1 Introduction

1.1 Client Identification

My Client is Paul Cox, a 54 year old mechanic. He has some experience with computers although not much. He uses computers for browsing, emails and using office programs such as word and excel for his business. He currently has a laptop running windows 7 64bit which he uses for this. Paul is a self-employed car mechanic who specialises in fixing SAABs but he also runs the rest of the business including billing, stock management and booking appointments with customers with occasional help from his wife, Karen Cox. The Garage is based in Cambridge but he often works at home, in Cottenham, when he is writing invoices or doing general tasks. He would like to develop a system to store the data of their customers, to book appointments and help stock control. He would like a database to store customer information so that he could access it from work or home without having to transport physical files.He would like to be able to enter the amount of time and the parts used into the system to use for invoices and then have the ability to print invoice.

1.2 Define the current system

The client's current system is a physical filing system which stores files into a filing cabinet. This means that data can only be accessed from one place at a time, it is easily lost, put back into the wrong place or duplicate files can be made for the same customer. There is also no backup so if it is damaged then the data is lost. The way they book appointments in is by using a diary and writing in when the customer is coming in. If this book is lost or damaged then they will have no way of knowing when customers have booked appointments.

Currently they record information about each individual job , this is a blank piece of paper that the the time spent, parts used and other costs that occured such as oil dumping the cost The current invoice system uses a book with a template that has to be manually filled in.

1.3 Describe the problems

There are many issues with the current system. First of all is the fact that information only has one copy and is stored with hundreds of other files, makes it hard to find quickly, easy to miss-place and easy to accidentally make duplicates of the same information. Sometimes instead of updating their current file a new one will be added so a customer will have two files with different information on.

Because the data is entered onto blank cards the format and type of data in each file can be inconsistent.

The data is stored in a physical filing system and doesn't have any back ups. This means if the files are lost, damaged or stolen then the data is lost and will have to be manually recovered

Another issue is that because appointments are currently stored in a diary so you can easily find appointments by date but not by the person they are with. This means that if a customer has forgotten the date of their appointment they will often

The current invoice system is ok although human errors can occure since the information has to be manually entered and if a mistake is made an entirely new invoice has to be made since they can't be edited. Also since it is made by hand it can be hard to read for the customers.

This information is sourced from the current filing system mostly so if the information is not correct in the filing system then the invoice will be incorrect.

1.4 Section appendix

add later(proof) scan question sheet

2 Investigation

2.1 The current system

2.1.1 Data sources and destinations

There are two data sources in the current system, the client and the business.

Source	Data	Example	Destination
Client	First name, Last name, address, postcode, phone number, email	John Handcock, 1 The Road, Cambridge, cb4 1ab, 01223 0123456	Filing system
Mechanic	Problem to be fixed	worn brake pads	appointment Diary
Mechanic	parts required	brake pads	supplier
Supplier	cost of parts	8.50	Task Sheet
Mechanic	Price and date of appointment	35.00, 01/01/15	Customer

2.1.2 Algorithms

There are currently several algorithms being used.

2.1.3 Data flow diagram

2.1.4 Input Forms, Output Forms, Report Formats

2.2 The proposed system

2.2.1 Data sources and destinations

2.2.2 Data flow diagram

2.2.3 Data dictionary

2.2.4 Volumetrics

I have chosen an initial size of 300 files since he estimated he had around 500 customers so this will cover over half. he also said that he has anywhere from 1-4 customers a day(see interview) so this should cover him for around a year because he works around 250 days per year.

3 Objectives

3.1 General Objectives

Fast and easy to book appointments with customers
to be able to access customer information quickly, clearly and easily.
Be able to print out invoices.

