CS 101 Lab 9

Database   *Paul Cao*

The lab report is due before class on Wednesday 4/16/2011. You need to submit your database file with the queries you built up. Submit your database file through the lab 9 dropbox on angel.

Objective
- Practice how to build up a database through import.
- Construct database with multiple tables.
- Construct MS access queries with multiple tables.

In this lab, we will practice building up a MS Access 2007 database by importing data from text files. We will put the exercise in the context of a database for a company called rugs-for-you. This company sells rugs (obviously) and we will focus on the database the company has for employee insurance information.

1. Create the database with three tables
The company's database will require three tables:
- Employee: This table contains the basic information of each employee with an identification number serving as the primary key
- InsurancePlan: This table contains information on each type of insurance option provided by the company. The primary key is the plan type.
- InsurancePolicy: This table contains information on the individual policies held by the employees. It has two foreign keys: the EmployeeId and PlanType.

In the lab 12 folder there is a zip file called data.zip. Download this zip file and unzip the three text files to your desktop (employee.txt, InsurancePlans.txt, and InsurancePolicies.txt). These three files will be used to create three tables in our database.

Launch Access 2007 and create a new database called RugsForYou. Save it to a place that is convenient for you.

Q1: Create three tables

First create the Employees table with the following fields

Field Name	Field Type	Description
EmployeeId	Number	Employee's identification number
LastName	Text	Employee's first name
FirstName	Text	Employee's second name
Birthday	Date/Time	Employee's birth date
PayRate	Currency	Employee's hourly rate
HoursWorked	Number	Number of hours worked in

Then import the data to this table using the file Employee.txt.

Similarly build the InsurancePlans and InsurancePolicies tables using the InsruancePlan.txt and InsurancePolicy.txt, respectively.

Here are the field information of the two tables.
InsurancePlans

Field Name	Field Type	Description
PlanType	Text	Code for the type of plan
Description	Text	Description of this type of insurance plan.
MonthlyCost	Currency	Monthly cost for this type of plan

InsurancePolicies

Field Name	Field Type	Description
EmployeeId	Number	Policy holder's identification number
PlanType	Text	Type of insurance plan for this policy
DateIssued	Date/Time	Date the policy was issued

Q2: Build up the relationships among the three tables.
Use the relationship builder from the Database Tools tab to build the relationship among the three tables. Link the common fields of the three tables together.

You may observe that the relationship between Employees and InsurancePolicies is one-to-one while the other relationship between InsurancePlans and InsurancePolicies is one-to-many.

2. Ask questions on this database

Q3: create a query to display all the employees whose insurance type is A1. Display the employee's first name, last name, birthday and the issue dates of the policy. Call this query A1Plan.

Q4: create a query to find all the employees who satisfies **all** the following requirements
- were born before 1/1/1980
- pay rate is lower than 13.00
- insurance policy was issued earlier than 1/1/2000

Display the employee's first name, employee id, insurance type, monthly cost of the insurance plan, and description of the insurance type.