Maintain 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.

Ensure Referential Integrrity

- Open Access Training: Database2.
- Click the Database Tools Tab.
- In the Show/Hide Group, click the Relationships button.
- The Relationships window should open.
- Click the Show Tables button in the Relationships Group.

- Add the Spot Play and the Production tables to the window.
- Drag the two tables below the Representatives and Clients tables.
- 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.
- The Edit Relationships dialog box will display (see illustration on next page).
- 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 as explained in the table below.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cascade Update Related Fields</td>
<td>With this option, when a change is made to the related table, the change will be made in the other table also.</td>
</tr>
<tr>
<td>Cascade Delete Related Fields</td>
<td>With this option, when a record in one table is deleted, the entries in the related table will not be valid anymore. Therefore, Access will delete the records in the other table.</td>
</tr>
</tbody>
</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.