

GASE STUD

By AbleOwl

EXCEL AUTOMATION PROJECT

Hospital ward management

Work done for Toowong Private Hospital

Summary

Toowong Private Hospital needed a system for managing patients in the ward. The system implemented displays the beds graphically on a large screen in the ward. The information includes details of patients, and assigned nurses for each shift.

Price range of work done US\$5,000-10,000.

Susan Jadkonis, Finance Manager, says "The application has been in use for 3 years and has run smoothly the whole time."



Toowong Private Hospital offers a range of inpatient, day patient and community-based mental-health treatment.



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AbleOwl offer Excel custom application development, presenter-led courses, webinar recordings on 60 one-hour topics, Knowledge Base, hotline support and the study and qualification Certified Professional in Excel for Finance.

Hospital ward management

Toowong Hospital use an Excel sheet displayed on a large screen in a ward to show important information about patients clearly and to manage the ward.

A large screen in the ward displays information about each patient in each room Toowong Hospital have a number of rooms with patients, nurses assigned to rooms at different times of the day and information recorded for each patient. The information appears on a board, that is, a large screen in the ward.

An Excel sheet displays that information as below. Many different staff use the application. Excel's formatting capabilities make the display clear and familiarity with Excel makes the application universally easy to use.

A dialog box displays all data for a single patient on screen

If information for a patient needs to be changed, the user selects a cell in the relevant row and clicks an *Edit row* button to display the data from that row in a dialog box as below. The dialog box shows all information for a patient on one screen. In addition, the dialog box makes input more reliable, checking nothing is missed and that all entries are valid. Entries cannot be made directly on the sheet.

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Patient details cannot be changed on the sheet. Instead, the user calls up a dialog box, which more clearly shows the information and checks all entries before storing to the sheet.

When the user clicks OK, the application checks for mandatory entries	So, there are a number of mandatory entries such as status, admission date and doctor. When the user clicks OK, the application runs various checks and, if any fail, the user needs to correct and try again. Otherwise, the data will not be saved.					
	The immediate feedback and forced correction is an advantage of dialog box entry compared to entry directly on the sheet. In addition, for on-sheet entry, if you allow cut and paste, cells can be corrupted by cut and paste or dragging.					
The users can easily include patient photos	As you see, the dialog box displays a photograph of the patient. For a new patient, the staff take a photo, save the photo file to the computer and then simply click the <i>Find photo file</i> button in the dialog box and browse for the file.					
The application automatically saves the data to a text file	When the user clicks the OK button of the dialog box, the data stores into the patient's row on the sheet. However, the workbook does not save. It could be made to save automatically, but there is a better solution. Even if a workbook saves in just a few seconds, that nevertheless means a wait before the next action can be taken.					

... which means the data saves instantly

Another benefit of the separated data is that updates are seamless

The user can access all commands from a custom ribbon

The solution is to automatically save the data on the sheet to a text file. When the workbook opens, the text file automatically loads into the sheet. Text files open and save many times faster than an Excel file. In this case, as the text file is small (8K as opposed to 1000K of the Excel file), the time to open or save is virtually zero.

Another benefit of the data being stored to a separate file is that we at AbleOwl can send an updated Excel file to the client without their need to copy data from the existing file to the updated one.

The application has many different sheets and reports. Users can access all they need from a custom ribbon as shown below. When the workbook is open, the word Board appears on the menu. The user clicks on Board to see the ribbon.

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Users can access all they need from the custom ribbon that appears when the workbook opens.

Multiple reports can quickly be printed from a single dialog box

Update and print is one of the buttons on the custom ribbon. When the user clicks the *Update and print* button, the *Update and print* dialog box appears as below. From there, the user can select multiple reports to update and/or print. Some of the reports are for individual patients, doctors or nurses. The user can select one or more and print each one selected.

Update and print			×		
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Update and print any or all of the reports from a single dialog box.

Excel provides a reliable application with clear display and efficient operation Salient points to make about the application are:

- The formatting capabilities of Excel make the display clear to a wide range of staff who use the application. Familiarity with Excel also makes the application easy to use.
- A dialog box displays all data for one patient clearly on one screen, checks for missed entries and avoids possible corruption that can occur with on-sheet entry.
- The data stores automatically after each change though not to an Excel file but to a text file instead, which means that there is no delay.
- Storing the data separately from the workbook means that updates can be seamlessly provided.
- A custom ribbon means that the user can run all commands from a single easy-to-access location.
- A single dialog box for reports makes it efficient to update and print multiple reports.

Susan Jadkonis, Finance Manager, says "The application has been in use for 3 years and it has run smoothly the whole time with no issue through changes of equipment and software including different Windows and Excel versions.

The benefits between the old application and the new are: the AbleOwl version is more robust than previous versions as users are not editing or saving directly to the spreadsheet, rather they are using the input screen. We also have a built-in system where the text file containing all the data is saved as a backup file automatically at a preset time everyday. This not only provides a backup data storage should there be a system malfunction, it also provides a historical record of our inpatient data.

We also use this database with a touchscreen whiteboard, therefore the custom ribbon allows all users to easily scroll through data with a touch of the screen rather than having to use a keyboard.

Little support from AbleOwl has been needed, but on the few occasions they were needed, which were mainly for enhancements, AbleOwl have been easy to deal with and have provided timely and efficient support."

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