DUBAI ENGLISH SCHOOL

In today's world, the policy of bigger is better certainly does apply to all companies and institutions. However any company or institution would always have a large amount of data, which has to be stored and categorized properly. Failure to categorise data would eventually lead to a lot of confusion and problems and this would then lead to the inefficient running of the company.

This is precisely the problem facing Dubai English School. Dubai English School is now a highly reputed school and was first started in 1978. Since then the number of students and teachers have grown from a few handful to thousands. With the coming of every academic year, hundreds of students apply for a chance to be admitted. As a large school, Dubai English School has a responsibility of handling vast amounts of data. This would include records of all its thousands of students to the date of birth of a teacher. Every single record has to be stored. However data handling has come a long way. Some firms prefer doing it the old fashioned way with files and filing cabinets and some companies prefer using registers and just writing everything down and a minority of the companies today actually use a computer to store programs. Dubai English School currently store all their records in files and these files are then locked in a filing cabinet. Dubai English School being a reputed school in the region receives no forms of stiff competition from other schools. This means that a vast majority of the children in Dubai come to this school, which means more records. However it is a common known fact that however easy it is to store files in a cabinet it is not very easy to actually refer to them. This is precisely the problem facing Dubai English School.

Dubai English School although being at the forefront of education is not very technologically advanced. The school has only 3 computers and that too for administrative use. All of these computers run on Intel Pentium I 133MHz processors, which are obviously insufficient for power use and for extensive data storage. One computer only is being used by the headmaster's personal secretary and this computer is being used to produce all the documents and leaflets of the school. This would include notices to parents to the school book list. The other two computers are made use of by the administrative department of the school and these computers are used to handle the schools financial records and also to produce school documents. None of these computers have sufficient hard disk space for extensive storage of data and they do not have the sufficient processor speed to process and handle this data like for example to run queries or to merge databases.

After completing this brief overview of the school I decided to complete a thorough analysis of the current system of the school and in doing so I hope to locate the problems, which I hope to rectify.

Current Working Of The System and the Problems Faced

Dubai English School, although having a lot of data to be dealt with, the working of the school can be categorized into two simple sections. These sections are:

- ❑ Administration
- ❑ Academic

The administration sector as the name suggests handles all the administration. This would include the creating and distributing of documents, the admission of new students

and teachers as well and also the management of the school staff details. The administration sector and the management of the school set a particular date for the admission of new students. On this date as parents come for admission, the administration hands each parent an admission form where the details of the student will be written down. The parent then hands the form back to the administration and leaves. After the day of admission the office of the school gets down to work. Each admission form has to be sorted according to the sex and date of birth of the student. Therefore at the end of sorting the school would have two main piles of forms, one of boys and the other girls. With this pile the forms would be sorted out according to the date of birth of each child, which would decide the class, the student would be in. All this sorting has to be done by hand and there are hundreds of forms so this is obviously time consuming and inefficient. After this process of sorting and separating the forms are then handed to the headmaster for selection. Again the headmaster along with the management of the school has to go through all the forms to make a decision. This again is a waste of time leading to inefficiency. Also during this process of sorting or selection some forms can also be misplaced which is rather unfortunate. After the selection process is over and the forms of the students who are to be admitted are set aside and are then handed over to the administration sector again. The remaining forms are discarded. The selected forms have to be sorted again into girls and boys and according to the date of birth. This again is done manually and is very time consuming. After sorting the selected applicants, the administration prepares letters of acceptance for each of the students and are then mailed. Telephone calls are also made to the respective parents as a form of confirmation. However this is the first part of selection. For the final selection, the students are asked to come to the school for an interview and based on the selected applicants, the parents are asked to fill in a form again which would contain all the details of the admitted student. This form is then handed to the headmaster who has the job of assigning a class for each of the selected applicants. After a class has been assigned, the forms are handed back to the administration and these forms are put into a file based on the class and sex. These files are then put into a filing cabinet. That completes the administration of a new student. These forms of the new students are put into a file, which would contain the records of current students as well. From this we can see how a simple process of admitting a new student is done so laboriously largely due to the fact that everything has to be done by hand. However the problems do not end here. If for example a particular student changes residence, then obviously he would have a new telephone number and this change has to be made in the form, which has been filed. However erasing the current number in the form and writing it again is a messy job therefore the administration has to fill out a new form with similar details and make the change. This again is time consuming. Also there is always the possibility of making an error while writing out the form again and this could again cause further confusion. Finally when the student arrives at school he is also asked to hand in his medical card as the school clinic also handles medical details. A special file is kept aside for this to handle all the students medical details, which would include the injections they have received, and the diseases they have been affected with.