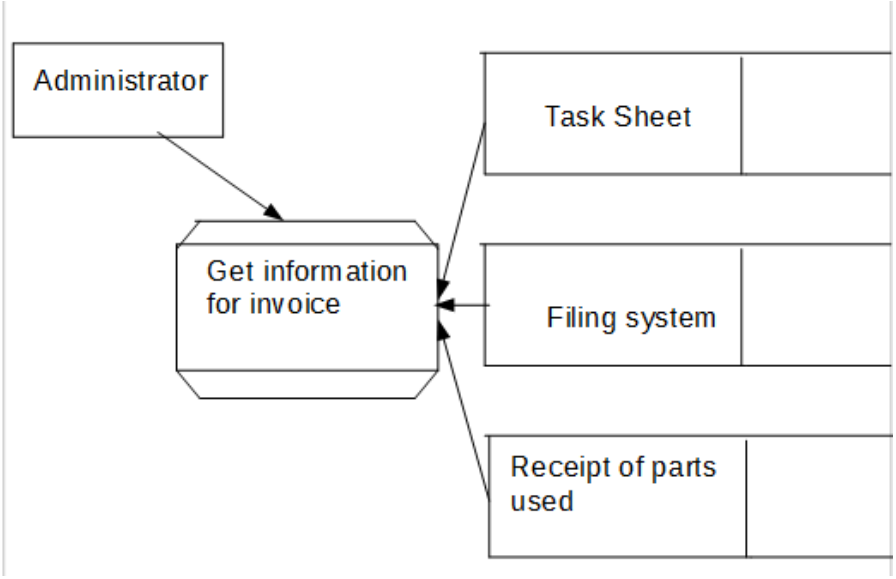


Figure 1: Invoices

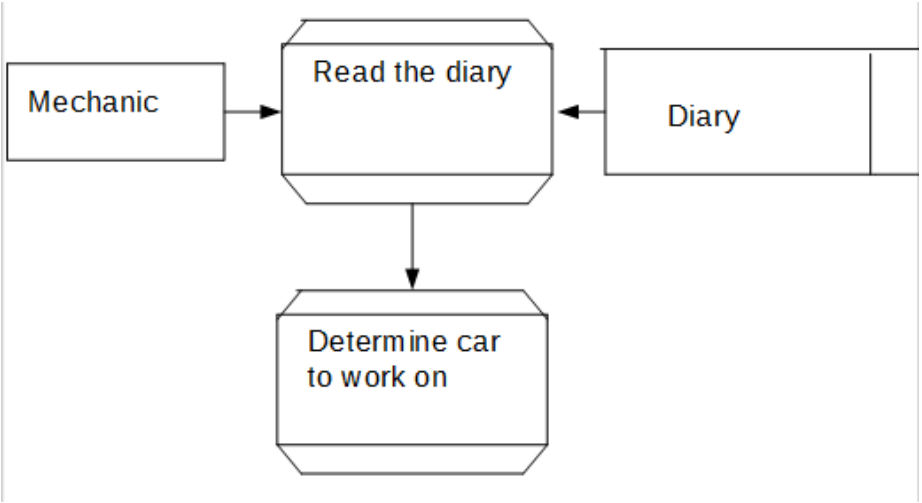
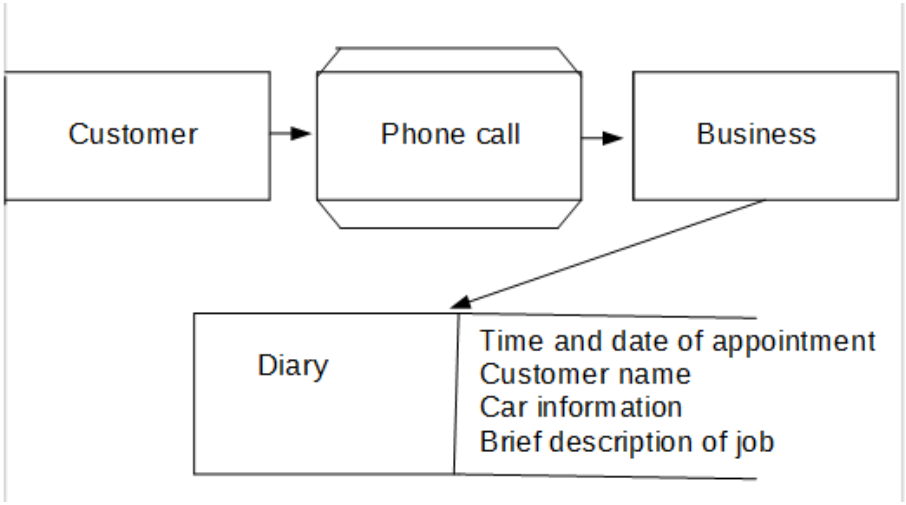


