Hospital Appointment System

Appraisal

# Comparison of Project Performance against Numbered General and Specific Objectives

1. **Allows the admins to add/edit/delete patient records**

The objective was met.

The system allows admins to add, edit and delete patient records from the patients table using visual basic code.

1. **Allows the admins to add/edit/delete clinic records**

The objective was met.

The system allows admins to add, edit and delete clinic records from the clinic records table using visual basic code.

1. **Allows the admins to add/edit/delete doctor records**

The objective was met.

The system allows admins to add, edit and delete doctor records from the doctor records table using visual basic code.

1. **Allows the admins to add/edit/delete appointment records**

The objective was met.

The system allows admins to add, edit and delete appointment records from the appointment table using visual basic code.

1. **Allows the admins to add/edit/delete medical records**

The objective was met.

The system allows admins to add, edit and delete medical records from the medical record table using visual basic code.

1. **Allows the admins to add/edit/delete past medicine usage records**

The objective was met.

The system allows admins to add, edit and delete past medicine usage records from the medicine usage table using visual basic code.

1. **Allows the admins to add/edit/delete past test results records**

The objective was met.

The system allows admins to add, edit and delete test results records from the test results table using visual basic code.

1. **Allows the admins to create regular backups of the files they specify through click of a button**

The objective was met.

The system allows admins to create regular backup of files through a click of a button. All errors were dealt with and an appropriate error message appears depending on which error occurs such as no file being selected. A file can be specified through the dialog box which opens up when the “Create backup” button is pressed

1. **Allows the admins to add or change rights of other non-admin accounts**

The objective was met.

The system allows admins to changed add or change rights of other non-admin accounts my navigating to the login rights table and selecting if an account has admin rights or not.

1. **Sets up validation rules for every field to ensure only valid data is entered**

The objective was met.

Once data has been entered into a field, the validation module activates and checks if the data entered into the textbox contains the right type of data entered into it. I.e. Forename only contains text and no numbers; phone number contains no text and can only contain numbers etc.

1. **Allows appointments times and dates to be rigorously checked if they conflict with other appointment times and dates.**

The objective was met.

Once on the appointment form, you can click on the “Check valid Date” button which runs the valid date procedure which checks if the date, time and assigned clinic of the current record does not conflict with another appointment’s date, time and assigned clinic.

1. **Sets up a one-button system which generates the appropriate letter for the appropriate appointment type to streamline appointment making process**

The objective was met.

One button enables the user generate the relevant letter for the appointment which is currently selected. The letter generated is dependent on which check boxes are checked or unchecked.

If “Did not Attend” is checked, then the button will generate a “Did not Attend” appointment letter.

If “First Appointment” is checked, then the button will generate a “First Appointment” appointment letter.

If no check boxes are checked, then the button will generate a normal appointment letter.

1. **Creates overviews which allow for easy manual record search needs**

The objective was met.

An overview is available which allows for easy manual search of clinics, appointments and patients.

1. **Allows the users to utilize the single search and multisearch functions to streamline data the data gathering process**

The objective was met.

The user can run an advanced search which provides the option for either a single item search or a multiple item search.

The former search function only allows one of the selected criteria to be searched for i.e. Forename or Surname, but not both.

The latter, the multiple item search, allows any of the selected criteria to be searched for i.e. both Forename and Surname.

1. **Enhances security by adding an extra layer of protection through the use of a security code which all users must enter. This prevents unauthorized access into the system if the transgressor has managed to find a valid username and password combination.**

The objective was met.

A security code textbox was created which has a complex algorithm associated with it. A security code must be entered if a user wishes to login. The security code does not allow any code of incorrect length.

1. **Allow doctors to see appointments which they must attend through the use of a timetable**

The objective was met.

Doctors are able to see which appointments that have been assigned to them as the code checks for any appointments which have the same clinic which the doctor works for.

1. **Prevent appointments to be made for a clinic at a date when no doctors are available.**

The objective was met.

No appointments can be created at a clinic on a date where no doctors are available on. This is done by displaying an error message on the screen which states the date when the first doctor is available

1. **Create a summary sheet to show the patient to doctor ratio and more.**

The objective was met.

A summary sheet was created which allows the users to see: the doctor to patient ratio, the doctor to clinic ratio, appointment attendance percentage, the number of clinic records, the number of doctor records the number of patient records, the number of appointments not attends, the total number of appointments made and the number of appointments which are first time appointments.

An option is also presented to present a report and print the report.

1. **Allow users to sort records though a multitude of fields**

The objective was met.

A combo box allows the user to sort the clinic records, appointment records and patient records in a set list of criteria which is viewable on the form screen.

1. **Allow labels to be printed off to send off with appointment letters**

The objective was met.

A letter label can be generated through the click of a button which displays a patient’s full name and address. An option to print the label also appears on screen.

# User Feedback

1. **How easy was it to follow the user guide?**

It was easy to follow the user guide as it had most, if not all of the form’s labelled to notify the users what each feature was for.