The admistration of the school also handles the employment of a new teacher when a vacancy is available. If a there is a vacancy for a teacher of a particular subject the school will accept all applications for the teacher. The interested people come to the

school where they are handed an application form, which they have to fill out. After that the form is handed over to the headmaster for a rigorous selection process where finally in the end a teacher is selected. A letter is mailed to the selected applicant and the form of the applicant is filed into the existing teacher file with all the other records of the teachers in the school.

The final aspect of the school which the administration section handles is the handling of the school staff records. All the records of the school staff from the librarian to the canteen worker is stored in a staff file, which is also stored in a cabinet. These records are updated not on a regular basis as not many changes take place. Only if there is the employment of a new staff worker or there is a change in a data item in a record will the file be updated.

This ends my analysis of the working of the administration of Dubai English School. The next sector, which I have to inspect, is the academic sector, which is where the majority of the data comes from.

The main process, which takes place in the academic sector, is the handling of student records. At the start of each scholastic year for Dubai English, all the student records have to be updated because there is a change in the class of the student. Therefore new student forms have to be written out by the administration and this is very time consuming, as thousands of forms have to be written out again just because the class of the student has to be changed. These new forms are then filed. There are separate files for girls and boys and a file for juniors and seniors. In all there are four files, which contain the student details. The senior boys file, the senior girls file, the junior boys file and the junior girls file. Along with the new forms, which have been written out for the current students, the new forms of the newly admitted students are also filed along with them. All the old forms have to be discarded. That means every year not only is there a waste of paper but also a waste of time. After the academic year starts, the school also records all the academic performances of each and every student based on the entries in the teacher's mark register and also based on the report card of a student. The marks of each student are stored along with their details in the same student file. The school also keeps track of the attendance of an individual student and this too is stored in the student's file. However note that all these data items are hand written and there is no verification of what has been written down. Because of this there is always a chance of a data entry error occurring, which in the end can lead to a lot of confusion. The school also handles the medical records of each and every student. The clinic of the school is responsible for this. Twice a year the school runs a medical checkup on each student and is also authorized to give a student the necessary injections if there is permission from the parent. For this a letter is sent to the parents stating the reason for the need of the injection. These are all the details of students, which the school handles and considering there are thousands of students this is a vast amount of data.

However besides the details of students the school also manages the details of teacher's, which would include their attendance and also the teacher's timetable and the classes, which each teacher teaches.

Besides the details of students and teachers there are other forms of data, which the school has to keep track of. One area, which this concerns, is the school library. The school library houses vast collection of books for reference as well as for reading pleasure. To keep track of all these books is a huge task and is still being done manually.

At first the school makes an entire list of all the books in the library and then if a student or teacher wishes to borrow a book, his or her name is written down on a form and also the date, which the book was issued. A tick is also placed near the name of the book on the library book list so as to signify that the book was borrowed. The problem here is that every week the librarian has to go through the entire of hundreds of books and locate the books, which have been borrowed. He then has to remind these students or teachers that the book they have borrowed is due. This sounds easy when said but when it comes to locating and informing close to a hundred students and teachers a week the job becomes very tedious and in the process some of the books are misplaced.

Therefore my analysis of the current system of Dubai English School, we can see that one main flaw is the fact that it is error prone largely due to the fact that all the work of data handling which is vital in any firm is done manually. Any errors caused during data handling will always lead to confusion. Therefore based on my assessment of the current working of the school I feel that the need of the hour is a complete revamp of the current system. The proposed computer system with the hardware and software configuration is shown below:

HARDWARE REQUIREMENTS

❑ **Intel PIII 500-600 MHz**
A high processing speed is used so as to cope with the number of applications that will run simultaneously and for power use.

