

ADDING CALCULATED FIELDS TO SELECT QUERIES

CREATING A PARAMETER QUERY

This type of query is used to extract data from a table that meets the criteria input by the operator. It is a good query to use when looking for data that meets very precise criteria.

- ❖ Make sure **Queries** is selected in the **Objects** bar.
- ❖ Click the **Create query in Design View** option.
- ❖ From the **Show Tables** list choose **Clients**.
- ❖ Click the **Add** button to add this table to the **Design** grid.
- ❖ Click the **Close** button to exit from the **Show Tables** dialog box.
- ❖ Select the following fields from the **Clients** table box in the order specified.
 - Zip/postal
 - Company name
 - Address 1
 - Address 2
 - City
 - State/province
 - Phone 1
 - Phone 2
 - Email
- ❖ In the column for **Zip/postal**, click the **Criteria** cell.
- ❖ Type [**Enter ZIP code:**].
- ❖ Save the query using one of the following methods:
 - Click **File, Save** on the **Menu Bar**.
 - Click the **Save** button on the toolbar.
- ❖ The name for the query is **Show clients by ZIP code**.
- ❖ Click **OK** to save the query.
- ❖ View the query in **Datasheet View** to test it.
- ❖ In the dialog box that appears type **64120**.
- ❖ Click **OK** to view the results of the query.
- ❖ The Datasheet should show two clients.
- ❖ Select **Close** to close the query.

CREATING A QUERY USING THE TOTALS OPTION

The Totals option is used to Sum, Count, Average, and so forth a field of information. When the Total option is selected, an additional row is added to the Design grid of the query.

- ❖ Select the option for **Create query in design view**.
- ❖ Select the **Payments** table from the **Show Tables** dialog box.
- ❖ Select all the fields from the **Payments** box by clicking on the first field, holding down the **Shift** key and clicking on the last field.
- ❖ Drag the fields to the first box in the **Design** grid.
- ❖ Release the mouse button. All the fields should appear in the grid in separate columns.
- ❖ Do one of the following:
 - Select **View** on the **Menu Bar** and then select **Totals**.
 - Click the **Totals** button on the toolbar (see illustration at right).

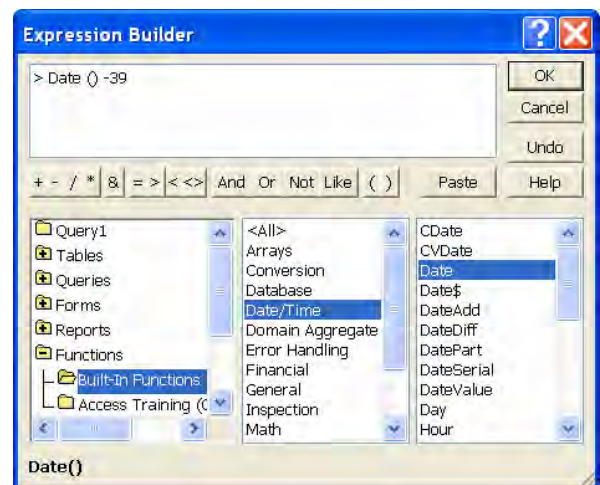


- ❖ Leave the **Total** cell settings for the **IDPayment**, **ClientID**, and **Date of payment** as **Group by**.
- ❖ Set the **Total** cell for the **Amount paid** field to **Last**.
 - This query will show the last payment for nine of the clients.
 - The field name for that field will appear as **Last of Amount Paid**.
- ❖ Save the query with the name **Show latest payment**.
- ❖ To see the results of the query, view it in **Datasheet View**.
- ❖ Close the query, saving the changes if prompted to do so.

CREATING A QUERY USING TOTALS AND BUILD OPTIONS

Build options are used to perform calculations in a query. The Expression Builder is used to generate the search criteria for the query.

