

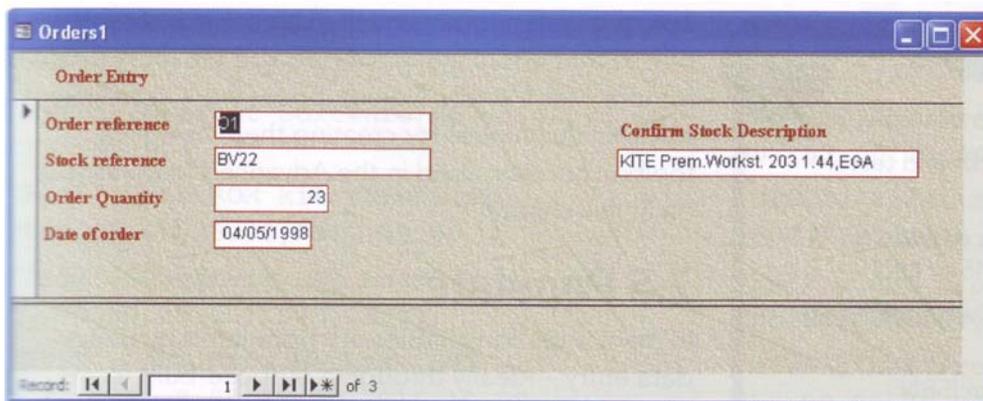
Databases: Data Entry

Creating Forms

Input Forms are generated using the forms wizard. A number of design choices are provided by the wizard and the final form is then produced automatically. The form produced can then be modified using the tool box if necessary.

Verification & Validation

Microsoft Access offers a number of techniques to enable verification. One technique is shown below.



| Order Entry | |
|-----------------|------------|
| Order reference | 91 |
| Stock reference | BV22 |
| Order Quantity | 23 |
| Date of order | 04/05/1998 |

Confirm Stock Description: KITE Prem.Workst. 203 1.44,EGA

Record: 1 of 3

A simple form is used for entering order details over the phone. To avoid an incorrect Stock reference being entered, a query (new virtual table) has been created that uses the relationship between the order table and the Stock table. This allows the Stock Description to be displayed as the Stock reference is entered in order to confirm that the correct product is being ordered. The data entry clerk can then confirm this by looking at the source document and checking that it matches. If the clerk has miskeyed the code, they will notice their mistake during this verification check and can re-enter the code.

Validation Routines

Input masking - One *very* useful validation technique is to set up an **input mask** for a particular field, as shown in the table below.

| Input mask | Description of control character |
|------------|--|
| 0 | Number (0 through 9, entry required; plus [+] and minus [-] signs not allowed). |
| 9 | Number or space (entry not required; plus and minus signs not allowed). |
| # | Number or space (entry not required; blank positions converted to spaces, plus and minus signs allowed). |
| L | Letter (A through Z, entry required). |
| ? | Letter (A through Z, entry optional). |
| A | Letter or number (entry required). |
| a | Letter or number (entry optional). |
| & | Any character or a space (entry required). |
| C | Any character or a space (entry optional). |
| . , . , / | Decimal placeholder and thousands, date, and time separators. (The actual character used depends on the regional settings specified in Microsoft Windows ^o Control Panel.) |
| < | Causes all characters that follow to be converted to lowercase. |
| > | Causes all characters that follow to be converted to uppercase. |
| \ | Causes the character that follows to be displayed as a literal character. Used to display any of the characters listed in this table as literal characters (for example, \A is displayed as just A). |
| Password | Setting the InputMask property to the word Password creates a password entry text box. Any character typed in the text box is stored as the character but is displayed as an asterisk (*). |

Exercise

- 1 Explain the difference between verification and validation of data.
- 2 How can the use of forms help with the validation of data?

Data redundancy and consistency

Users would not normally be expected to enter information more than once unless it is required to double-check an important item, eg a password for consistency. If appropriately normalised, the database will store items only once.

Visual prompts

Visual prompts, eg leaving gaps at key places or pre-inserting special characters that structure (limit) the data entry, can be very useful. It is also sometimes valuable to put explanatory text onto the form next to a field that could be misunderstood. For example, if a form asks a user to enter the check digit for a credit card, you might want to add text explaining where the check digit is found and how many characters it needs.

Drop down and combo boxes

These techniques are widely seen in all Windows applications and are used to assist users in their interactions with the system. In a QUERY, for example, the word 'ascending' is highlighted and this is because only a few choices are available - ; the user in this situation (no sort, descending or ascending) and rather than presenting an open text box, the system gives you the choices in a drop down box so that errors are minimised and the entry process is more

user-friendly. Combo boxes work in a similar way and techniques for creating them using the toolbox are described in the Advanced features later on in this chapter.

Exercise

1 What is input masking? Give an example.

2 Create the following input masks and test them in appropriate fields.

a) Two letters followed by one or two numeric characters, eg HG45 or NK7

b) Three numeric characters always enclosed in brackets, eg (044)

c) An ISBN number of the form ISBN 6-343444455-4.

Assume that the structure is always:

"ISBN" +space+single numeric character+hyphen+9 numeric characters+hyphen+single numeric character