**IT Helpdesk System**

**Background and Current Practices**

*Beaconhills Christian College* is a local high school that is located in South Eastern suburbs of Melbourne. Students are the ones that usually discover software and hardware problems on the network. The only way students can get their computer problems resolved is to tell a teacher or an IT Technician.

Teachers and students have found that they are having all sorts of trouble with computer maintenance such as:

* Students are unable to log in onto the network because of forgotten passwords, they are logged on to another computer or they have been logged out by the library, IT Technician or the Head of IT because they have done something inappropriate. Students and teacher are unable to know for which reason students have been logged out and only teachers can log a job in the schools existing system to deal with these issues.
* BeaconNet is the main method for students to access their course content. If students don’t know the course password they cannot access their courses. The only way is to ask their teachers the password, but the teachers don’t always know it, particularly if they are new teachers.
* If hardware and software issues arise only teachers can report these. If the IT Technicians are not in their office or near their computer these issues will not be attended to, even if they are urgent.

**Networked Environment**

All computers and printers are networked. Students and teacher can access network resources using their mobile devices through the extensive wireless network points that exist at the college. All service requests have the potential to be logged to a central database located on a drive on the college LAN.

**The proposed software solution**

After analysing the practices that were in place to log jobs on the helpdesk by staff and students, a SRS was written containing the following requirements:

**General Description**

The required software solution will be used to log and manage helpdesk jobs.

**Functional Requirements of the software should:**

1. Allow the users (students, teachers and technicians) to log in IT services jobs from their mobile devices.
2. All data relating to these service requests will to be written to a database. The prototype does not need to write to a central database located on a network drive but can write the local device.
3. The service requests will also be written to a text file called (service request.txt) that will act as log stored on individual devices. This process must be automatic when a user logs a service request to the central database.
4. The required fields to log the service request are: the username, the category of job (Hardware/Software/Other), the computer number, the room number, the date when the job was logged, the job’s priority level and a comment field for the users to fill.

**Non-functional requirements**

1. Clear and easy to use interface
2. The logo and the colours of the College should appear on the interface
3. The user should see a summary of what he is about to submit

**Constraints**

* Work on Windows Mobile devices with a screen size of 210 in width by 350 Height.
* All input will be via touch (as this is a prototype, single mouse clicks will simulate touches on the display)
* Security - The log in function should allow for two users level permissions. Student log in will allow them to log a service request and technicians will allow them to view the database.

**Scope**

* You will need to cater for all computers and printers located at Beaconhills. At present, the number of computers is about 300 and printers are 50. However, the prototype does not need to cater for these amounts.

**Some additional notes specific to the software solution**

* For testing purposes, it is only necessary to include a sampling of the helpdesk jobs at *Beaconhills Christian College*, although you should be careful that the data you do include covers the situations/combinations necessary to fully test the functioning of your program.

**The Task**

Represent a software design and apply a range of functions and techniques using a programming language to develop a prototype solution to meet a specific need.

**Complete the following (see assessment criteria):**

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| Write a set of criteria for evaluating the efficiency and effectiveness of the solution. |
| Data types and structures are accurately described using appropriate design methods: Data Dictionary and Data Structure Diagram  |
| Solution requirements are accurately and clearly represented in a detailed algorithm using pseudo-code. |
| **Development of the software module** |
| **Manipulation -** The prototype solution is efficiently coded with all data types and data structures being appropriately used and integrated. |
| **Documentation** - Internal documentation is complete, contains relevant program comments, and is clearly stated and well formatted. |
| The solution meets specifications as stated in the SRS |
| **Testing/Validation** - An appropriate range of test data is expressed in a testing table, with both expected and actual output stated. All tests are successfully applied to enable the performance of the prototype solution to be verified. |