

You are the manager of the small business loan department for the U.S. government. You need to calculate the payments for the loans that are currently on the books. To do this, you will need to create a query and add the Pmt function to calculate the loan payments for each loan. You will also summarize each loan by loan type (M=Mortgage, C=Car, and O=Other). Refer to Figure 3.32 as you complete this exercise.

FIGURE 3.32 Loan Payments Query Results

LoanID	Company	Amount	InterestRate	Term	LoanClass	Payment
1	Jones and Co	29,000.00	5.90%	15 M		\$243.15
2	Elements, Inc.	23,000.00	5.25%	5 C		\$436.68
3	Godshall Meats, LLC	24,000.00	4.50%	3 C		\$713.93
4	Godshall Meats, LLC	12,000.00	3.99%	10 O		\$121.44
5	Godshall Meats, LLC	60,000.00	5.50%	30 M		\$340.67
6	Elements, Inc.	4,000.00	6.50%	5 O		\$78.26
7	Jones and Co	43,000.00	5.50%	5 O		\$821.35
8	Jones and Co	37,000.00	5.80%	30 M		\$217.10
9	Jones and Co	15,000.00	4.75%	3 O		\$447.88
10	Jones and Co	8,000.00	5.50%	15 M		\$65.37
11	Godshall Meats, LLC	34,000.00	5.00%	3 C		\$1,019.01
12	Godshall Meats, LLC	13,000.00	7.99%	5 O		\$263.53
13	Jones and Co	46,000.00	6.50%	5 C		\$900.04
14	Godshall Meats, LLC	56,000.00	5.99%	15 M		\$472.26
15	Godshall Meats, LLC	54,000.00	6.25%	15 M		\$463.01
16	Jones and Co	39,000.00	6.50%	15 M		\$339.73
17	Jones and Co	21,000.00	6.00%	30 M		\$125.91
18	Godshall Meats, LLC	27,000.00	5.50%	3 O		\$815.29
19	Elements, Inc.	44,000.00	5.50%	5 C		\$840.45
20	Godshall Meats, LLC	22,000.00	6.25%	4 C		\$519.20
21	Godshall Meats, LLC	6,000.00	6.75%	4 C		\$142.98
22	Godshall Meats, LLC	46,000.00	6.50%	15 M		\$400.71
23	Jones and Co	25,000.00	5.00%	15 M		\$197.70
24	Jones and Co	11,000.00	5.55%	30 M		\$62.80
25	Jones and Co	52,000.00	4.99%	15 M		\$410.94
Total		751,000.00	5.74%			

a. Open Access and create a new blank desktop database named **a03m1Loans_LastFirst**. Access will display a table named Table1 with one field, ID.

b. Switch to Design view. Type **Customers** in the **Save As dialog box** and click OK.

c. Change the first field Name to **CustomerID** and accept **AutoNumber** as the Data Type. Type **Company** in the second row and press **Tab**. Accept **Short Text** as the Data Type. Type **FirstLastName** in the third row and press **Tab**. Accept **Short Text** as the Data Type.

d. Type the remainder of the fields:

LastName	Short Text
City	Short Text
State	Short Text
Zip	Short Text

e. Verify the first field is set as the primary key.

f. Switch to Datasheet view. Click **Yes** to save the table. Add the records as shown in the following table. Note you will allow Access to assign an ID. Once you have entered the records, close the Customers table.

Company	FirstName	LastName	City	State	Zip
Jones and Co	Robert	Paterson	Greensboro	NC	27401
Elements, Inc.	Merve	Kana	Paterson	NJ	07505
Godshall Meats, LLC	Francisco	De La Cruz	Beverly Hills	CA	90210

g. Click the **External Data tab** and click **Excel** in the Import & Link group. Click **Browse** to locate the **a03m1Loans** spreadsheet. Select the database and click **Open** at the bottom of the dialog box.

2 Investment Properties

You are in charge of LGS Investment's database, which contains all of the information on the properties your firm has listed and sold. Your task is to determine the length of time each property was on the market before it sold. You also need to calculate the sales commission from each property sold. Two agents will receive commission on each transaction: the listing agent and the selling agent. You also need to summarize the sales data by employee and calculate the average number of days each employee's sales were on the market prior to selling and the total commission earned by the employees. Refer to Figure 3.33 as you complete this exercise.

- n. Switch to Design view and change the display to **Currency format**. Run the query again to verify your changes. Compare your results to Figure 3.32.
- o. Switch to Datasheet view and add a **Totals row**. Use it to calculate the sum of the amount column, the average interest rate, and the average term. Save and close the query.
- p. Create a copy of Loan Payments. Save the new query as **Loan Payments Summary**.
- q. Open the Loan Payments Summary query in Design view and rearrange the columns as follows: LoanClass, LoanID, Amount, and InterestRate. Delete columns CompanyName, Term, and Payment. Click **Totals** in the Show/Hide group. Change the Total row from left to right as follows: Group By, Count, Sum, and Avg. Run the query.
- r. Switch to Design view and display the Property Sheet. For the LoanID field, change the caption to **Loans**. For the Amount field, change the caption to **Total Amount** and change the format to **Currency**. For the InterestRate field, change the caption to **Avg Interest Rate** and change the format to **Percent**. Run the query. Save and close the query.
- s. Exit Access, and submit based on your instructor's directions.

TROUBLESHOOTING: If you cannot see the fields from your current query, ensure you have saved the query. Try closing and reopening the query.

- h. Ensure the **Import the source data into a new table in the current database option** is selected and click **OK**. Click **Next** three times, until you are asked to add a primary key. From the **Choose my own Primary Key** menu, select **LoanID** (this should be the default option). Click **Next** once more and click **Finish**. Click **Close** in the Save Import Steps dialog box.
 - i. Open the Loans table in Design view. Select the **InterestRate** field and change the format to **Percent**. Change the field size for the CustomerID field to **Long Integer**. Click **Yes** when prompted that some data may be lost. Save and close the table.
 - j. Click the **Database Tools** tab and click **Relationships** in the Relationships group. Add both tables to the Relationships window and close the Show Table dialog box.
 - k. Drag the **CustomerID** field from the Customers table and drop it onto the CustomerID field in the Loans table. Check the **Enforce Referential Integrity** check box in the Edit Relationships dialog box and click **Create**. Save and close the Relationships window.
 - l. Create a query using the two tables that will calculate the payment amount for each loan. Add the following fields: **Company**, **LoanID**, **Amount**, **InterestRate**, **Term**, and **LoanClass**. Sort the query by LoanID in ascending order. Save the query as **Loan Payments**.
 - m. Add a calculated field named **Payment** in the first blank column to calculate the loan payment for each loan, using the Expression Builder. Use the Pmt function. Insert the appropriate field names in place of the placeholder arguments. Assume the loans have monthly payments (12 payments per year). Ensure the payment displays as a positive number. Run the query.
- The first loan should have a value of approximately \$243.15 (the extra decimal places will be removed shortly). Refer to Figure 3.32. If your number does not match up, reexamine your formula.