

REFERENTIAL INTEGRITY

MAINTAINING REFERENTIAL INTEGRITY

Referential integrity is a system of rules that control how data can be deleted or modified between related tables. This protects data from being changed erroneously from a primary table required by a related table. Referential integrity can be applied when:

- ☞ The matching field from the primary table is a primary key or has a unique index.
- ☞ The related fields have the same data type. There are two exceptions to this rule. They are:
 - An **AutoNumber** field can be related to a **Number** field with a **Field Size** property setting of **Long Integer**.
 - An **AutoNumber** field with a **Field Size** property setting of **Replication ID** can be related to a **Number** field with a **Field Size** property setting of **Replication ID**.
- ☞ Both tables belong to the same Microsoft Access database.
 - If the tables are linked tables, they must be tables in Microsoft Access format.
 - The database in which the tables are stored must be open.
 - Referential integrity cannot be enforced for linked tables from databases in other formats.

Referential integrity places some limitations on entering records into a table.

- ☞ Before adding a record to a related table, a matching record must exist in the primary table.
- ☞ The value of the primary key in the primary table cannot be changed if matching records exist in a related table.
- ☞ A record in the primary table cannot be deleted if matching records exist in a related table.

ENSURING REFERENTIAL INTEGRITY

- ❖ Open the **Chamber Access Training** database.
- ❖ Click the **Database Tools Tab**.
- ❖ In the **Show/Hide Group**, click the **Relationships** button.
- ❖ The **Relationships** window should open.
- ❖ In this window, drag the borders of the box for **Spot Play** until all the field names are visible.
- ❖ In the **Productions** table box, click and hold the pointer over **IDShow**.
- ❖ Drag the pointer to the **SponsorShowID** field name in the **SpotPlay** box.
- ❖ Release the mouse button.
- ❖ In the **Edit Relationships** dialog box, click the check box for **Enforce Referential Integrity**.
- ❖ This will establish a **One-to-Many Relationship** between the two tables.
- ❖ This means that the **Products** table contains one record while the **SpotPlay** table contains many records with the same **ID**.
- ❖ There are two other options that are available here. They are:

Option	Description
Cascade Update Related Fields	With this option, when a change is made to the related table, the change will be made in the other table also.
Cascade Delete Related Fields	With this option, when a change is made to one table, the entries in the related table will not be valid anymore. Therefore, Access will delete the records in the other table.

- ❖ Click the **Create** button.
- ❖ A relationship with referential integrity will be created.
- ❖ The type of relationship will be displayed above the line on the table as shown in the illustration below.

