

SMART DENTASSIST

Interactive System for Dental Support and Patient Management



PATIENT MANAGEMENT SYSTEM





SMART DENTASSIST

Interactive System for Dental Support and Patient Management



TELECONFERENCING SYSTEM



DIAGNOSIS, TREATMENT, SIMULATION



PATIENT MANAGEMENT SYSTEM





SMART DENTASSIST

Interactive System for Dental Support and Patient Management



TELECONFERENCING SYSTEM



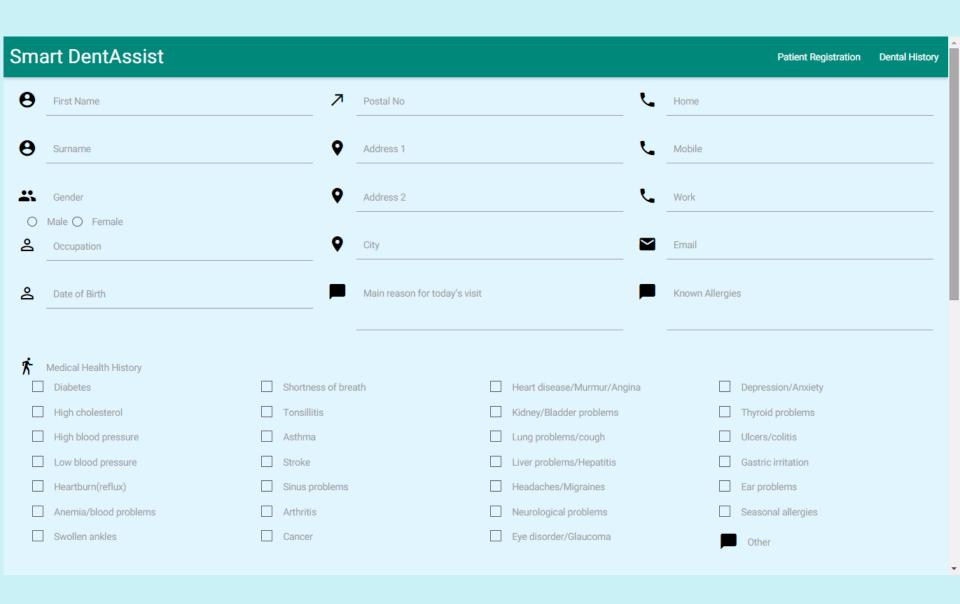
DIAGNOSIS, TREATMENT, SIMULATION



Patient Registration



Interactive System for Dental Support and Patient Management



©	Dental Health History							
	Do you have difficulty in chew	ing your food?		Are your teeth sensitive?				
	Do you chew on only one side	of your mouth?		Does it hurt when you chew or	open wide to take a bite?			
	Do you avoid brushing any par	rt of your mouth because of pain?		Have you ever noticed slow-hea	aling sores in or about your mo	uth?		
	Do your gums bleed when you	ı floss?		Have you had a blow to the jaw	/ (trauma)?			
	Do your gums feel swollen or	tender?		Do you have pain in the face, cl	heeks, jaws, joints, throat, or ter	mples?		
Are yo	u a habitual Gum chewer?	Pipe smoker?	Betel chewer?	Cigarette smoker?				
Do you	I feel twinges of pain when your Hot foods or liquids?	teeth come in contact with Sours?	Cold foods or liquids?	Sweets?				
	Other							
©	Past Treatments							
	Removal	Fillings	Retainers	Cleaning	Bridges	Implar	ts	
	Wound treatment	Sealants	Braces	Polishing	Dentures			
					C RESET	REGISTER	× CAI	NCEL

© 2015 Smart DentAssist - Final Year Project

Smart DentAssist

Patient Registration

Dental History

Congratulations!

Patient records has been saved successfully.



