Introduction

BACKGROUND

Computers have many applications in the 21st century. Specific software such as databases and spreadsheets are designed to help, improve, speed up, and reduce the workload of certain tasks. In this IT project, I am going to use Microsoft Excel to computerise and store the information in my faculty for my tutor who is the faculty head.
The aim of this project is to make it easier and more efficient for my tutor to access and update information of all the students.
She will be able to:

- Add new students
- Edit student's details
- Update progress details
- Grade predictions
- Compare student results with the class average
- She can email this worksheet to her colleague, other school, Head of the Department etc. without using the paper.
- She can display the student's performance on the graph, table, designed table etc.

The project is based in Desborough School where my tutor – Mrs. Brennan works as a math teachers. She needs to calculate the average mark, overall performance, compare the individual results with the class average, predict grades of all the students in her faculty so that she can monitor their progress, and print out the student report. This is difficult with paperwork and very difficult to make amendments and not very user friendly, as it is very tedious. I have offered to put all this information on excel to make it easier to store and keep up to date while have the luxury of monitoring the students progress. I will need to make tables, quarries and report so that all the information that is required is interrelated and can be accessed by a click

of a button.
I will design relationships between the tables so that quarries can be made to view the appropriate information required from each table, instead of having to open up all the tables and taking information separately.

There is not currently a computerised.My tutor doe's thing all by hand, and everything is done using paper work. She has to calculate the student's average twice to get the results accurate, she has to up date the records manually, and this can be very time consuming. She cannot add, delete, or edit the student's records. With the help of this new system, it will be easy for her to add and delete information on students' grades so that she is constantly kept up to date, instead of having to rewrite everything by hand. This will make the information more readily available for analysis.

Investigation

In order for the system to meet the users, needs an interview was arranged with my tutor Mrs. Brennan and here are the results:

For how long have you been working like this?

10 years

What is involved in your working?

Adding up marks, using calculator to find the average and using papers to feed in the result

How do you record your student's grades, average and grade prediction?

In a mark book and its consumes a lot of time and paper works

How useful will a computer-based system be to your company?

It will be effective in making my job simpler as well as saving me time.

What advantages and disadvantages do you think a computer system has?

- Quicker than calculator
- Corrections are easier
- No paper works
- Data can be display in various ways
- Data can be compare easily

- Much cleaner than the paper work
- And many copies can be made

Disadvantages

- Setting up the programs is too complicated and difficult
- The cost of the PC are expensive
- I will find it initially unfamiliar

How many students do you have in one class?

In year 11, I have 31 students

What system do you have at home or school? E.g. Pentium processor, windows, and MS OFFICE?

Well at home, I have Windows 95 and I do have office but I have no idea what is the version. About the school, I have no idea because I do not use the PC at the school.

Do you know your way around Microsoft Excel?

I have a basic knowledge, e.g. feeding in the student's names and marks but have no idea as to how to calculate the average marks etc.

How good are you in computer?

I am fairly competent. I have a basic knowledge of computing because I use my computer for working in WORD, EXCEL, and using Internet.

