

# Computing Coursework

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# Chapter 1

## Analysis

### 1.1 Introduction

#### 1.1.1 Client Identification

my client is Susannah Mason, she is 50 years old and has very little usage of computers, except when having to order new stock for the pharmacy. currently the pharmacy uses computerised methods to submit orders to the warehouse.

Suesannah is a pharmaceutical manager at spire healthcare in impington

by creating this program it would speed up the process making leeping track of and ordering of new equipment and stock alot easier for her

#### 1.1.2 Define the current system

the current system uses mostly computer based order submission and price checks but the orders have to be put through the computer manually

#### 1.1.3 Describe the problems

the orders for the stock take too long to submit and all stock has to be conted by hand

### 1.1.4 Section appendix

## 1.2 Investigation

### 1.2.1 The current system

the current system at the pharmacy is a data base that holds the information of over 36000 items(change when get home) the data base holds the price the mass the desription and how much is in the pharmacy at that point in time

#### Data sources and destinations

#### Algorithms

i will be using quite a few algorithmus for this assignment

IF item = lowest minimum amount THEN order more item

ELSE check next item

END IF

this other algorithm will be used to calculate the exact price of all of the order

if order submitted = True THEN calculate order

ELSE restart program

END IF

using the information in the list Items the exact price is calculated

IF item in Items add price item

ELSE add price 0

END IF

#### Data flow diagram

#### Input Forms, Output Forms, Report Formats

### 1.2.2 The proposed system

the proposed system will be used to order, check stock and be informed as soon as anything leaves the pharmacy the data base will be updated of the removal, as well as if the product falls below a certain point it will be program to replace

data Source	travels via	destination
stock information	request for stock information	pharmacy computer
stock price	request stock price	pharmacy computer
show stock info	display info	pharmacist

the stock by ordering new stock form the wearhouse automatically but the order will go through a master contol point before being sent off

### Data sources and destinations

### Data flow diagram

### Data dictionary

### Volumetrics

## 1.3 Objectives

### 1.3.1 General Objectives

- to make a stable system that checks, updates, restocks and sends payment for the ordered items
- to give the system to auto restock items when they fall below a certain number of items
- to graph which items are being bought or used faster and updates the resocking system accordingly

### 1.3.2 Specific Objectives

- to design a program that will make sorting through the items at the pharmacy as well as store the price and item location in the pharmacy as well as the amount.



### 1.3.3 Core Objectives

### 1.3.4 Other Objectives

## 1.4 ER Diagrams and Descriptions

### 1.4.1 ER Diagram

### 1.4.2 Entity Descriptions

- Client(clientID, PharmacyNum,)
- Pharmacist(PharmacistID, *PharmacyNum*, surname, firstname, PhoneNumber, address, email)
- Pharmacy(PharmacyNum)
- Warehouse(WareHouseNum, )
- Order(OrderNum, *WareHouseNum*, OrderDate,)

## 1.5 Object Analysis

### 1.5.1 Object Listing

- Client
- Pharmacist
- Pharmacy
- Warehouse
- Order

**1.5.2 Relationship diagrams****1.5.3 Class definitions****1.6 Other Abstractions and Graphs****1.7 Constraints****1.7.1 Hardware****1.7.2 Software****1.7.3 Time****1.7.4 User Knowledge****1.7.5 Access restrictions****1.8 Limitations****1.8.1 Areas which will not be included in computerisation****1.8.2 Areas considered for future computerisation****1.9 Solutions****1.9.1 Alternative solutions****1.9.2 Justification of chosen solution**



