

National surgery of dentistry essay sample

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The user will be the receptionist of the NSDAP who needs a way of making the system more efficient. The NSDAP was set up a few years ago and is a dental surgery with few patients. The user would like a way of arranging the patient's details easily as the number of patients is increasing rapidly.

Currently the secretary is asking the new patients to fill in a hand written form, of which she copies onto another paper form. This form then is moved into a back storeroom, which is roughly kept in alphabetical order. When a patient wishes to book an appointment the receptionist gets the calendar, which has patient's appointments and views, which dates/times, are free.

Once the patient has chosen a time, the secretary writes in the patients name for reference. On the day of the appointment, the secretary copies the calendar for the dentist or his assisting nurse, and then she finds the patient's information from the name off the calendar. These are kept in a box in time order, which the assisting nurse takes them in order and reads out the patient's names calling them to be seen by the Dentist. The dentist writes on the personal notes of the patient's record and writes a return date in the top left corner. The patient takes the record back to the secretary, who then asks the patient which time he/she would like to book on the allocated day, after which the date is scribbled out. After allocating the desk the secretary puts the file in another box and, at the end of the day, the secretary returns the patients card to the storeroom until the next appointment date.

Statement of the problem

The Dental Surgery is currently taking an average of three new patients a day, as the small storeroom is currently filled wall to wall of records finding a place to literally put the records is getting a challenge. As there are so many files to accommodate and manipulate on a daily basis and are getting removed by multiple people, the files are getting put back in the incorrect places, sometimes the patient's file can be misplaced or lost, which is not a help with the surgery's efficiency times. As most of these files are being handled recurrently, the older records are starting to deteriorate severely. Sometimes if a substitute secretary was put in place, some records have illegible writing, which makes it harder to isolate an individual file. If a patient wishes to edit a telephone number, or an address the receptionist scribbles out the previous information and fits it in above the scribble, if there is not enough room the secretary gets a white label, covers the incorrect/outdated part and writing on that. After each session, the dentist writes in the top left corner what date the patient should return, as the patient visits more times the corner looks very scruffy.

Another problem the secretary faces is when appointment renewals have to be made. The receptionist has to go through the 150+ records and check the last appointment date if no appointment has been made in the last 4 months and to send them a letter informing the patient to rebook or face extradition from the surgery list.

Manual Solution Considered

The storage issue could be sorted out with various filing cabinets each labelled with the letter of the surname of the patients, which makes it a lot easier to find the files required for the day.

If the paper files were replaced with a plastic or even laminated the degradation issue would decrease greatly, but changing information would become a lot harder. The secretary should be forced to insert all patient information in block capitals to prevent confusion. The dentist could write the date on a post-it note or just simply tell the patient his/her next appointment date. After each appointment, a label can be stuck on each record on a 4-month basis to tell the secretary to send a letter to inform the patient he/she has an outstanding appointment renewal.

Two alternate software solutions considered

There are two computerised options within Microsoft both are within the Microsoft Office 2007 Suite.

Microsoft Excel

Microsoft Excel 2007 is a great new application with almost limitless data storage it has 1'048'576 Rows, 16'384 Columns, 17'179'869'184 Cells each can contain 32'767 Characters, which means a total number of 562'932'773'552'128 Characters per sheet! Data Validation can be inserted into cells to ensure correct details are inserted. Mail Merge is also available but can be quite hard to control and set up. Also with excel formulae can be inserted to control and manipulate the data inserted. Links and macros to other workbooks and sheets increase versatility of this program.

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After data has been inserted into the spreadsheet function, mathematical functions can be created and with the results graphs or charts to display average data easily.

Microsoft Access

The Second solution available in the Microsoft office 2007 suite is Microsoft Access, which hold many advantages. The system is primarily a database function, which links together using tables. Once data is inserted to the tables, they can be checked with data Validation and edited easily input forms can be created to enable to user to insert data easier. Table Relationships can be created to link data value together, once linked this information can be access from any of the tables. Queries enable to user to search for information or a data value with greater ease, however the initial file sizes can be large, when more information and data is inserted it makes it easier to use the information. After data has been isolated, it can be sent to other applications in the form of a mail merge in which, the data can separated into fields and be inserted, in the form of a letter, to fill in patient information.

Proposed solution

We will use Microsoft Access to control and input data. The initial system will be based on a calendar function, which the secretary will use. The secretary then inputs the patient's name, and from relationships to another table, be able to reference the patients Name, DOB, address next of kin and any other relevant information needed. The receptionist and the Dentist can either have synchronised computers or have computers on a network. When the <https://assignbuster.com/national-surgery-of-dentistry-essay-sample/>

receptionist has to send reminder letters multiple criteria can be used to search and manipulate data. After she has found the results of the search she then can connect to Microsoft Word and create a mail merge where a template can be used to send multiple letters whilst the links are put in the receptionist can also create a report on his/her computer enabling them to know crucial information as whether they have paid or not, or made their yearly appointment. Access it good at many things, which makes it the ideal choice for database software as multiple criteria, enables easy manipulation of data and it makes easy work of large amounts of data.

Three Quantitative objectives

1. The user needs to search and print patient information for a reminder letter to be sent out to remind patients who have not booked for 5 to 6 months prior. The user needs the patients Telephone Number, ID, reminder date, Time, Title, Past Treatment Description, Forename, Surname, Address (Town and Postcode) and to print out a report to enable the user to ' tick off the people who have re-booked.
2. The user needs to search for specific patient's details to be able to add, edit or delete the information for the one record and to be able to search the patient's details easily.
3. The user wishes to do a search for all children suitable and eligible for braces and mail merge a letter informing the child that they can book for appointment with the relevant doctor to fit braces (Dr Bragg).

