A Level Computer Science Coursework

FOLSS Uniform Shop Program

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# Analysis

## Description of the Problem

I am going to build a program for my school PTA (FOLSS) to manage pre-loved uniform sales.

FOLSS run a pre-loved uniform shop where they sell items that have been donated by students, parents and boarding Houses. The money raised from the sales goes back into providing treats and other items for the pupils. Each house receives 75% of the sales price of items they donate, and the other 25% goes to FOLSS. At the moment, when stock is donated, each item is manually labelled with the name of the donating House. When an item is sold, this label is detached and the sales price and House is recorded on a spreadsheet. This process is labour intensive and is also slow during sales because a customer may be purchasing several items which have been donated by several different houses. This can lead to a backlog at the checkouts during busy sales. After the sales, the amounts due to houses have to be calculated.

The program I will create will contain a checkout system to speed up the processing of sales, as this is currently done manually. It will also contain ways for the volunteers and staff at the school to access the totals for how much uniform has been sold and sort this by house. I am also planning on creating an online shop where pupils or parents can buy uniform from the shop. They will then be able to either pick it up from the shop or have it delivered to them in school. The program will also include stock management features to help the volunteers to sort through the uniform and know what items they need more of.

To solve this problem I am going to use a database with a web front. Users will input data into the website which will be stored in the database and then be accessed from other parts of the website.

I will start this project by considering the needs of stakeholders to understand exactly what the website needs to be able to do, and also consider existing solutions to similar problems.

## Stakeholders

I have identified three main groups of stakeholders: FOLSS Volunteers, Uniform Shop Customers, and School Staff. I have also split these three groups into smaller sub-sections. All of these users will use the website in different ways, so they all need to be considered. I will interview stakeholders before I start to design my coursework, and also get opinions from them throughout the development process.

### Volunteers

The FOLSS uniform shop is run by volunteers who are parents of pupils at Oundle. They are in the shop for uniform sales and also spend time in the shop outside of sales organising uniform and managing stock. Within the volunteers section there are also two sub-categories, Committee members and Other volunteers.

#### Committee Members

The FOLSS committee membership form the leadership of FOLSS. There are three members who have different roles. There is the chair, the treasurer and the secretary. They will need to be able to use all the functions other FOLSS volunteers use, but they will also need to be access more information and perform tasks as the system admins. They will need to be able to view the total amount raised from each sale, and also how that money has been split by house. This is so that they can distribute it to different houses. I will interview all three of them so that I can get their opinions on the system as they will be the people who use it the most.

#### Other Volunteers

FOLSS has many other volunteers who aren’t part of the committee. They will use the system for managing stock by adding it when items are donated. They will also use it as a checkout system when sales are happening. I will interview \_\_\_\_ as a representative of this group.

### Customers

At FOLSS sales there are many customers who come to buy pre-loved uniform. Customers will use the online shop part of the program, and they will also be affected by the checkout system as it will mean they won’t be waiting in queues for as long. This can be split into parents and students, and they might have different requirements for the program.

#### Parents

Parents are the main customers at uniform sales. They come to sales to buy uniform for their children, and also sometimes contact FOLSS to buy uniform outside of the sales. I am going to talk to \_\_\_ who will represent the parents who use the shop so that I can suit the solution for their needs.

#### Students

Students sometimes come to the shop to buy uniform, but the main way that they would use the program would be through the online shop. They need to be able to buy uniform easily, and be able to either pick it up or have it delivered to their boarding houses. I will talk to \_\_ to get student’s opinions about the website.

### Staff

Staff at the school will need to be able to use the system

#### Matrons

#### Housemasters/Housemistresses

## How the problem can be solved by computational methods

### Thinking Abstractly

### Thinking Procedurally

### Thinking Logically

### Thinking Concurrently

## Research

### Attending a Uniform Sale

### Interviews with Stakeholders

### Similar Solutions

* Schoolblazer

### Conclusions from Research

## Features of my Proposed Solution

## Limitations of my Proposed Solution

## Hardware and Software Requirements

### Hardware

### Software

## Success Criteria