Figure 2: Invoices


Customer
Phone call
Business
Diary
Time and date of appointment
Customer name
Car information
Brief description of job

H

Figure 3: hi

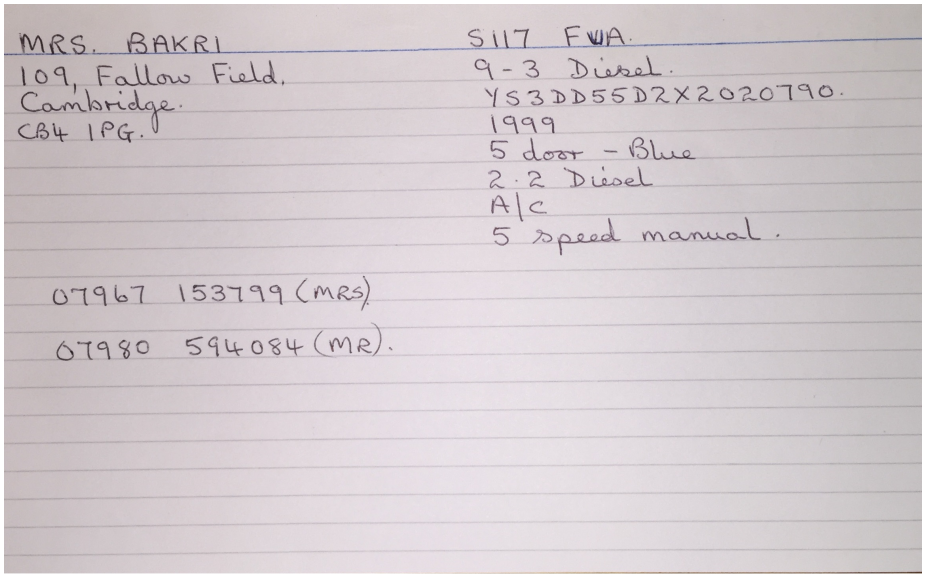


Figure 4: This is an example of the part of the customers file that stores their address and car information.