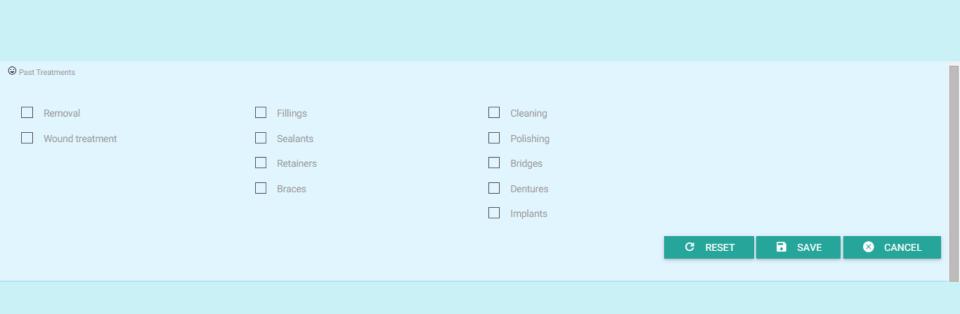
© 2015 Smart DentAssist - Final Year Project



Dental Health History



Interactive System for Dental Support and Patient Management





Patient Profile

Hasith Malinga: M: 26 Years old: 1 /isit for: Tooth removal Allergies:		
	EDIT PERSONAL INF	ORMATION
Health History : Diabetics : Stroke	EDIT HEALT	'H HISTORY
Dental History : Gums feel swollen or tender		
	EDIT DENTA	AL HISTORY
Past Treatments : Wound treatment		
	EDIT PAST TR	EATMENTS
Dental Examination		
Comment		
Reason		
FILE IN		
Treatment Needs		
Urgent Treatment Restorative Care Preventive Care Other		
Drug Needs		
Drugs		

SAVE 🗔

Medical Health History Diabetes Shortness of breath Heart disease / Murmur / Depression / Anxiety Angina High cholesterol Tonsillitis Thyroid problems Kidney / Bladder High blood pressure Asthma Ulcers / colitis problems Low blood pressure Lung problems / cough Gastric irritation ✓ Stroke Heartburn(reflux) Sinus problems Liver problems / Ear problems Hepatitis Anemia / blood problems Arthritis Seasonal allergies Headaches / Migraines Swollen ankles Cancer Other Neurological problems Eye disorder / Glaucoma

SAVE

Health History : Diabetics : Stroke	
Dental Health History	
Do you have difficulty in chewing your food?	Are your teeth sensitive?
Do you chew on only one side of your mouth?	Does it hurt when you chew or open wide to take a bite?
Do you avoid brushing any part of your mouth because of pain?	Have you ever noticed slow-healing sores in or about your mouth?
Do your gums bleed when you floss?	Have you had a blow to the jaw (trauma)?
✓ Do your gums feel swollen or tender?	Do you have pain in the face, cheeks, jaws, joints, throat, or temples?
Are you a habitual	
✓ Gum chewer? ☐ Pipe smoker? ☐ Betel chewer?	Cigarette smoker?
Do you feel twinges of pain when your teeth come in contact with	
☐ Hot foods or ☐ Sours? ✓ Cold foods or liquids?	Sweets?
Other	
	SAVE



Patient Management System

- ✓ The system registers new patients
- ✓ The system generates unique barcode for each patient.
- ✓ Images captured from intra oral cameras, medical history and all other relevant data are stored in patient folder.
- ✓ Dentist can view the patient being treated as well as the list of patients who are waiting in queue

When the barcode is scanned, the patient's details will be displayed.