Analyse (9 marks)

Appropriate Software identified

The software being used is part of the Microsoft Office suite (Microsoft Access and Microsoft Word and Microsoft Excel) there are many other programs that could substitute for the MS Suite, but we use MS Suite because it is easy-to-use and is the ' typical choice of program to use. Access will be used to store and control the database, word will be used to link to access for a Mail Merge, Excel will be used for accountancy as it uses the spreadsheet format. In addition, an Internet Connection will be required to enable the secretary to use DENlist, which is an Internet-based network, which shares other Dentist's patient's files (in general, this does not give detailed information about the patients). Because an Internet Connection is used, Norton Antivirus would be used to keep the computer free from viruses and other potential Malicious Files.

Appropriate Hardware identified

This is the computer and printer I believe is suitable for use now and in the future of the Dental Practice and the running of this efficient system:

Manufacturer: Packard Bell BV

Processor: Intel(R) Core(TM) 2 CPU 6300 @ 1. 86GHz (2 CPUs)

Memory: 4066MB RAM

Hard Drive: 200 GB Total

Video Card: NVIDIA GeForce 7300 SE

Monitor: SyncMaster 911N/920N/920Nx, SyncMaster Magic CX918N

Sound Card: Realtek HD Audio output

Speakers/Headphones: Realtek HD audio

Keyboard: Terminal Server Keyboard Driver

Mouse: Terminal Server Mouse Driver

Operating System:

Windows XP Home Edition (5. 1, Build 2600) Service Pack 2

(2600. xpsp_sp2_qfe. 070227-2300)

Print technology

Printing method 4-colour inkjet printer with Dual Black Ink System, Epson

Micro Piezo(tm) print head

Nozzle configuration 360 nozzles Black / 59 x 3 nozzles Colour (cyan, magenta, yellow)

Droplet size 3 PI (minimum) with Variable-sized Droplet Technology

Ink system Epson DURABrite(tm) Ultra Ink

Print resolution

Up to 5760 x 1440 optimised dpi on suitable media using RPM (Resolution Performance)

Management)

Print speed

Black text A4 Up to 37 ppm (Fastest), 25 ppm (Business quality)*

Colour text A4 Up to 20 ppm (Fastest), 11 ppm (Business quality)*

Photo 10×15 cm Approx. 49 secs*

I recommend this computer as all of the specifications noted are relevant as the surgery has a large amount of files to manage manage and handle which would depend on the processor, Hard Drive and RAM. The RAM and Processor are suitable for running Microsoft office suite. The processor is apt for handling many applications at once; The Hard Drive is sufficient to store many files (patient's records, etc.) ; The RAM is necessary as it aids to quicker use of the computer. I have chosen to use Windows XP OS as it runs efficiently without any known major bugs or errors but, if necessary, the computer could be updated. The monitor, which comes with the computer, is a Widescreen and will be able to display all relevant program information. The printer is suitable as it is quick easy and efficient which is paramount for outputting data for the patients.

Data collection (Source data and identifiers, with details of input method, validation and key identifiers)

Patient's data

The patients Data will be retrieved from the hard-copy format of the patients records. The Secretary then manually adds them (or scans them in). Data
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can be edited by word of mouth where the patient is informing the secretary that there is a change of address she could tell the secretary the new address. When the receptionist inputs the data, she visually checks the record for any spelling errors (such as a misspelt road name) the she then asks the patient directly if this is the correct address.

Staff Data

The staff's data can be inputted from their information sheet also, it can be imported from DENlist, which has all of the local dentist's information.

Nurse's information can be in hard copy format or inputted from the referring University (where the nurse dentist or technician studied). This is checked by referencing with the member of staff and validating that the inputted data entered about the person is completely correct else legal implications may arise.

Data Flow Diagrams showing data sources, processes and destinations

Add/Edit Data

The User wants to add, edit and manage data to be able to put into the database file. Access will be opened and the database file will be opened.

The input form will be opened and the data will be entered as written on the form. The data is entered via two ways typing and mouse drop down menu select. The data is then checked on the screen via the form and re-checked with the patient and any corrections made. Then it is saved (to be later backed up on a memory pen drive). If the data is to be edited the secretary writes down (on a piece of paper) the data that has to be edited, such as a

telephone number. The secretary then runs a search query of the patients name and to edit the field allocated to change it. The edited data is then to be checked on paper and with the patient.

Mail Merge

The file will be manipulated before it gets send into a mail merge. First a Query search will be formed where the specifications of this query are that the patient has the last appointment more than 6 months ago, The query will be run, checked with the query fields being Patient Name and forename date of last appointment (including a sub-form which calculates the exact amount of days the patient has not had an appointment) the query will be run and search results found these are then inserted in to a report to which the receptionist can ' tick off then the secretary will save both the report and the query. The report will be printed out and the required fields checked for any errors then Word will be opened. A letter template will be made for the reminder letter which contains spaces for the data of the patients name(s) the date of last appointment (including sub-form) and contact details and then link the previous query to the word document, input the fields and check the valid fields have been inputted. The links are inserted and checked (using print preview or any other means) and then the letters are printed off to be sent.

Multiple Table Search Criteria

The secretary needs to do a cross table search to find people who have had a filling and search dates of 3-5 years ago who have had a gold filling the database file will be opened and a multiple search criteria will be started and <https://assignbuster.com/national-surgery-of-dentistry-essay-sample/>

a report is made with the relevant fields on. The report is saved and printed and the Mail Merge is created and the query results linked with word (having the template already completed) the relevant information.