

1. Introduction to Computers

Computers come in a wide variety of sizes and types - ranging from the small home computer costing a few hundred pounds to the large machines used by banks and other large firms costing many millions.

Large computers (known as mainframes) are used to process great quantities of data very quickly - and in some cases will have several hundred or perhaps a thousand or more users - each with his/her own keyboard and screen - able to use the computer at the same time. They cost many millions of pounds, will need specially trained staff to operate them, and need to be kept in an air conditioned room. They are usually kept working 24 hours a day - with operating staff working shifts. They are used for processing bank accounts, government data, airline bookings, large firms' payrolls and for many other tasks where great quantities of data have to be dealt with in a reasonable period of time. (Consider how many cheques have to be dealt with by a major clearing bank each day!)

Medium sized computers (known as minicomputers) might have between ten and one hundred users at the same time. They are used for many jobs where the great power of the mainframe is not needed. They generally do not need a specially conditioned room - and are therefore more flexible in where they can be located. Often they might be used to serve a single building - such as carrying out stock control in a large store. Colleges and polytechnics often use them as they are reasonably powerful but much less expensive than mainframes (e.g. tens or hundreds of thousands of pounds). They still require a fairly high level of skill to manage - but are considerably simpler than mainframes.

Small computers (microcomputers) will generally fit on a desktop and have a single user at a time. They range in price from a few hundred pounds for a machine suitable for home use up to a few thousand pounds for a more powerful computer useful to a business. They are commonly used for word-processing, accounts and holding small data bases. They are however becoming very fast and powerful and gradually taking over many of the jobs which used to be carried out by larger machines.

Typically, the COBOL programmer is mainly involved with larger computers (mainframes particularly) but as smaller computers become more powerful it is now reasonably common to use COBOL on microcomputers.

Exercises

1. List 20 uses for computers in business.
2. List 20 uses for computers outside business.
3. For each of the above consider what size computer might be appropriate.
4. Name 2 manufacturers each for:
 - a) mainframes b) minicomputers c) microcomputers.