FOR 240
Introduction to Computing in Natural Resources

Course Project
Timber Cruising Management System

A timber cruising management system needs to be developed for the course project, which consists of the following four modules:

Module 1:   Data Storage – Design and build a simple database to store the field data using MS Access.

Module 2:   Data Collection – Collect field data using HP Jornada handheld and transfer field data from handheld to desktop PC.

Module 3:   Data Manipulation - Design an interface and implement business functionalities to manipulate the data and generate desired reports.

Module 4:   Data Report – Design three web pages to summarize your Module 1, 2, and 3, respectively.

1. Module 1 – Data Storage

A database for timber cruising needs to be implemented in module 1. It is about the same as you did in Labs 5, 6, and 7. You should use MS Pocket Access to build it on the handheld and save it as dbTimberCruz, which should consist of the following tables:

(1) Table Plot (tblPlot)

PlotID	Integer, primary key
PlotType	Text
Forest	Text
Crew	Text
Date	Date/Time

(2) Table Trees (tblTrees)

TreeID	Integer, primary key
PlotID	Integer, not null, refers to PlotID in Table Plot
SppID	Integer, not null, refers to SppID in Table Species
DBH	Single
MHT	Single
THT	Single

(3) Table Species (tblSpecies)

SppID	Integer, primary key
SppName	Text (10)

2. Module 2 – Data Collection

Cruising data must be collected in this module. Basically, you should complete the following tasks:
- Define species
- Identify at least five 1/10- acre square plots
- Collect plot and tree data
- Transfer data from HPC to desktop PC

Once you transferred your database to the PC, you need to create the following queries and reports as you have done in Labs 5 and 6:

- Basal area and volume summaries by plot
- Basal area and volume summaries by species

3. Module 3 – Data Manipulation

In this module, some business functionalities should be implemented and programmed using Visual Basic based on what you have done in Lab 9 and Homework Assignment 4. What you should do are as follows:
- Design VB forms to manipulate the data in the database. It should allow the users to add, edit or delete the data in data tables.
- Create VB interface to allow you to generate summary reports.
- VB controls and objects that might be used in this module include Data Access Object (DAO), Data Control, and DB Grid.

4. Module 4 – Data Report

Using HTML, three web pages need to be developed to summarize the Module 1, 2, and 3, respectively, with texts and necessary screen shots or images. You also need to update the main page of your Lab 1 to include web links to your course projects, specifically, these three pages associated with the Module 1, 2, and 3.

5. Final report and demo

To finalize the project, you need to:
- Use MS Word to write your final report of about five pages plus a cover page and a table of contents,
- Demonstrate your project on a computer.

Using this timber cruising management system as a template, you are also allowed to choose your own project in your major area. However, you need to discuss with me to select a project in your area.