Requirements Document

Introduction

The client, *Fizzilink*, is at the moment a conceptual company that, once established, will constitute an on-line[1] network of physiotherapists (hereafter referred to as *physios*). For this company to exist in any sense, they require a system to provide a community[2] of physios, and the goal of the system is to make this available to the general public requiring their services.

In the United Kingdom, there are a large number of physios who work alone, or are part of a small clinic; to unite these physios, and give them a method of booking their appointments is the main thrust of the system. At present, there is a situation arising where a physio will be dealing with a patient[3] and their telephone will ring. The physio is then faced with the dilemma of whether to continue with the treatment of the current patient, and possibly lose out on another's custom, or to answer the telephone, thus gaining another customer, at the risk of aggravating the current one.

The main thrust of the system is to therefore provide an on-line booking mechanism for these physios, which would also act as an appointment diary[4] for the physio. In order for this to work, the database[5] of physios who form the network must be searchable by the public, most probably by different search criteria[6] and through this a potential physio can be selected and an appointment booked.

At present there are around two thousand *small-team*[7] physios around the country, each with varying numbers of existing patients. There are also many larger practices[8] each containing several physios. The scope of purely NHS[9] physios is beyond the scope of the business.

The system should provide each physio with a presence on both the website[10] and indeed the World Wide Web itself. The information held within these pages must be updateable by the physio so as to allow for any changes of address, correspondence details *et cetera*.

The system should record any appointments made by a patient with a specific physio. These appointments must have the capability of being changed or cancelled, but only at the discretion of the physio. The system should also provide the physio with a method of scheduling their available time, i.e. allowing only pre-specified times for appointments.

There is also the notion of an *on-line physio*[11] which will provide information with respect to the treatment of common ailments, such as sprained ankles and so on. Tied in with this is the idea of on-line shopping[12], which will provide the *public users* of the system with a means to buy items such as support bandages over the Internet. This could also be extended to cater for the physiotherapists' needs, selling items to them such as treatment tables and other pieces of equipment they may need in the running of their practice.

The current manual system for booking an appointment is as follows:
> The patient will telephone a physio and request an appointment.
> The physio will consult their diary.
> A time that suits both the physio and the patient will be agreed on.
> The patient will pay for the appointment on the day of treatment, in person.

At present, this provides the physio with no guarantee that a patient will turn-up, and with the ease of fraudulent bookings[13] over a medium such as the Internet, some sort of system will need to be in place to prevent this. This will involve some form of credit-card processing, and due to the fact that we, as students, do not have the ability (by law) to deal with such sensitive information, nor the links to banking services, a third-party payment collection scheme was agreed on.

The *Fizzilink* team should also have certain administrative rights[14] to the system. This would allow them to add physios to the network once their application has been successfully completed and vetted[15], as well as maintain any older records that may need updating or deleting. This could include physios that no longer wish to be part of the network, or patients who have registered and now wish to leave (or have contravened the terms of the site[16]) *et cetera*. It would also allow them complete control over the content of the site, and rights to change information such as that held with the on-line physio.

The practice manager[17] should be able to add individual physios working within their practice; this should be independent of the administrators.

The administrators also wish to have a function that generates automatic reports. This has been quite vague throughout the requirements capture, but will include things such as:
- Financial reports
- Demographic/geographic statistics of users (physios and patients)
- Practice managers to view statistics of physios in their practice

Throughout this document, and words which are suffixed by a number written in superscript, for example *community*[4], denotes that the meaning of the word or phrase can be found in the 'Glossary of Terms' found at the end of this document. Only the first occurrence of every word in the 'Glossary of Terms' within the document has the notation after it.

Elementary Data Modeling

This section details some of the concepts in the system which needs stored data.

<u>Patients</u>:
   All patients have a unique username.
   The information to be stored about a patient is:
       The name of the patient (first name and surname).
       The patient's username.
       The patient's full address (including postcode).
       The patient's telephone numbers (daytime, evening and/or mobile).
       The patient's e-mail address.
       The patient's date of birth.
       The patient's GP details (name, practice name and address).
       The patient's area of problem (e.g. right knee).
       The patient's referral source.

<u>Physiotherapy practices</u>:
   All practices have a unique I.D.
   The information to be stored about a physiotherapy practice is:
       The name of the practice.
       The practice's I.D. number.
       The full address of the practice (including postcode).
       The telephone and/or fax numbers of the practice.
       The e-mail address of the practice.
       The name of the proprietor / practice manager.

<u>Physiotherapists</u>:
   All physios have a unique username.
   The information to be stored about a physio is:
       The name of the physio.
       The physio's username.
       The physio's contact address.
       The physio's contact telephone number.
       The physio's e-mail address.
       The physio's date of birth.
       The physio's CSP[18] / OCPPP[19] No. or other identifier (to link those in more than one practice).
       The physio's working diary.
       The physio's specialist knowledge (up to three areas of speciality).

