
5.4	Production Configuration Management	78
	5.4.1 Configuration	

	Environment Setup	80
5.5	Implementation Status	83
5.6	Conclusion	
<b>CHAPTER VI</b>	<b>TESTING AND EVALUATION</b>	
6.1	Introduction	84
6.2	Test Plan	85
	6.2.1 Test User	85
	6.2.2 Test Environment	86
	6.2.3 Test Schedule	87
	6.2.3 Test Strategy	88
6.3	Test Implementation	89
	6.3.1 Test Description	90
	6.3.2 Test Data	90
	6.3.3 Test Result and Analysis	94
	6.3.4 Analysis Testing	96
6.4	Conclusion	100
<b>CHAPTER VII</b>	<b>PROJECT CONCLUSION</b>	
7.1	Observation On Weaknesses and Strengths	101
7.2	Proportions for Improvement	102
7.3	Contribution	102
7.4	Conclusion	103
	<b>REFERENCES</b>	104
	<b>BIBLIOGRAPHY</b>	105
	<b>APPENDICES</b>	

## LIST OF TABLES

<b>TABLE</b>	<b>TITLE</b>	<b>PAGE</b>
2.1	Software Requirement For Report Writing	22
2.2	Software Requirement For System	22
2.3	Software Requirement For Tooth Charting And Interface Design	22
2.4	Hardware Specifications For Developer	23
2.5	Network Requirement Of Dental Charting	23
3.1	Web Functional Requirement Dental Charting	31
3.2	Web The Usage Of Multimedia Elements	32
3.3	Questions Of Questionnaires	39
3.4	Questionnaires Of Dental Charting Web	39
3.5	Software Requirement For Report Writing	40
3.6	Software Requirement For System	40
3.7	Software Requirement For Tooth Charting And Interface Design	41
3.8	Hardware Specification For Developer	41
3.9	Network Requirement Of Dental Charting	42
4.1	Web Navigation Control Dental Charting Web	51
4.2	Description Of Charting	53
4.3	Description Charting Of Kebersihan Mulut, Gingivitis And Dentur	55
4.4	Description Of Registration Patient	57
4.5	Description Of Medical And Dental History	58
5.1	Form Text production in Dental Charting Web	69
5.2	Server configuration	79

<b>5.3</b>	<b>Plug-in Information</b>	<b>79</b>
<b>5.4</b>	<b>Implementation Status Of Module In Dental</b>	<b>81</b>
<b>6.1</b>	<b>Charting Web</b>	<b>85</b>
<b>6.2</b>	<b>User Tester</b>	<b>86</b>
<b>6.3</b>	<b>Hardware Requirement for Testing</b>	<b>86</b>
<b>6.4</b>	<b>Software Requirement for Testing</b>	<b>86</b>
<b>6.5</b>	<b>Dental Charting Web Test Schedule</b>	<b>89</b>
<b>6.6</b>	<b>Table of Expected Result for Each Module</b>	<b>89</b>
<b>6.7</b>	<b>User's level of satisfaction and description</b>	<b>90</b>
<b>6.8</b>	<b>Tooth Design Testing Result</b>	<b>90</b>
<b>6.9</b>	<b>System Testing Result</b>	<b>91</b>
<b>6.10</b>	<b>Navigation Design Testing Result</b>	<b>91</b>
<b>6.11</b>	<b>Audio Testing Result</b>	<b>92</b>
	<b>Test Result and Analysis for Tooth Design</b>	
<b>6.12</b>	<b>Testing</b>	<b>92</b>
<b>6.13</b>	<b>Test Result and Analysis for System Testing</b>	<b>93</b>
<b>6.14</b>	<b>Test Result and Analysis for Navigation</b>	<b>93</b>
	<b>Testing</b>	
	<b>Test Result and Analysis for Audio Testing</b>	

## LIST OF FIGURES

FIGURES	TITLE	PAGE
2.1	Main Menu Page	15
2.2	Tooth Charting	15
2.3	Interface Of Member Login	17
2.4	Interface Of Member Registration	18
2.5	Process Of Methodology	19
3.1	Activity Diagram Of Current System	27
3.2	Task Composition Four Season Dental & Med Spa	28
3.3	Malaysian Dental Association	29
4.1	Diagram Architecture Of The System Dental	45
4.2	Charting Web Entity Relationship	62
4.3	Diagram(ERD) Relationship Between Table SAKITLAMA And PESAKIT	63
4.4	Relationship between table PESAKITNEW and GIGI	64
4.5	Relationship between table PESAKITNEW and CHARTING2	65
4.6	Template for Dental Charting Web	66
5.1	Diagram production of Text	71
5.2	Drawing Part of teeth in Adobe Photoshop CS	72
5.3	4 Diagram Show How to develop Part Of Teeth	72
5.4	Drawing Shape in Adobe Photoshop and Animate in Adobe Flash CS 4 Diagram Show process how to develop	73