❑ **64-128MB RAM**
For the running of Windows 2000 effectively 64Mb to 128Mb is quite acceptable. With a higher RAM this means more programs can be run simultaneously.

❑ **512Kb Cache**
The cache stores frequently run operations thus when accessed they are executed faster.

❑ **10 GB HDD**
This high capacity hard disk would be needed to store all of Dubai English School's data as well as the additional which will be used by the school.

❑ **16-32Mb SVGA Card**
An SVGA card is suitable because it displays graphics with acceptable resolution and also since there will not be many graphical operations implemented by Dubai English School then 16MB would be acceptable.

❑ **1.44MB Floppy Disk Drive**
Can be used to make copies of documents, which can be viewed by the principle personally.

❑ **58x CD-ROM drive**
Can be used to access numerous files usually multimedia.

- **56K Modem**
  Can be used to access numerous amount of information from the Internet.

- **17" monitor**
  View high-resolution pictures and obviously the contents of the files.

- **Inkjet printer**
  Can be used to create professional looking outputs due to its capability to print in color with accurate resolution and this would particularly useful when I print out reports which would contain color.

- **Optional; Ethernet Hub, Network Card and necessary cables and connectors**
  The Ethernet hub can be used to share files and company data within the school so all staff have the reference they need at any time. This is known as an Ethernet.

- **Optional; Tape drive**
  A tape cartridge is quite useful based on the fact that large amounts of data is involved in the running of the company. There is always the possibility of data being corrupted and to counter attack this problem, a tape drive can be used to make backups of important data.

With the hardware, also comes the software and below is the software, which I will require in the improvement of Dubai English School's data handling.

SOFTWARE REQUIREMENTS

- **Microsoft Windows 2000 Professional or MS Windows 98.**
  This OS is highly recommended due to its simplicity of use and also the wide range of applications that can be run on it.

- **Microsoft Office 2000 Professional Suite**
  This package contains a wide range of applications...one of which is Access, which can be used to store all the data, which Dubai English School deals with currently.

Although there are numerous database applications, which are available, and are more economical compared to buying the Microsoft Office suite there are various reasons as to why I have specifically chosen the Microsoft Office suite. Firstly the Microsoft Company currently is the largest manufacturer of software for home as well as SOHO (Small Office Home Office) use. The Microsoft Office package offers software which is versatile and easy to use and at the same time the software offers the user a myriad of features which help to make his documents professional as well easy to refer to. At the moment there is no other software package, which is parallel to the features and versatility offered by Microsoft Office. One of these software is called Microsoft Access,

which will be an asset when it comes to solving Dubai English School's problem. MS Access has been specifically designed to deal with data handling and not only does it allow the user to enter data into tables but it also allows you to create forms and draw up reports on your data and run complex queries. All of these features can be accessed with a few clicks of the mouse and the typing in of a few simple commands. This robust software is precisely the reason why I chose the Microsoft Office package. MS Access is well equipped to help me solve the problem at Dubai English School. However the Office package comes with other software as well. However I will not be making extensive use of this software. I will not be making use of MS Word because Word is a word processor and is more suited for producing documents, which I will not be dealing with here. Excel is another piece of software, which I will not be using. MS Excel is a spreadsheet program and is basically used for financial handling of data. If I was dealing with the Accounts department of the school then I would have made use of this software. However just because I am not making use of these software doesn't mean that they are useless. Since each of these software are from the same company and are from the same version of 2000 this makes it very easy to import data with each software. Therefore if I was king a report with illustrations of the performances of the senior boys compared with the senior girls, I would get the data, which in this case is the marks from Access which would be imported to Word. Next I would use Excel and create a pie chart to represent the data. Then with a little re arranging and a few additions a report can be made on MS Word by using Access. Although Access has a report feature it doesn't allow you to create your own diagrams. This is what makes the Office package so useful.

Therefore by using MS Access I hope to organize Dubai English School' data in a more logical manner making it easier foe reference and processing. The solution to this problem faced by Dubai English School is shown in the next section of my coursework.