

Appendix

Completion

Assemble your project – in order, with each page clearly numbered and annotated. The examiner will want to know what each printout is for. Complete the covering tick-sheet and hand in to your teacher for marking. You may get parts of your work back with suggestions on how to improve it.

Types of Validation Rules

Validation checks are carried out by the software (in this case Microsoft Access) to make sure that the data which has been input is both sensible and allowable. Data, which is not sensible or allowed, will be rejected. There are many types of validation check that software can make on data; some of these are described below.

- **Range Check:** used to check that data is within a range of numbers or a specific set of values. In a database containing records of all pupils in a school, a range check could be used for the Date of Birth field – the range would be ‘between 01/01/87 and 31/12/91’, for the current pupils.
- **Type Check:** used to check that the correct type of data has been entered in a field. If numeric data is being input a type check would be used to make sure that text data isn’t entered by accident, e.g. a O instead of a 0.
- **Length Check:** used to check that input data contains a certain number of characters. In the example of the school database, the log-on ID for each pupil has to contain four digits and only three were input, an error message would be given to the user.
- **Presence Check:** used to make sure that a value has actually been entered into a field. In some database files entering data in certain fields can be optional. Other fields, such as key fields for example, are compulsory and must have values entered in them. Going back to the example of the school database, a field containing data about special medical condition is not going to affect every pupil, and so is not compulsory. An emergency daytime contact number is necessary for every pupil, and therefore is compulsory.

Using Validation Checks

You do not have to try to use every type of validation check in your database, or use complicated validation rules. You do, however, have to include screen shots as evidence that you have used some form of validation in your work. Some validation checks are simple to include in your work, for example, the presence check. There are alternatives to using validation checks, for example, input masks and drop down lists (combo or list boxes) limiting the data that can be entered in a field.

Table 1 below gives examples of typical validation rules that can be included in a database. If you choose to write a validation rule, you must write corresponding validation text, the error message that is displayed to the person entering the data. In the school database example, the Gender field has a validation rule, entry may only be ‘Male’ or ‘Female’, and uses the equal to operator. The validation text displayed if an error is made is – Please enter Male or Female for Gender.

Operator	Meaning	Example
<	Less than	<20
<=	Less than or equal to	<=20
>	Greater than	>0
>=	Greater than or equal to	>=0
=	Equal to	=“Male” OR “Female” =20
<>	Not equal to	<>ICT
BETWEEN	Test for a range of values, must include a higher and lower value separated by the AND operator	BETWEEN 01/01/86 AND 31/12/90