<u>Appointments</u>:
   All appointments have a unique I.D.
   The information to be stored about an appointment is:
       The date of the appointment.
       The time of the appointment.
       The appointment's I.D.
       The appointment type (consultation, treatment or special).

The username of the patient.
The username of the physio.
The practice I.D.

Diary:
   A diary doesn't really constitute a data model as such, but is a view of the database returning the appointments of a specified physio.

User Characteristics

There are four types of users who will use this system – patients, physios, practice managers and administrators. All users could be considered to be competent on computers, and familiar with the principles of using the Internet, as well as some form of a browser[20] and e-mail handling.
Only administrators should be considered experts on computers. In addition, it should be assumed that all users have access to the internet. As long as the system is not complicated to use, all users should be able to use and navigate through the system unhindered.

Non Functional Requirements

There are two categories the details of this section will cover, quality attributes; which are those requirements which describe how well the system should perform, and resource attributes; which detail constraints or limits the system must stick to. Based on these categories it is also possible to break down the requirements into five basic categories, as follows:

Efficiency:

Req. ID	Description
	The system should access data quickly, without a problem.
	The system should load up in under 10 seconds.

Reliability:

Req. ID	Description
	The system should hardly crash at all.
	Access to the system should be available all the time.
	After a crash the system would resume as normal.

Usability:

Req. ID	Description
	Physio should be able to check their diary, and edit it.
	Patient should be able to add and request to cancel an appointment.

	Admin should be able to access all the system.
	Practice Managers should be able to request adding their practice to the system.

Maintainability:

Req. ID	Description
	The system should be made so that it is easy to upgrade or implement new features in the future.
	The system should be designed to make testing easier.

Portability:

Req. ID	Description
	The system should have the ability to work on various different platforms.
	The system should be easy to use and access.

Narrative Models (Functional Requirements)

Set availability	Author: SR	Date: 05/03/04	Version: 1
Purpose	Allows the *physio* to 'block-out' time in his *diary* for breaks, holidays etc.		
Actors	*Physio*		
Objects	*Diary*		
Preconditions	*Physio* exists, *Physio* is logged in.		
Description	The *physio* can view his *diary* and set periods of 'unavailability'. The system should check that no appointments have been booked within this period **[! Appointment Booked].**		
Post conditions	Appointments can no longer be booked in this time period.		
Exceptions	**[! Appointment Booked]** An appointment is booked within the request unavailability period. **[? Remove Appointment]**		

Manage Patient Profile	**Author:** SR	**Date:** 05/03/04	**Version:** 1
Purpose	Allows the *patient* to change their personal details such as contact information.		
Actors	*Patient*		
Objects	*Patient Profile*		
Preconditions	Patient exists, patient is logged in.		
Description	A patient can view his profile information such as contact information and personal details. The patient can amend any of the details, they are checked for basic validity **[! Invalid Patient Profile]** and they are saved to the system.		
Post conditions	Patient profile is up-to-date.		
Exceptions	**[! Invalid Patient Profile]** The profile contains some invalid data, or data may be missing. Provide valid data before proceeding.		

View Diary	**Author:** Matthew Rowe	**Date:** 05/03/04	**Version:** 1
Purpose	For a *Physio* to view their plan for the day.		
Actors	*Physio*		
Objects	Diary		
Preconditions	*Physio* logged in		
Description	*Physio* selects to view Diary, *Physio* is taken to the Diary		
Post conditions	*Physio* has consulted Diary		
Exceptions			

Practice Application	**Author:** Matthew Rowe	**Date:** 05/03/04	**Version:** 1
Purpose	*Practice Manager* applies for practice inclusion.		
Actors	*Practice Manager, Admin*		
Objects	Practice		
Preconditions	Practice not registered		
Description	*Practice Manager* sends off application to *Admin*. *Admin* validates the application **[Validate Application]**. *Practice Manager* receives result of application **[!Application Rejected]**. If the application has been successful **[?Add Practice]**. Practice is added to the system.		
Post conditions	Practice is placed in the system.		
Exceptions	**[!Rejected Application]** application is unsuccessful.		

Add Appointment	Author: Matthew Rowe	Date: 05/03/04	Version: 1
Purpose	*Patient* is able to book an appointment, and pay the fees.		
Actors	*Patient, Physio*		
Objects	Appointment		
Preconditions	*Patient* is logged in		
Description	*Patient* specifies preferred time slots for appointment. *Patient* selects an appointment. Appointment is confirmed by *Physio* **[!Appointment Rejected].** *Patient* receives confirmation.		
Post conditions	*Patient* receives confirmation of appointment application.		
Exceptions	**[!Appointment Rejected]** appointment is unavailable.		