## Chapter 2

# Design

### 2.1 Overall System Design

2.1.1 Short description of the main parts of the system

2.1.2 System flowcharts showing an overview of the complete system

### 2.2 User Interface Designs

### 2.3 Program Structure

2.3.1 Top-down design structure charts

2.3.2 Algorithms in pseudo-code for each data transformation process

2.3.3 Object Diagrams

2.3.4 Class Definitions

### 2.4 Prototyping

### 2.5 Definition of Data Requirements

2.5.1 Identification of all data input items

2.5.2 Identification of all data output items

2.5.3 Explanation of how data output items are generated

2.5.4 Data Dictionary

2.5.5 Identification of appropriate storage media

### 2.9.1 Outline Plan

Test Series	Purpose of Test Series	Testing Strategy	Strategy Rationale
Example	Example	Example	Example

### 2.9.2 Detailed Plan

Test Series	Purpose of Test	Test Description	Test Data	Test Data Type (Normal/Erroneous/Boundary)	Expected Result	Actual Result	Evidence
Example	Example	Example	Example	Example	Example	Example	Example

## Chapter 3

# Testing

### 3.1 Test Plan

### 3.1.1 Original Outline Plan

Test Series	Purpose of Test Series	Testing Strategy	Strategy Rationale
Example	Example	Example	Example

### 3.1.2 Changes to Outline Plan

Test Series	Purpose of Test Series	Testing Strategy	Strategy Rationale
Example	Example	Example	Example

### 3.1.3 Original Detailed Plan

Test Series	Purpose of Test	Test Description	Test Data	Test Data Type (Normal/Erroneous/Boundary)	Expected Result	Actual Result	Evidence
Example	Example	Example	Example	Example	Example	Example	Example

### 3.1.4 Changes to Detailed Plan

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Test Series	Purpose of Test	Test Description	Test Data	Test Data Type (Normal/Erroneous/Boundary)	Expected Result	Actual Result	Evidence
Example	Example	Example	Example	Example	Example	Example	Example

### 3.2 Test Data

#### 3.2.1 Original Test Data

#### 3.2.2 Changes to Test Data

### 3.3 Annotated Samples

#### 3.3.1 Actual Results

#### 3.3.2 Evidence



## **3.4 Evaluation**

### **3.4.1 Approach to Testing**

### **3.4.2 Problems Encountered**

### **3.4.3 Strengths of Testing**

### **3.4.4 Weaknesses of Testing**

### **3.4.5 Reliability of Application**

### **3.4.6 Robustness of Application**



## Chapter 4

# System Maintenance

### 4.1 Environment

#### 4.1.1 Software

#### 4.1.2 Usage Explanation

#### 4.1.3 Features Used

### 4.2 System Overview

#### 4.2.1 System Component

### 4.3 Code Structure

#### 4.3.1 Particular Code Section

### 4.4 Variable Listing

### 4.5 System Evidence

#### 4.5.1 User Interface

#### 4.5.2 ER Diagram

#### 4.5.3 Database Table Views

#### 4.5.4 Database SQL

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#### 4.5.5 SQL Queries

### 4.6 Testing

#### 4.6.1 Screenshots of Results

#### 4.10.1 Module 1



## Chapter 5

# User Manual

### 5.1 Introduction

### 5.2 Installation

#### 5.2.1 Prerequisite Installation

Installing Python

Installing PyQt

Etc.

#### 5.2.2 System Installation

#### 5.2.3 Running the System

### 5.3 Tutorial

#### 5.3.1 Introduction

#### 5.3.2 Assumptions

#### 5.3.3 Tutorial Questions

Question 1

Question 2

#### 5.3.4 Saving

#### 5.3.5 Limitations

### 5.4 Error Recovery

#### 5.4.1 Error 1



# Chapter 6

## Evaluation

### 6.1 Customer Requirements

#### 6.1.1 Objective Evaluation

### 6.2 Effectiveness

#### 6.2.1 Objective Evaluation

### 6.3 Learnability

### 6.4 Usability

### 6.5 Maintainability

### 6.6 Suggestions for Improvement

### 6.7 End User Evidence

#### 6.7.1 Questionnaires

#### 6.7.2 Graphs

#### 6.7.3 Written Statements