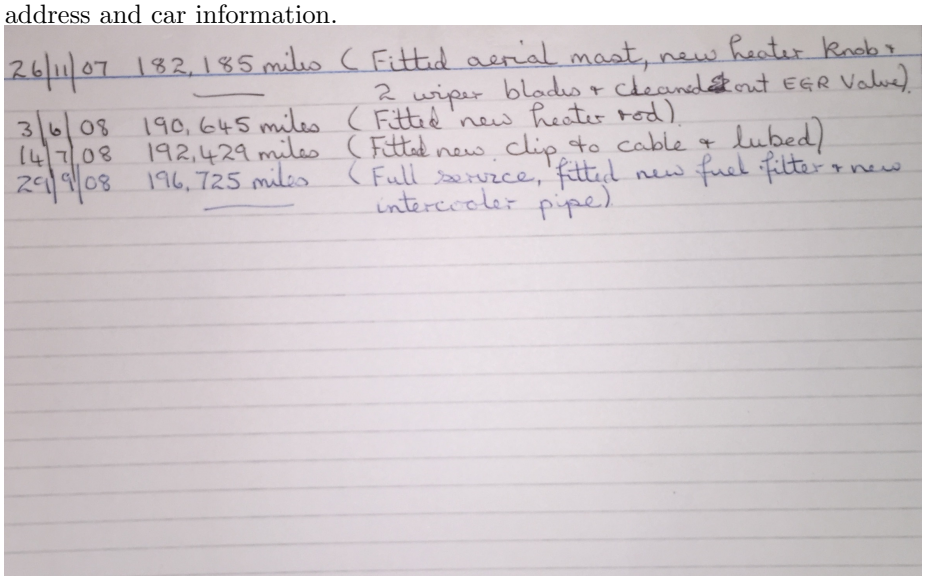
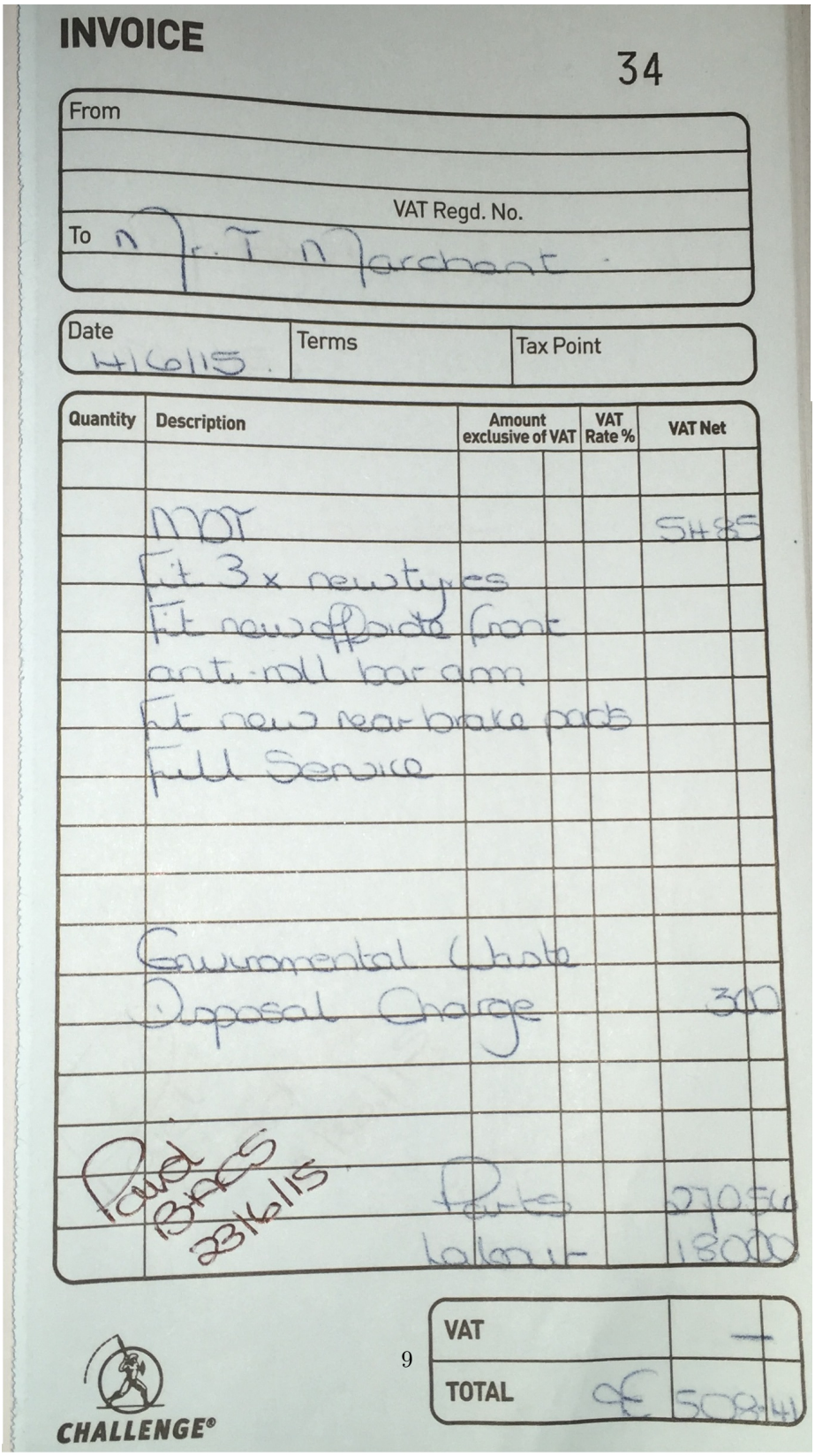


Figure 5: This is an example of the part of the customers file that stores their service history



INVOICE

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From

VAT Regd. No.

To n J. T n Jarchant.

Date	Terms	Tax Point
14/6/15.		

