4F Computer Studies Chp 7: Collecting your data

Chapter 7 examines the collection of data via the student enrolment system. We can examine this in the ISH.

To collect data accurately and efficiently we need to design forms to do this. Certain questions must then be asked before those forms can be implemented.

- How do we collect all the information that we need about students?
- What types of forms are used to collect data?
- How many people have been consulted in the design of forms to collect the information?
- What headings will be used?
- Are instructions to be inserted? including examples of how to complete the form?
- Layout decisions including sections simple and logical!

FINALLY - TEST IT - WHY?

<u>1.</u> CODING DATA

Codes can represent information. In many cases it is much quicker to insert a code than long words. Also the sizes of files can be reduced if codes are used which in turn increases the speed of searches. Finally, codes are often unique which is more secure.

Designing codes:

- Codes should be the same length. Validation checks can pick this up.
- Easy to use.
- Not to short, so as to run out of codes.

<u>Data capture</u> - getting data into a form which can be recognised and processed by the computer

<u>Key to disc</u> - an enrolment form is the source document. Data is typed in from this, but the problem is that it takes time to input and can lead to typing errors.

Other ways - can you define them?

1. MI CR

2. OMR

3. Barcode readers

4. OCR

- 5. Data can also be captured via the use of <u>SENSORS OR SIGNALS.</u>
- 6. E.g. measuring the water level or the flow of traffic passing along a road.

7. <u>3.</u> <u>Using sensors for control</u>

- <u>8. Traffic light control</u> sensors can monitor the intensity of traffic and control the flow to ease congestion. Data is relayed back to a central computer and the sequencing of the lights is altered.
- <u>9. Remote sensing</u> e.g. weather stations in remote areas. Data is collected and stored with the use of sensors and sent to a central computer. The information is then analysed and used to predict the weather.

10. <u>4.</u> <u>TURNAROUND DOCUMENTS:</u>

11. Documents which are produced by the computer which are then used as input documents by the computer. E.g gas bill and tear off slip which the customer returns with a payment.