1. **Did the user guide contain detailed enough information such that all the necessary processes carried out by the system could be carried out by reading the instructions?**

The guide did contain a good amount of detail on how to use the system. However, the user guide was plagued with the words “valid details” with minimal mention of what details were acceptable in the text boxes. Thankfully, the textboxes has accepted all of the ordinary data which I have tried to enter into the system.

1. **Were the error messages in the user manual simple to understand and easy to fix?**

I encountered some error messages when typing in data and I had accidently pressed a number instead of a letter in the forename text box. Other than that, I had encountered none. Following from the user manual, the errors were easy to fix and enough information was given to do so.

1. **How easy was it to add, edit and delete records?**

Adding and editing details for all records seemed relatively easy. However, deleting a record was a cumbersome task for patient records as no option was available to delete a patient record on the form.

1. **How easy was it to navigate through the program?**

The form was easy to navigate through, however, in hindsight it would have become a tedious task to navigate to specific clinic or appointment records as there is no search function implemented that allows the user to search the clinic or appointment records.

1. **How easy was it to find the record necessary?**

It was very easy to find a specific patient’s record through the advanced search feature. However, if the database was extremely large, a search function would be required for clinic records and appointments records of which there was none.

1. **Did the program prevent the problem of double booking?**

The program did prevent double booking successfully. Although, the function could be improved as a user may forget about pressing the button to check if the date does not conflict with another date.

1. **Did the program streamline the process of making appointments?**

The program streamlines the process of making appointments greatly as the patient’s information no longer has to be manually retrieved and instead is automatically taken from the database.

1. **Was the data validation of each text box satisfactory?**

The data validation for each text was satisfactory; however it could be improved if its function was extended to validation text boxes which required dates to be input.

1. **Did the program meet your requirements?**

Yes the program met all the requirements that I asked for.

1. **What are some positive aspects of the system?**

To list them, they would be:

* The data validation feature which greatly reduces the amount of incorrect information input into the system.
* The advanced search features which makes searching for a specific record really easy.
* Appointment creating has been streamlines which will greatly increase the speed at which work is done because it removes the manual aspect of retrieving patient information and inputting it into a template letter.

1. **What aspects of the system could be improved?**

One of the features that could be improved is the doctor timetable feature. Whilst the program does display a doctor’s timetable, a more graphical approach would be really helpful as it would show what free slots a doctor has and which slots are not.

Another feature which would have assisted in reducing incorrect data entry into the system is extending the data validation process so that it covers the text boxes which only allow dates to be entered.

An advanced search feature should be added for the clinic records and appointment records as when the database becomes too large, a search function becomes necessary.

Instead of having a button which the user must press to check if a date conflicts, this could be checked once the user attempts to save the record.

Signed:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Analysis of User Feedback

Advanced Search

From the comments that the user had offered, it’s clear that the user felt that an advanced search needed to be incorporated to search through the patients, clinics and appointment records. This could be easily incorporated by modifying the code currently used to search through the patients records and include options to search the clinic record database and the appointment record database.

Deleting Records

The user commented on the fact that it was difficult to delete a patient record. In hindsight, I could have made it much easier to delete a patient record. However, I feel that fully deleting a patient’s record is very circumstantial and rarely would it be required as a patient’s information is mainly updated or added to the system and not deleted. Although, adding the feature would be really simple and could easily be created as a macro.

Check Valid Date Function

Also stated by the user was the fact that “check valid date function” should have been constructed such that the function initiates every time the user saves the record to the system. In retrospect, this would have been a good idea as many users could simple forget to click the “Check valid date” button which could replicated the problem. Integrating this into the current system is quite easy as instead of running the function from a button press, every time the user saved the record to the system, it would check if the dates did not conflict with any other appointments.

Doctor’s Timetable

Furthermore, the user stated that the doctor’s timetable could be updated so that a graphical representation of the doctor’s day could be viewable. This would take a lot of effort to implement and would take a month or two. However, it would be a good addition to the program as it would be much easier to see which slots a doctor is free for and which slots an appointment can be booked for.

# Possible Extensions

Extensions requested by the user(s)

* An advanced search function which is able to do a multi-search and a single search of the patient, clinic and appointment records.
* Deleting record macro’s for every form
* A graphical view of a doctor’s timetable which shows the free slots available.
* A graphical timetable for a clinic which shows empty appointment slots for the clinic. The timetable should have a modifiable view such that it can be extended to view the appointments in a 30 day period, appointments in a week and appointments in a day. A summary of the amount of free slots available for the week/month/day as applicable should also be placed on the side of the timetable for quick reference if the clinic has available appointments or not.

Extensions I would add to the system:

* Make the “Check Valid Date” function initiate every time a user attempts to save the appointment record
* Colour code the graphical timetable and put a key on the side of the timetable to show what each colour represents i.e. purple for surgery
* Add in a “forgot password” function to the system which will allow users to manually change their own password by answering a security question.
* Update the “Advanced Search” functions so that they show the amount of records it has found with the criteria that has been entered.
* Allow backup paths to be specified and set by Admins as well as allowing Admins to change the path which the system searches for the appointment letter templates.
* Add a function to the system which updates the “Hospital Appointment Source” database every time the main database has been saved/changes have been added to it.