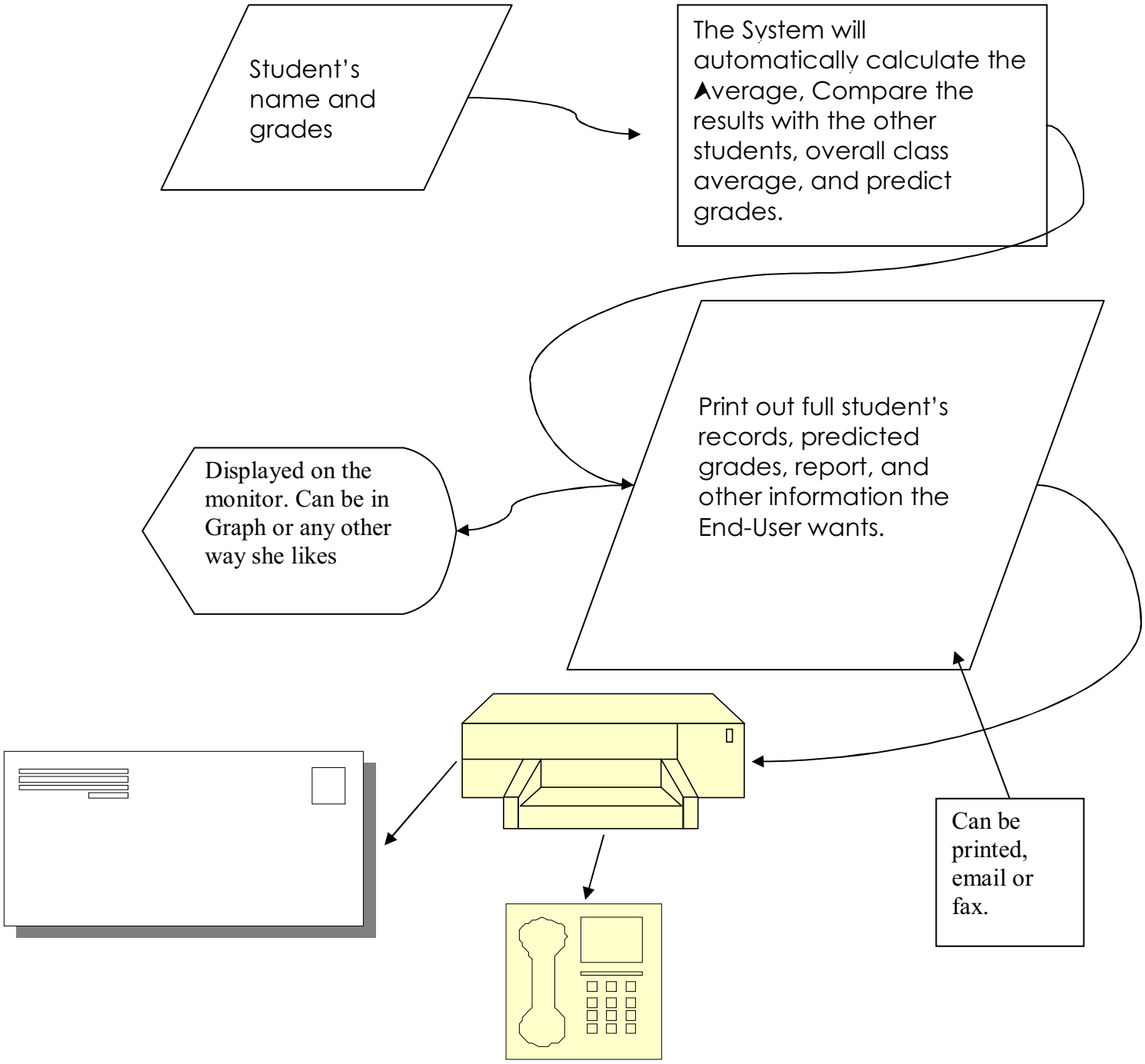
From the interview, a number of problems were realised with the current system, of manually doing the work. It was said that the old way of doing things was far too slow and time consuming, and many mistakes were made with the data. So many records have to be manually put in and a lot of paper work done. This is where our new system would help.

Also available for use at the school are Pentium PC´s running Windows 98 and a laser jet printer. The Windows system comes installed with Microsoft Office 97 and includes all the major programs (Word, Excel, and Access). In addition, at home she has Pentium PC's running Windows 95 and office 97 or later. She has all the recommended hardware needed for this program

Since all this is available to Mrs. Brennan, and she is, familiar with computers and her programs, she has asked me to design the new system in Excel. She feels that a spreadsheet would be the best way to begin the

problem as information can be gained quickly and efficiently and large amounts and she feels that the new system will be very useful in the future.

Process and Output of the new system



Objectives for the new system

- Improve speed and ease of accessing, and updating the data on all the students and grades information forms.
- The system will be user friendly, easy to use because all she have to do is just feed in the student's grades and details. The rest of the work will be done by the system itself.
- A new student can be added to the spreadsheet within few seconds.
- The database can hold up to 40 or more students' grades and details.
- It should take no longer than 15 seconds to find all the student data required like student details, student current grades, Minimum Target grades, Over all average, to compile a report for the student.
- The calculation will be quicker. The data can be print it, email, or fax. Student's performance can be display on the graph, bar graph or any other chart.
- The result will be accurate, so Mrs. Brennan does not have to calculate the average twice or thrice to get the accurate result.
- Data entry should be as fast as possible, particularly as there will be many students to add to the spreadsheet when it is first set up and installed.
- Enable user to easily extract information such as class lists of students for a subject and total predicted grades as well as Target Minimum Grade (TMG).
- No paperwork, data can be added, edit or delete any time.
- Number of copies can be print out, email or fax

Hardware, software and network requirements

Here are the minimum requirements to run this program:

IBM Compatible PC
Inter Inside Pentium Processor 266 or later/ AMD K6-200 or above
64 MB of RAM
1 GB of Hard drive space
Keyboard
Mouse
Printer (any colour or laser)
Monitor
4 MB of Graphic card

Software:

Windows 95 or later (latest version will be the best)
Microsoft office 97 or later (Word and excel are necessary)
Microsoft outlook 97 or later (sending email or fax)
Microsoft Outlook express 5 or later (sending email using the network)
Microsoft Internet Explorer 5 or later (sending email using the web server like Yahoo! Or Hotmail)

According to the interview, Mrs. Brennan has mentioned that she has a computer at home with Windows 95 and preinstalled Microsoft Office 97 or maybe later (she is not sure what it is). About the computer processor, RAM and other hardware, she feels that all the specification this system needs will definitely meet her computer at home, so the end-user have all the hardware and the software available.

According to my research, I found that the school system is quite good for this system. All the hardware and software are available.

In addition, Mrs.Brennan has a basic knowledge of computer and Microsoft Excel. We do not need an expert to run this system because its will be a user-friendly system. As I mentioned, all she has to do is to feed in the student's details and grades. Hence, she may not be familiar with this system but I believe she will like the system and enjoy it too!