- ❖ Choose **Create query in design view**.
- ❖ Select the **Spot orders** table from the **Show Tables** list.
- ❖ Add the fields **IDSpot**, **ClientID**, and **Start date** to the Design grid.
- ❖ Add the **Totals** line to the Design grid using one of the options described in the previous section.
- ❖ In the column for **IDSpot**, click the **Total** cell.
- ❖ From the list choose **Count**.
- ❖ In the column for **Start date**, click the **Total** cell.
- ❖ From the list choose **Where**.
 - You have to add this extra step for entering query criteria whenever the **Total** row is visible in Query Design View.
 - Choosing **Where** automatically removes the check mark for the **Show** box for that field.
- ❖ In the column for **Start date**, click the **Criteria** cell.
- ❖ Click the **Build** button on the toolbar (see illustration at right).
- ❖ The **Expression Builder** dialog box will appear (see illustration below).
- ❖ In the **Expression Builder**, click the **greater than (>)** button.
- ❖ In the **left** list, double-click the **Functions** folder.
- ❖ Click the **Built-In Functions** subfolder.
- ❖ In the **middle** list, click **Date/Time**.
 - Make sure that you click the middle list only **once**.
 - A double-click will add a term to the upper text box.
- ❖ In the **right** list, double-click **Date**.
- ❖ Type **-30** in the box at the top of the dialog box, next to the parentheses after the word **Date**.
- ❖ Click **OK** to exit the dialog box and place the expression in the **Criteria** row.
- ❖ In the **Design View** window, press **Tab**.
- ❖ Save the file with the name **Count spots for clients in last 30 days**.
- ❖ Test the query by clicking the **View** button on the toolbar.
 - In the Datasheet View for the query, the field **Count of ID Spot** shows the number of spots each client has purchased for running during the past 30 days.



- When the database was created, winter 2005 was used as the example.
- Because the query is being run at this time, the query results will not show the data.
- ❖ If this query was run earlier than winter 2005, this problem could be solved, by completing the steps below:
 - Return to **Query Design View**.
 - In the upper pane, double-click the **Start date** field to add it to the query a second time. When creating a query, it is possible to add a field to the query more than once.
 - In the second column for **Start date**, click the **Total** cell.
 - From the list, choose **Where**.
 - In this same column, click the **Criteria** cell.
 - Click the **Build** button on the toolbar.
 - In the **Expression Builder** dialog box, click the **less than (<)** button.
 - In the **left** list, double-click the **Functions** folder.
 - Click the **Built-In Functions** subfolder under **Functions**.
 - In the **middle** list, click **Date/Time**.
 - Make sure that you click the middle list only once.
 - A double-click will add a term to the upper text box.
 - In the **right** list, double-click **Now** and then click **OK**.
 - In the **Design View** window, press the **Tab** key.
 - Save the query.
- ❖ To test the revised query, view it in Datasheet View.
 - If this query were being run during the same quarter of the year 2005 as when it was created, you would see the results of the query.
 - If the query were being run earlier than the quarter when it was created, you would not see any results – which is correct.
 - If the query were being run during a later quarter than when it was created, you would not see any results – which is also correct.
 - Sometimes when a query does not show any results, it is a good thing.
- ❖ Close the query, saving the changes if necessary.

CREATING A CALCULATED FIELD BY INPUTTING EXPRESSIONS MANUALLY

This query will be used to divide payments received over the last 90 days into groups according to the client's ID number. It will also show the sum of what each client has paid.

- ❖ Make sure that **Queries** is selected on the **Objects** pane.
- ❖ Click the **New** button on the toolbar.
- ❖ Click **Design View** from the list of query options.
- ❖ From the **Show Tables** list, add the **Payments** and **Clients** tables to the **Design Grid**.
- ❖ If necessary, create a Join Line between the **IDClient** field in the **Clients** box to the **ClientID** field in the **Payments** box.
- ❖ Add the **Totals** row to the **Design Grid**.
- ❖ Add the field **ID Client** from the **Clients** table for the first **Field**.
- ❖ In the **second** column, click the **Field** cell.
- ❖ Type **Total paid: Sum([Payments]![Amount paid])**.
- ❖ In the same column, click the **Total** cell.
- ❖ From the drop-down list, choose the **Expression** option.
- ❖ In the **third** column, click the **Field** cell.

- ❖ From the drop-down list, choose **Payments.Date of payment**.
- ❖ In the **Total** cell for this column, choose **Where**.
- ❖ In the same column, click the **Criteria** cell and input **<=Date()-90**.
- ❖ Save the query as **Show clients' payments in last 90 days**.
- ❖ Test the query by viewing it in Datasheet View.
 - As in the previous query, you may not see any results.
 - This is because of when the query is being run.
- ❖ Close the query.