152-124 Introduction to Database
Project 1

Morris Arboretum

Project Overview:

The Morris Arboretum in Chestnut Hill, Pennsylvania, tracks its donors in Excel. They also use Excel to store a list of plants in stock. As donors contribute funds to the Arboretum, they can elect to receive a plant gift from the Arboretum. These plants are both rare plants and hard-to-find old favorites, and they are part of the annual appeal and membership drive to benefit the Arboretum's programs. The organization has grown, and the files are too large and inefficient to handle in Excel. Your task will be to begin the conversion of the files from Excel to Access.

Data Files: (to be used in Step 3 below)

project1donors.xls

project1plants.xls

Project Steps:

1) Create a New Database

a) Create a new database in which to store the currently identified objects related to Morris Arboretum. Name the database **Project1XXX.accdb** where XXX is modified with your initials.

b) Locate the Excel workbook named ***project1donors*** and open it.

c) Locate the Excel workbook named ***project1plants*** and open it.

d) Examine the data in each worksheet and identify the column that will become the primary key in an Access table. Primary key: _____

e) Identify the foreign keys in each table. Foreign key(s): _____

2) **Create a New Table**

a) In the **Project1XXX.accdb**, a new blank table should have been created automatically. You will use this table to hold the donations as they are received from the donors. Save this table and call it **Donations**.

b) Using the Design view, make the following changes to the **Donations** table design:

i) Change ID field to **DonationID** with an *AutoNumber* Data Type.

ii) Identify the **DonationID** field as the primary key of the table.

iii) Add **DonorID** (a foreign key) as *Number* (long integer) Data Type.

iv) Add **PlantID** (a foreign key) as *Number* (long integer) Data Type.

v) Add a field to store the date of the donation. Give it an appropriate name, DonationDate, and appropriate data type, DateTime (Format: short date)

vi) Add a field to store the amount of the donation. Give it an appropriate name, AmountOfDonation and appropriate data type of Currency.

ii) Save the **Donations** table.

3) **Import Data from Excel**

a) Import the ***project1donors*** using the Import Spreadsheet Data Wizard (Import Excel data command).

i) Set the **DonorID** field Indexed option to **Yes (No Duplicates)**

ii) Select **DonorID** as the primary key when prompted

iii) Name the table **Donors**

iv) Modify the **DonorID** field size property to Long Integer.

v) Save the changes to the **Donors** table

b) Import the ***project1plants*** using the Import Spreadsheet Data Wizard. (Import Excel data command)

i) Set the **ID** field Indexed option to **Yes (No Duplicates)**

ii) Select **ID** as the primary key when prompted

iii) Save the table **Plants**

iv) Modify the **ID** field name in **Plants** table to **PlantID**

v) Modify the **PlantID** field size property to Long Integer.

vi) Save the changes to the **Plants** table

4) **Create Relationships**

a) Open the Relationships window

b) Add the three tables to Relationships window using the Show Table dialog box

c) Close the Show Tables dialog box.

d) Create the relationships between the tables using the Relationships window by identifying the primary key fields in each table and connect them with their foreign key counterparts in related tables.

i) Drag the **DonorID** field in the Donors table onto the DonorID field in the Donations table.

ii) Enforce referential integrity

iii) Check the Cascade Update Related Fields option.

iv) Drag the **PlantID** field in the Plants table onto the PlantID field in the Donations table.

v) Enforce referential integrity

vi) Check the Cascade Update Related Fields option.

e) Close the Relationships window and save your changes

5) **Add Sample Data**

a) Open the Donations table

b) Add 20 records using the following guidelines:

i) Use any donor from the Donors table (Use at least 5 different donors)

ii) Enter the date the donation using dates from last month, this month, and next month. (Enter 7 records with a date in the last month, 7 with a date in the current month, & 6 using next month)

iii) Use any amount of donation. (Use amounts between 10 and 100 for 10 of the records and amounts between 101 and 1000 for 10 of the records)

iv) Use any plant from the Plants table (use at least 5 different plants).

6) **Use the Query Wizard**

Create a query of all donations greater than $100 in the Donations table. Use the following guidelines:

i) Include the DonorID and AmountOfDonation fields

ii) Name the query DonationsOver100

iii) Add criteria to include only donations of more than $100.

iv) Sort the query data so it displays in descending order by AmountOfDonation

v) Run the query and verify the results (should get 10 records sort by descending AmountOfDonation)

vi) Close the query.

7) **Create a query using design view**

a) Create a query that identifies the people who have made a donation in the current month. The query results will be given to the Arboretum staff so they can notify the donors that a plant is ready for pick up.

b) Click the Create tab, and then click Query Design in the Queries group

c) Add the tables and fields necessary to produce the query as stated previously.

d) The query should list the donor's full name, phone number, the amount of the donation, the date of the donation, and name of the plant they want.

e) Sort the query by date of donation, then by donor last name.

f) Save the query and name it **"Plant Pickup List"**

g) Run the query and verify the results (should get 7 records sorted by date then last name).

8) **Close the database**

9) **Submit your completed Project1XXX.accdb to Blackboard.**