Quantity	Description	Amount exclusive of VAT	VAT Rate %	VAT Net
	MOT			54.85
	Fit 3 x new tyres			
	Fit new offside front anti-roll bar arm			
	Fit new rear brake pads			
	Full Service			
	Environmental Waste Disposal Charge			3.00
	Paid BACS 23/6/15	Parts		270.50
		Labour		180.00
		VAT		—
		TOTAL	£	508.41

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Figure 6: This is an example of an invoice

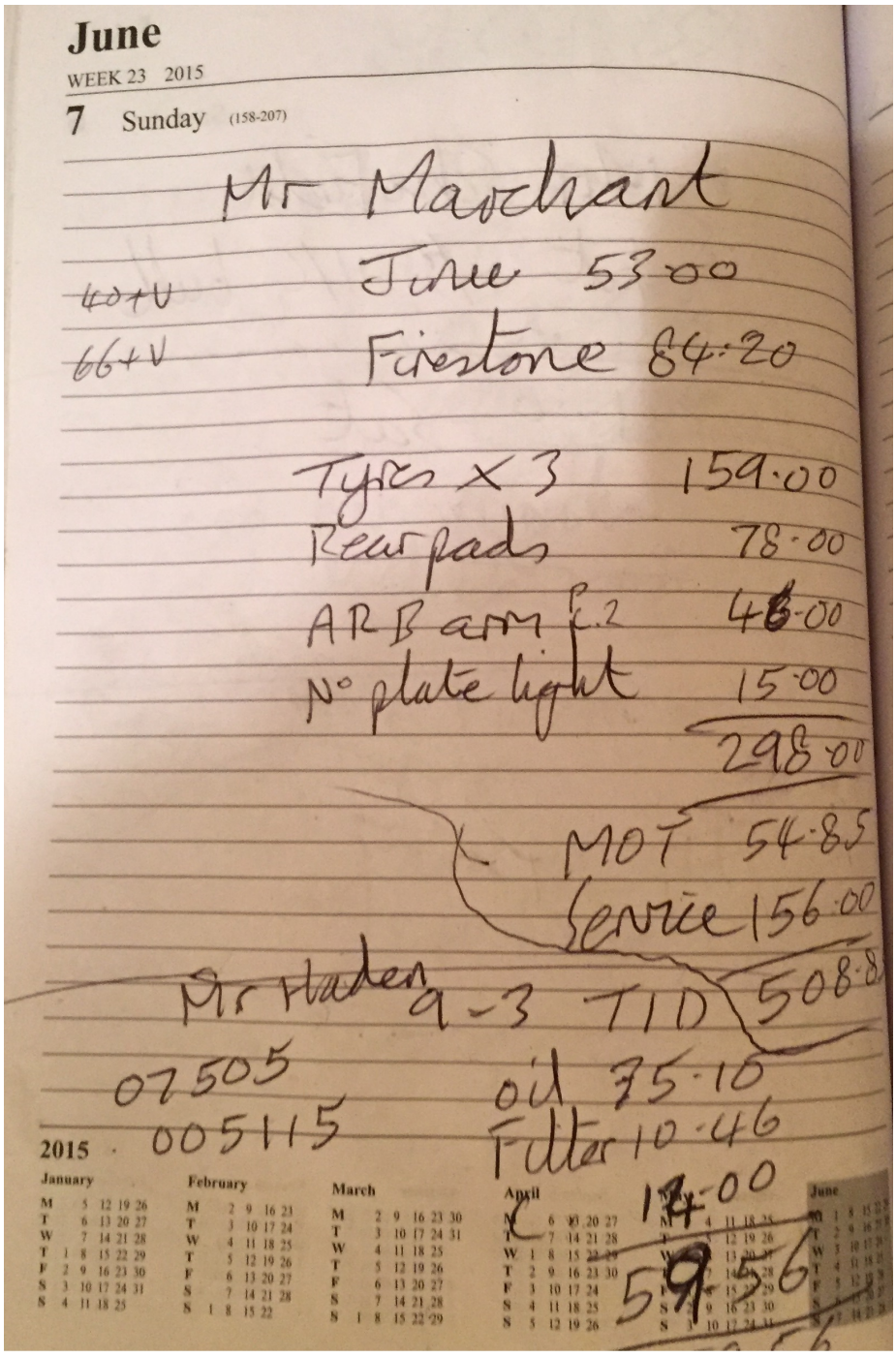

Figure 7: This is an example of a diary entry that Paul uses to book appointments in