Patient Management System

Technologies Used

- ✓ Php
- ✓ JavaScript, jQuery
- ✓ MySQL



PATIENT MANAGEMENT SYSTEM DENTAL INFORMATION KNOWLEDGE BASE



SMART DENTASSIST

Interactive System for Dental Support and Patient Management



TELECONFERENCING SYSTEM



DIAGNOSIS, TREATMENT, SIMULATION



Disease Images & Notes

Smart DentAssist



✓ Comment

Description

C ADD ENTRY

Please Select Disease

Dental Caries

Periodental Disease

Gingivities

Adult Periodontitis

Early-Onset Periodontitis



Treatment

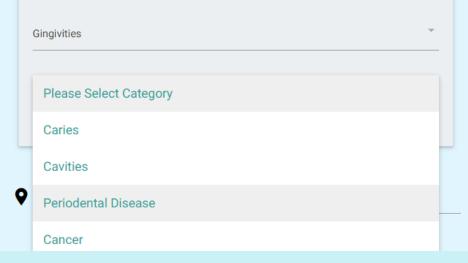
Smart DentAssist



Comment

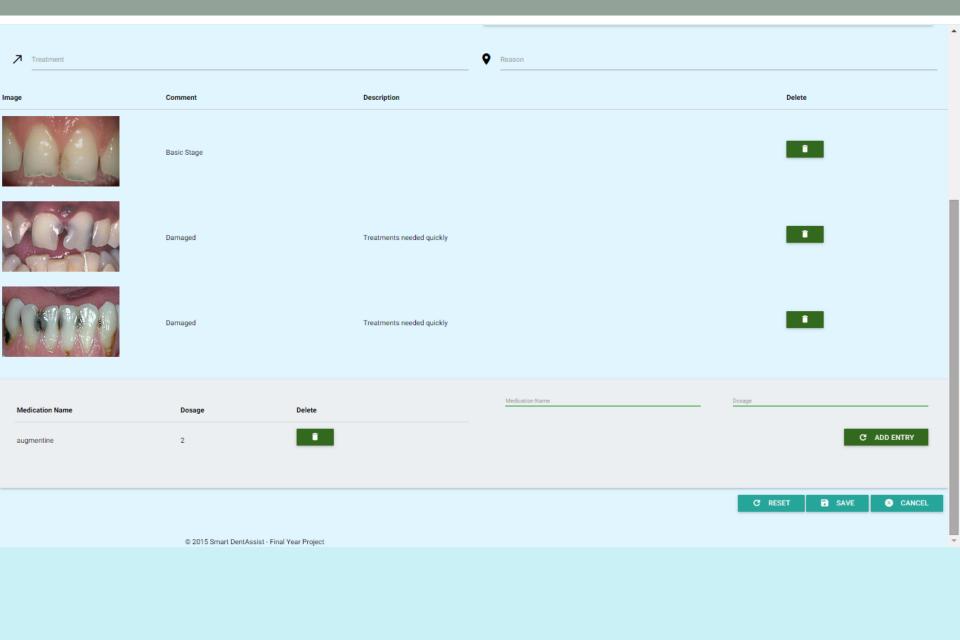
Description

C ADD ENTRY





Diseases & Treatments





Previously Treated Cases

Smart DentAssist Patient Registration Dental History

Mahesh Rathnayaka : M : 25 Years old : Queue 1				
Past Treatments	Drugs Prescribed			
Teeth Removal	1. Anti-inflammatory drugs			
	2. Anesthetics			
	3. Chloraseptic			
	4. Xylocaine			
Clean Cavity	1. Chloraseptic			
	2. Xylocaine			

@ 2015 Smart DentAssist - Final Year Project



Dental Information Knowledge Base

- ✓ The system stores images captured from intra oral camera along with their comments.
- ✓ The dentist can edit intraoral images
- ✓ The diseases will be categorized and images will be saved accordingly
- ✓ Dentist can refer the knowledge base to check previously treated cases, treatments given, drugs used, and comments.

The system maintains independent timers for each patient to send reminders

This knowledge base provides the dentist with treatment suggestions

The system enables the dentist to create prescriptions

The system allows the sharing of the content in knowledge base with other dentists



