GCSE Database Coursework

IDENTIFY

Define problem

There is a lot of confusion at school because there have been unsolved cases of vandalism in the school car parks. This is due to the fact that there is no way to tell between the cars that belong to teaches and the cars that belong to the sixth formers. I need to create a database that I can use to tell who a car belongs to if it is damaged. I can do this by putting the name of the owner, the car colour, the Number plate and make/model of car into a database.

Hardware

The system I am using is as follows: The network has a server that has a Pentium III processor running at 500MHz. It has 512 MB of RAM, 512 k cache memory and a 9 Gb hard drive. The system is referred to as a Citrix Metaframe. The workstations have a 486 processor with 4 MB RAM with a WindowsNT4 operating system. When a workstation is running all processing is done by the server not by the workstation. The system runs in parallel with the main network where work files are stored. I would need a printer in case I needed toy print any reports or forms.

Software – Why used?

The software I use needs to be capable of storing, retrieving and amending data so that I can save files, change them if anyone gets a new car and call it back up to perform queries. I have access to; MS word, MS Access and MS Excel. I am going to use MS Access as I can create a good database that is clear to show information and easy to use.

ANALYSE

Available data

I need to collect data such as name of the owner, car make and model, registration, if the owner is staff or sixth form, if they park in the top or bottom car park, car colour and the owners telephone number.

How data captured?

I will need to devise a questionnaire so that I can collect all of the necessary information to create my database. I will have to send it out to everyone in the sixth form and on the staff so that I know for sure that I have covered everyone who has a car.

Processing required?

I need to find out all of the cars of one particular colour / make / model this is called a query. I need to design a user friendly way of adding, amending and deleting records this is called a form. I also need to Design a quick way of printing out the results of queries this is called a form.

Outputs

I need screen displays that are clear and easy to understand and that are easy to follow, I also need to print out lists of the data in some specific order.

Sub problems

- *Will it be easier to print off lists of all colour categories*
- *What types of data will I assign?*
- *What field names will I use?*
- *How many characters will I assign to a field?*
- *Will a colour scheme make it easier to see records?*

Method of testing

I need to test my new system; I could use it over a period of a week to try out my new database, if a problem arises, I will be able to use my new system as a faster, more affective way of finding out who a damaged car belongs to.

DESIGN

Which data used?

These are the field names I am going to use:

- *Name of the owner – text- 50chars*
- *Car make – text- 50chars*
- *Car model – text- 50chars*
- *Registration number*
- *Is the owner staff or sixth form – text- 50chars*
- *Car colour – text- 50chars*

Method of data capture

I have chosen to go with my initial idea of creating a questionnaire to collect my data, I will have to send it out to everyone in the sixth form and on the staff so that I know for sure that I have covered everyone who has a car.

Outputs/Screen/Print layouts

I need to print off a copy of my data capture form to put in the office of each department and in the sixth form areas so that if there is a problem the person on duty, or who spot's the problem can tell straight away who the car belongs to.

How solution tested?

I have tested my solution by using it over a weeks span, there was one incident when a car with the registration number "G516 XLF" where the door was scratched, the incident was reported straight away and due to my system I managed to find out who's car it was a lot quicker than I would have in the past.

How sub-problems solved

- *Will it be easier to print off lists of all colour categories – I found it easier just to print off the lists straight from the database programme, the lists are in colour order but it is continuous not in sections.*
- *What types of data will I assign? – I am only using text data in my database.*
- *What field names will I use? – Name, Make, Model, Reg.No, Staff/sixth, Colour*
- *How many characters will I assign to a field? – 50 characters to each field*
- *Will a colour scheme make it easier to see records? – I am using a black and white printer, if I was using a colour printer I may consider using a colour scheme as it may be easier.*

IMPLEMENTATION

Description of work

I captured data using my questionnaire. I then constructed a simple database. Entered all of the records from the questionnaires then I produced a query.

EVALUATION

How well was it solved?

My Design works well but there are areas in which I could have improved. I could of added forms or records, and I could of added a special feature to determine where in the car park a person would park. I would have done this by numbering each car parking space and where ever the person falls in the database, is where they park, for example, if a person is number 20 on the database, they will park in space number 20.

Real world use

Databases are used for various things, they are used to keep pupil and staff records and can be linked closely with mail merge. For example if a teacher wants to send out a progress report to all pupil's in one tutor groups parents, he would look up the tutor group in the data base files then type out a simple mail merge letter leaving spaces for every fieldname he needs to put in, for example:

Dear Mrs <<Surname>>

I am writing to inform you of <<Forename>>'s progress during this term. She has achieved a <<Maths>> grade in Mathematics, a<<English>> in English and a <<Science>> in science…

The words inside the <<>>'s are the fieldnames that have been entered into the letter using mail merge.