

## **Tutorial 1 M150**

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I have put this tutorial on the web. This tutorial can be viewed and downloaded from <http://www.users.totalise.co.uk/~rifat> then selecting M150 Tutorials then Tutorial 1.

1) Define the followings : (a) data, (b) information and (c) computers

Describe how computers can be made to work with data?

2) Take a blank sheet and write the followings on it :

Name, Address, Postcode, Age, Profession and other OU courses you are studying

Describe which of those attributes are important to the OU and which are important to your tutor and why?

3) Take the things you have inside your pockets and write all the items that you think can be stored electronically. What sort of persona do you think you present through the cards and documents you hold?

4) List at least 5 items in your house that cannot exist if computers (or computer logic) did not exist?

5) Discuss one advantage and disadvantage of using computers in everyday life? Give one specific recent example of this.

6) Write down on blank paper the route you took to get to Putney for this tutorial. List the individual underground stations, rail stations, roads or bus routes. Describe which part of your route can be classified as data and which one would be information? How can information be better presented to the traveller?

## **Answer to question 1**

*Data* refers to discrete items, such as the price of an item on the shelf of a supermarket, or the type of product listed on a sign over a supermarket aisle. It can be person's name or the number of a bus route.

*Information* involve linking together two or more items of data to provide an item of knowledge.

*Computers* are electronic devices that are used to store, process, disseminate and find data and information.

Computers can work with data to produce information to the user. But they can do this faster and more accurate than the human brain, thus they enhance human capability. What they can't do or not good at doing is creating data or information.

## **Answer to question 2**

The individual attributes can be considered as data. So the OU would be interested in the name, address, postcode and OU courses the students are currently studying. Name, address, postcode can be combined to produce student ID. Name, address and OU courses let the OU keep in touch with the student to ensure that they get their TMA scores and course materials.

The tutor would be interested in Name, Age and Profession. Name to identify the student, Age and Profession can be useful in tutoring as Age of student can be used in historical context when giving specific examples. For example if a student is in his/her 20s the tutor can talk about World Wide Web, MP3, Windows, mobile phones and GPS as well as Pentium IV but if a student is in his/her 40s or more then the tutor can use record player (LP), hi fi, ZX spectrum and MS DOS as examples.

### **Answer to question 3**

Your pockets are likely to have some of the following items that can be stored electronically :

- 1) driving license
- 2) credit card(s)
- 3) store card(s)
- 4) travel ticket
- 5) National Health Service Card
- 6) Library card(s)

Various organisations such as DVLC in Swansea, credit card companies and NHS hold data about you. Probably they store name, age, date of birth and address in common but each do store other different data depending on the type of organisation. Your persona consists of all this data, i.e. it is an 'image' of you created by various collections of data about you, such as your finances, shopping habits, interests and state of health.

### **Answer to question 4**

The 5 times in your house that cannot exist without invention of computer are :

- 1) Washing machine (logic of wash is similar to a computer program)
- 2) Video recorder
- 3) Digital watch/alarm clock
- 4) Mobile telephone
- 5) Oven timer

Of course the personal computer can be included as well as other items. But the point is that computers are everywhere even in devices that are not associated directly with them such as washing machine where a cycle of wash is preprogrammed to control the mechanics of the washing machine in a particular way.

### **Answer to question 5**

This is meant to stimulate discussion about the pros and cons of computers in everyday life.

One advantage is speed, computers are very quick at retrieving data e.g. if we go the World Wide Web and go to the yellow pages website, within it we can search for all the locksmith nearest to the area we live in and the computer gets us back the data very quickly. It would take a human at least an hour to list the same thing.

One disadvantage is security. Computers after all are designed by humans and humans evolve, so someone always find a way of hacking to a computer or writing better computer viruses. But the most notorious recent example of security is surprisingly due to lack of foresight from the designers of computers and software that year 2000 can only be stored in four digits as 00 can mean 1900 or 1800 ..etc. This lead to the much hyped mellenium bug in 1999 which meant all organisation had to upgrade their computers to ensure that nothing can go wrong on 1<sup>st</sup> of January, 2000.

### **Answer to question 6**

Data would be the individual bus numbers or underground station name or rail station name or road name. Information would be the linking of those items to describe a route from your source to Putney.

Information can be better presented using colour coding and naming of specific routes. A good example is the London Underground where specific routes have been given a colour code and name e.g. District Line, Circle Line, Jubilee Line ..etc allowing them to be easily identified by travellers as the underground system is complex and without colour coding and name of routes the traveller will be lost in finding the correct route to get to his/her destination.