Dental Information Knowledge Base

Technologies Used

- ✓ Php
- ✓ JavaScript, jQuery
- ✓ MySQL



PATIENT MANAGEMENT SYSTEM DENTAL INFORMATION KNOWLEDGE BASE



SMART DENTASSIST

Interactive System for Dental Support and Patient Management



TELECONFERENCING SYSTEM



DIAGNOSIS, TREATMENT, SIMULATION



Live Stream - Intraoral Camera



Online Consultants

- O Hasith Malinga
- Mahesh Rathnayake
- O Eshan Kumara
- O Kavindi

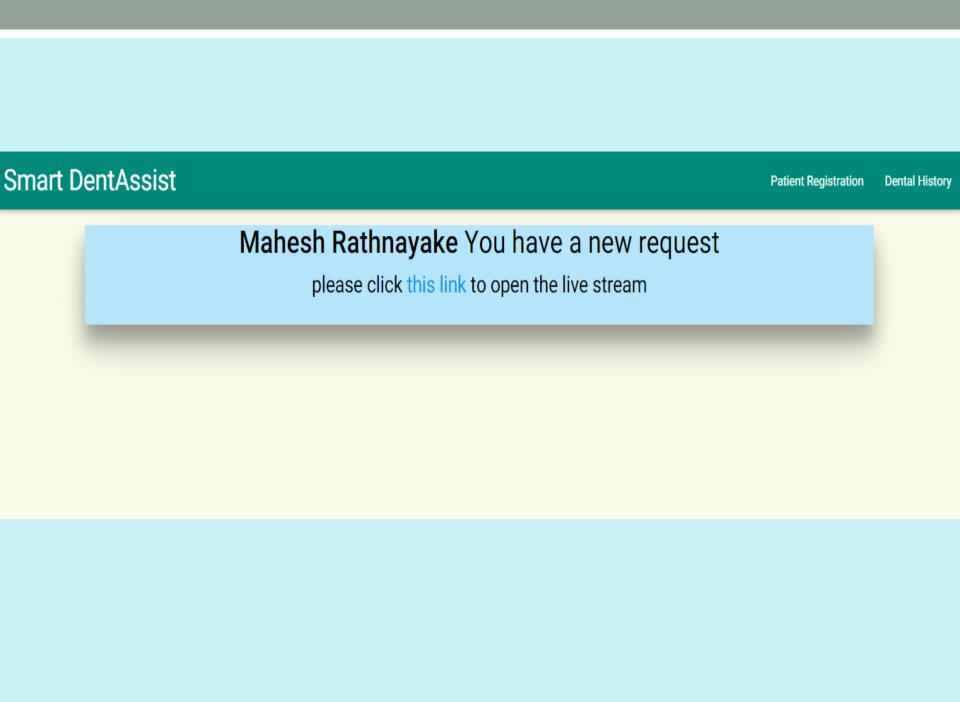
Send request to a consultant.

REQUEST HELP

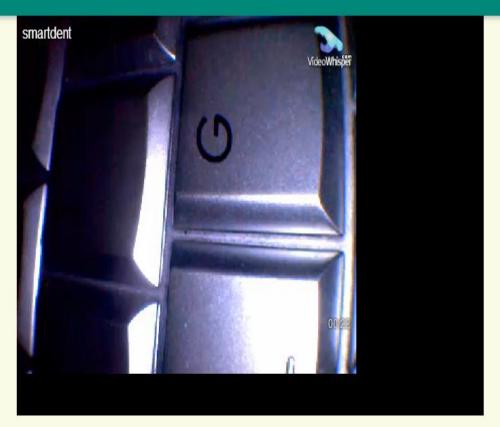


undefined

undefined



Smart DentAssist Patient Registration Dental History





Teleconferencing System

✓ The dentist can teleconference with other dentists to live stream video

The system will also transmit images or video from the intra oral camera to a tablet



Telconferencing System

Technologies Used

- ✓ Php
- ✓ JavaScript, jQuery
- ✓ MySQL
- ✓ RTMP Protocol



PATIENT MANAGEMENT SYSTEM





SMART DENTASSIST

Interactive System for Dental Support and Patient Management



TELECONFERENCING SYSTEM

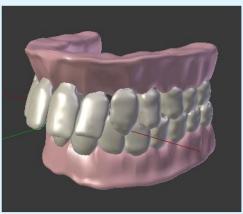


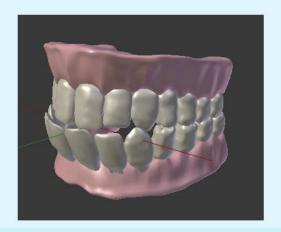
DIAGNOSIS, TREATMENT, SIMULATION



Diagnosis







Class II Division 1

occurs when the permanent first molars are in Class II and the permanent maxillary central incisors are either normal or slightly protruded out toward the lips. MILD

MODERATE

SEVERE

Class II Division 2

occurs when the permanent first molars are in Class II and the permanent maxillary central incisors are retruded (pulled backward toward the oral cavity) and tilting inwards towards the tongue. MILD

MODERATE

SEVERE

Class III

In this classification, the maxillary first molar is more to the back of the mandibular first molar than normal; the buccal groove of the mandibular first molar is mesial to the mesiobuccal cusp of the maxillary first molar. The facial profile is termed prognathic.