	<b>background system</b>	
<b>5.6</b>	<b>Button Blur and true Button in Adobe Flash</b>	<b>73</b>
<b>5.7</b>	<b>CS 4 Diagram Show process how to develop button in this system</b>	<b>74</b>
<b>5.8</b>	<b>Color Picker in Adobe Flash CS 4</b>	<b>74</b>
<b>5.9</b>	<b>Diagram Show process how to develop color picker for tooth charting treatment in this system Diagram the audio production</b>	<b>74</b>
<b>5.10</b>		<b>75</b>
<b>5.11</b>	<b>Diagram production of animation in background system animation</b>	<b>76</b>
<b>5.12</b>	<b>Scene for develop background system</b>	<b>77</b>
<b>6.1</b>	<b>The Graph Of Tooth Design Testing Result</b>	<b>96</b>
<b>6.2</b>	<b>The Graph of Tooth System Testing Results</b>	<b>97</b>
<b>6.3</b>	<b>The Graph of Navigation Testing Result</b>	<b>98</b>
<b>6.4</b>	<b>The Graph of Background Audio Testing Results</b>	<b>99</b>

## **LIST OF ABBREVIATIONS**

ERD	Entity Relationship Diagram
PK	Primary Key
FK	Foreign Key
UTeM	Universiti Teknikal Malaysia Melaka



## CHAPTER 1

### INTRODUCTION

#### 1.1 Project Background

Nowadays, technology build many tools to easier for human manage their daily life. With the advanced development of the information technology, most of the task or works need to be managed systematically and more efficient. Dental care is the maintenance of healthy teeth. The Dental Charting Web is project in general contain background of selected area in web based and for Health. This Dental Charting Web specially for dentists to do the task effectively. There are many problems working in the manual and this Dental Charting Web is needed to help dentists to easier record information during the treatment and more interactively because the dentist just touch at screen at the teeth charting and display explanation about the teeth and treatment. And assistant can easier understand what the dentist do at the patient treatment. Also do the patient registration for easier to manage and all of this can easier to record.

As usually, in the manually environment, firstly a new patient must provide patient full details during the first visit at the dental clinic. The front desk staff will do all the registration work and will ask the patient to wait in a queue. A patient may be assigned to a different dentist for a treatment in each visit except if it is a visit based on appointment. In the second visit, patients only need to provide a patient registration number. During treatment, patient's oral condition will be dictated in a charting card by

a dentist's assistant. It is very important for the assistant to understand and know what to write or draw in the charting card in order to ensure patients tooth details are recorded correctly for future treatment plan. If a patient changes clinic the paper chart has to be sought, located, copied or transmitted. If a chart is required for referral it has to be located and copied. None of this is necessary if the record is on a central server.

Then, the implementation of the proposed Dental Charting Web can at least reduce the problems occurred in the current manually. It focuses on interactively because do not use manually, efficiency, easily managed, centralized method to keep all the teeth charting and patients information of the treatment taken and display it on the Web. The word simply means that the system will be developed on the web based. Thus, dentist and assistant can easily access to this and can surely give them flexibility on accessing all the past and current information in digital environment. It is also possible for the patients to know about the treatment history. The proposed interactive web also manages to reduce the dentist and assistant time and effort to insert all the patients information. This can ensure that the dentist take less time to remind all treatment and symbol of the charting, also the assistant take less time to insert all the patients information.

## 1.2 Problem Statement

Based on the observations conducted in the current manually, there are few problems and weaknesses that were identified. That is :

- **Lack of function flexibility**

That is in the current manually patient treatment card, the nurse has to insert all the patients information one by one. Furthermore, the dentist must mark the dental charting and must remember the symbol of the charting. The probability of writing error such as mismatch treatments symbol and this can cause inaccuracies of the information. It will be much easier if use this web because just click then display what the dentists want.