Create Patient Account	Author: Matthew Rowe	Date: 05/03/04	Version: 1
Purpose	*Patient* can sign up to use the system, and enter all their relevant details.		
Actors	*Patient*		
Objects	PatientAccount		
Preconditions	*Patient* is not a member of the system. *Patient* is logged in.		
Description	Patient enters all their details **[!Already Registered]**. Patient account is activated on the system.		
Post conditions	Patient can log in to use the system.		
Exceptions	**[!Already Registered]** the Patient is already registered on the system **[Send Login Details]**.		

Manage Physio Profile	Author: Matthew Rowe	Date: 05/03/04	Version: 1
Purpose	Physio is able to login and edit their profile.		
Actors	*Physio*		
Objects	PhysioAccount		
Preconditions	*Physio* has an account. *Physio* is logged in.		
Description	Physio views their profile. Physio selects to edit their profile **[!No Update].** PhysioAccount is updated. Physio is taken back to view their Profile.		
Post conditions	Account has been updated.		
Exceptions	**[!No Update]** Physio does not wish to update their Profile.		

Associate Physio	Author: N E	Date: 05/03/04	Version: 1
Purpose	For a *practice manager* to add a *physio* to the practice		
Actors	*Physio, Practice Manager*		
Objects	Physio account, practice account		
Preconditions	Practice is registered with FizziLink and practice manager is logged in. The physio must be employed by the relative practice.		
Description	If the physio is new to the Fizzilink network [?Add Physio]. Ensure that the physios registered details are correct and up to date [!Manage Physio Profile]. The physio is then considered to be associated with the practice.		
Post conditions	Physio is registered, Physios profile is up-to-date		
Exceptions	[!Manage Physio Profile] Physios profile is out-of-date. Allow them to update their profile. [Retry Associate Physio]		

Request Cancellation	Author: N E	Date: 05/03/04	Version: 1
Purpose	To allow a patient to request to cancel an appointment		
Actors	Physio, Patient		
Objects	Appointment		
Preconditions	Patient has registered an appointment with a physio		
Description	The patient logs on to the system and requests to cancel an appointment. The related physio is notified.		
Post conditions	The physio is notified of a request for cancellation		
Exceptions			

Remove Physio	Author: N E	Date: 05/03/04	Version: 1
Purpose	To remove the association between a physio and a practice		
Actors	Practice manager, Physio		
Objects	Practice account		
Preconditions	Physio is registered with Fizzilink, practice manager is		

	logged in
Description	The practice manager removes the link between a physio and a practice.
Post conditions	The physio is no longer associated with the practice
Exceptions	

Add Physio	Author: N E	Date: 04/03/04	Version: 1
Purpose	To add a physio the the FizziLink system		
Actors			
Objects	Physio		
Preconditions	The physiotherapist wanting to join the system must already be employed by a practice		
Description	The physiotherapist fills in some online forms and once the data entered is verified they are added to the system		
Post conditions	The physiotherapist has an online profile and is registered with the system.		
Exceptions			

Remove Appointment	Author: H M	Date: 05/03/04	Version: 1
Purpose	To allow a *physio* to remove an appointment from his diary		
Actors	*Physio*		
Objects	Appointment		
Preconditions	*Physio* has an appointment with a *Patient*		
Description	The *Physio* chooses an appointment he wishes to remove [select appointment]. He then selects the time-slot with which he wants to move the appointment to [select time-slot]		

Glossary of Terms

[1] **On-line** – Accessible via a computer or computer network; in this case via the World Wide Web

[2] **Community** – a group of people. [In this case, an on-line group of physiotherapists]

[3] **Patient** – a (potential) client of the physiotherapist

[4] **Appointment diary** – a graphical and/or textual representation of a physiotherapist's bookings

[5] **Database** - A collection of data arranged for ease and speed of search and retrieval

[6] **Search criteria** – the restrictions imposed on the viewing of the physiotherapists

[7] **Small team [physios]** – independently working physiotherapists not operating as part of a large practice

[8] **Practice** – the notion of a group of physiotherapists working under a unified banner

[9] **NHS** – National Health Service

[10] **Website** – a page or collection of pages of content published on the World Wide Web

[11] **On-line physio** – a search that can be made as a set of defined conditions for advice about symptoms and treatments

[12] **On-line shopping** – the ability to purchase goods over the World Wide Web

[13] **Fraudulent bookings** – the booking of appointments with no intention of attending

[14] **Administrative rights** – privileges to change any parts of the system or information within the system

[15] **Vetting** – the process of ensuring that physiotherapists are legitimate

[16] **Terms of the site** – restrictions placed upon users of the site

[17] **Practice manager** – a person with semi-administrative rights over the physiotherapists registered under their practice

[18] **CSP** – Chartered Society of Physiotherapists

[19] **OCPPP** – Organisation of Chartered Physiotherapists in Private Practice

[20] **Browser** – a program that allows a person to view pages on the Internet