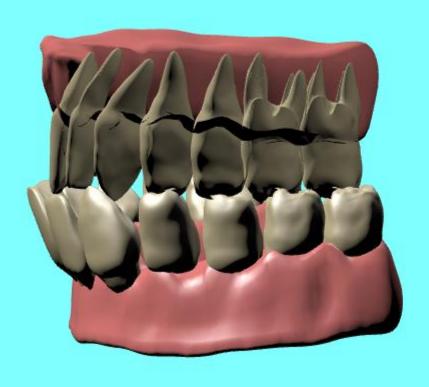
MILE

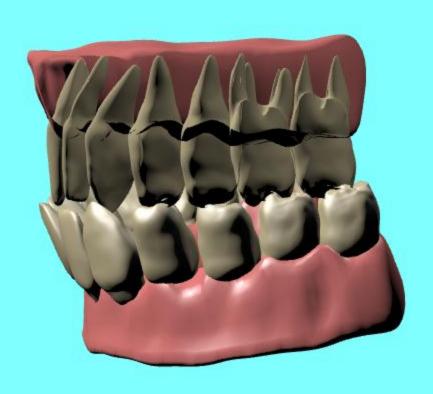
MODERATE

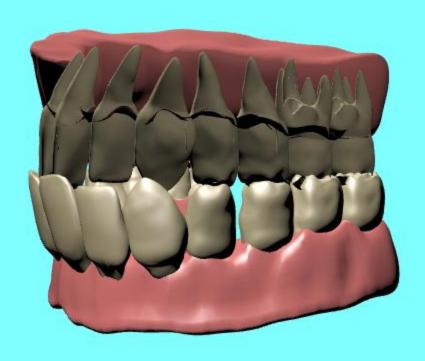
SEVERE

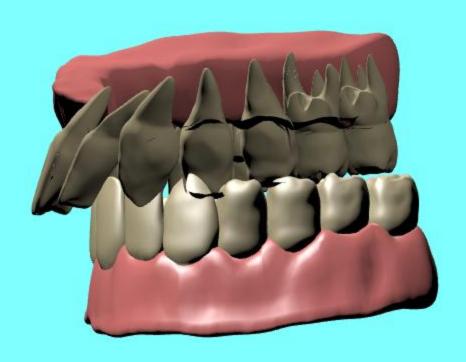


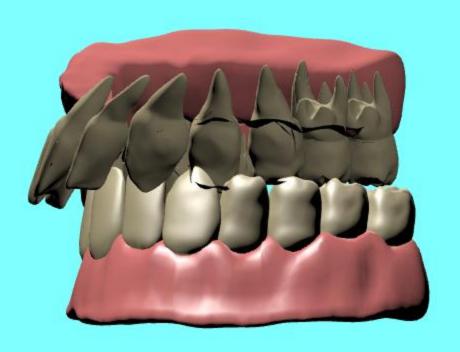
Simulation

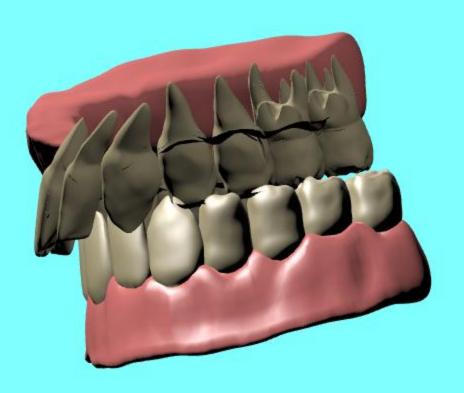






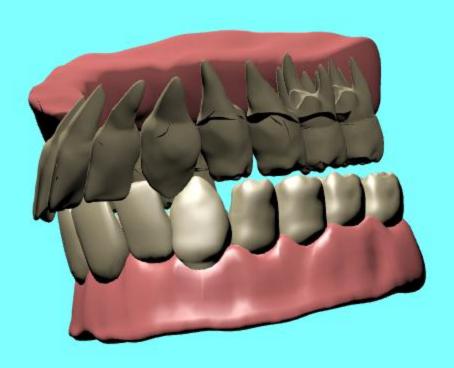














Diagnosing, treating and simulating outcome

- ✓ The system models patients' jaw structures
- ✓ The system simulates the outcome of treatments using 3D modelling.

Any modification to a tooth is displayed on the 3D model

The system will convert 2D images to 3D images



Diagnosing, treating and simulating outcome

Technologies Used

- ✓ Php
- ✓ JavaScript, jQuery
- ✓ Blender
- ✓ X3dom
- ✓ WebGL



Thank You!