- **Information can easily be lost**

By implementing the manually patient treatment card, information stored in the card and the risk of losing it is higher than expected. It might be that the nurses who responsible of keeping it might lose it and cannot get it back. Thus, the whole information about the patient will be lost.

### 1.3 Objective

List of objectives to be achieved from the Dental Charting Web are listed as below:

- **To develop web based for dental charting**

By implementing this, it will surely enhance the manually during treatment, dentist just click at the charting and display all. So it is much easier to remember and more effectively. Also patient treatment card can be systematic and effective that allows the nurse to insert all the patient's information only once. Other that, the outcome of lost of information due to missing treatment card can be reduced as all the information is systematically saved into the database and the users can retrieve all the desired data anytime needed.

- **To apply web based interactive user interaction touch screen**

This system more interactively because not use in manually. The Dental Charting Web have the efficient service that means, this web creating a friendly interface and web interface to excite the user on using this. It can give a comfortable to access the information and it provides a simple and interacting user interface to interact the user.

## **1.4 Scope**

Scope describes the limitations or boundaries of the Dental Charting Web for the dental clinic. The two major scopes of the proposed system are user scope and system scope.

### **1.4.1 User Scope**

The system is developed for three levels of target which consist of dentist and nurse and dentistry student. Specially develop for dentist to easier mark the patient tooth charting. Also dentist will be able to view the history information of the patient for the next treatment. Firstly, when patient registered at the counter, nurse need to search the patient's Identification Number and the patient's name will be update at the patient's database. So, the dentist will be view the patients name at that day. For the dentistry student can help them to more understand to visualized about tooth charting. Meanwhile, the proposed system that will be developed only focus on outpatient in the range adult and children.

### **1.4.2 System Scope**

One of the system scopes is that the nurse must register patient before see the dentist. Then, nurse need to enter the patient Identification Number to register. If patient not register before this in this system then nurse must register patient information. The system scope is divided into seven categories regarding to the modules of the system.

**i) Dentist Charting**

- Dentist can easily fill in the treatment patient by clicking and save to database. The tooth charting picture easily to dentist show to their patient which part the broken tooth .

**ii) Previous Treatment**

- Dentist can easily to see the previous treatment because the tooth charting is display and coloring refer the part of broken tooth.

**iii) Login**

- Nurse register patient by entering the identification number. After the login is successfully, patient can do the treatment with dentist.

**iv) Add Patient / Treatment record**

- Nurse can add new patient, when the patient register at the first time treatment and the record of the patient is not exist..
- Nurse manage all the patient's information and sent the patient's information to the dentist that responsible to treat the patient.
- Dentist can add treatment record of the patient by using the dental charting.

**v) Update Patient Information**

- Nurse update the patient information when the patient meets the dentist for the next time. The information about the treatment will be updated after the patient treat by the dentist.

**vi) Search Patient's Information**

- Nurse / dentist can search the patient's information by insert the patient's identification number and the patient's information will be appearing.

## **vii) Generate Report**

- The system will generate statistics about the outpatient information which are by name and type of treatment.

## **1.5 Project Significance**

Despite having the current manually, the dental charting web that will be developed will provide a convenient alternative and flexibility for the dentists on accessing all the tooth charting and symbol treatment. Also dentist and nurse can view history patient treatment.

By using the proposed web, the usage of the paper to produce the manual paper-based patient treatment card can at least be reduced. In addition, the main purpose of the proposed web is to reduce the dentist workload by simplifying all the treatment information to replace the dental charting that using before this. At the same time it can be reduced and be able to dentist show the teeth image to the patient. Other than it is time and effort effective, it also offers some new way of producing usual patient's treatment card and all the current problems can be solved with the developed of the proposed web.

## **1.6 Conclusion**

Conclusion on this chapter is Dental Charting Web is that runs on any web browser. The project mainly provides an alternative for the users specially for dentist to replace the manual paper-based patient treatment charting card to an easy-access online application. The implementation of the proposed project will reduce the time and effort of the users on using the manual patient treatment card and also easier for nurse. This Dental Charting Web basically about tooth charting. Dentist record the patient treatment and can previous the last patient treatment. The dentist or nurse manage to view all the patients' information. To apply specially functions and features for offers flexibility to all the users on accessing the treatment information. All the limitations found on the current patient treatment charting card that is at the counter manage to find its solutions by implementing the Dental Charting Web.

Chapter II will discuss on the Literature Review and the Project Methodology.