business and each of its customers and suppliers.

Even the biggest microcomputer-based system, however, has an upper limit on the amount of data that it can store, and cassette-based packages cannot hope to deal with the details of as many transactions as disk-based packages. So one of the key questions any potential user of cassette-based software (or disk-based software, for that matter) has to ask is: Can this system cope with the volume of work associated with my business?

The more data that is stored in a file, the longer it takes a computer to sort, so the usual approach is for programs to retain detailed information on outstanding transactions only (an outstanding transaction is one where money is still owing). Systems based on this principle are called 'open item' ledgers.

An alternative approach is for the computer to retain only the cumulative value of transactions between the business and its customers or suppliers. This is called 'balance brought forward' accounting. It conveys less information, but requires less memory and is simpler to operate. In other words, there is a trade-off between efficiency (in terms of the level of detail that can be recorded) and the demands made on the machine's processing and memory capabilities.
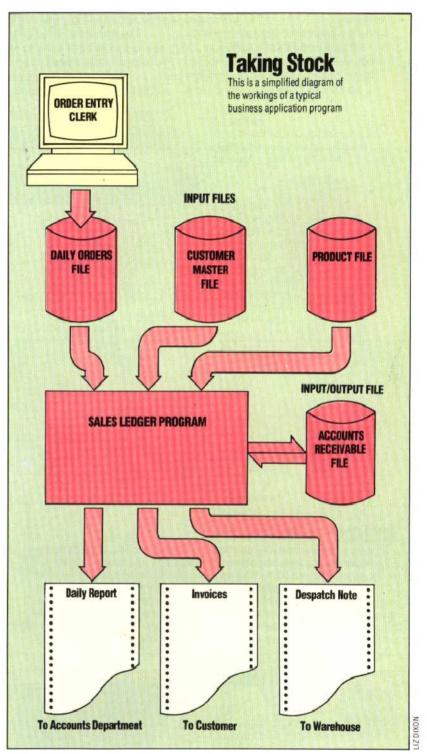
As we will see in the course of this series, disk-based sales and purchase ledger programs have a number of specialised features that it is not possible to incorporate in cassette-based packages. Sales ledger programs, for example, might include an invoicing option that allows the business to generate invoices and statements to send to its customers. Purchase ledger programs might have the ability to print cheques as well as remittance advices (listing what has been purchased) to send to suppliers.

Business software carries out a variety of functions. The easiest way to understand them is to consider the way cash flows into and out of a business. The basic requirement of anyone in business is to find out how much income the company brings in and how much it costs to operate the business. One of the simplest systems for achieving this is the cash book. A manual (non-computerised) cash book has its pages divided into as many columns as the business needs to identify the way in which it spends or receives its cash. The cash book will also have to keep track of the VAT value on each receipt and each payment so that it can pay over or reclaim the correct amount of VAT from Customs & Excise.

The cash book might be updated on a daily or a weekly basis. Each transaction might be written up, or, more usually, the total value of a day's takings might be entered. The difference between the cash book and a full ledger-based accounting system consisting of sales, purchase and nominal ledgers, hinges on the cash book's lack of detail.

Cassette-based business/book-keeping programs have a limited amount of working memory at their disposal. They cannot write data to disk and then clear an area of work space in their

internal memory so that new data can be accepted. Because of this, cassette-based programs tend to follow the summary format of the cash book.

Instead of having three separate cassette programs for the sales, purchase and nominal ledgers, these programs usually amalgamate all three. A typical example would be a program to keep track of the incomings and outgoings of a small trader on a weekly basis. The point of such a system is that it would pull together and summarise the data keyed in from week to week. To do this it has to total up all the cash received and paid out through the week, subtract the one from the other, and present a report of the profit or loss.

The next article in the series will look at the design requirements of such a system.

Taking Stock

This is a simplified diagram of the workings of a typical business application program

ORDER ENTRY CLERK

INPUT FILES

DAILY ORDERS FILE

CUSTOMER MASTER FILE

PRODUCT FILE

SALES LEDGER PROGRAM

INPUT/OUTPUT FILE

ACCOUNTS RECEIVABLE FILE

Daily Report — To Accounts Department

Invoices — To Customer

Despatch Note — To Warehouse

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