Name:

By submitting this exam by email to rwatson@terry.uga.edu you acknowledge that the completed exam is entirely your own work and you have complied with the Academic Honesty program of the University of Georgia.

You may consult your notes and textbook and use your computer for testing SQL queries or drawing data models. You may not consult anyone else.

Answer all questions

SQL (50 points)

Answer the following queries based on the ClassicModels database.

Easy (4 points each)

1. List the names of Australian customers not in Sydney or Melbourne.
2. What was the value of payments made in 2005 by customers in Sweden?
3. List the customer name for individual payments greater than EUR 50,000 sorted by customer name. Assume an exchange rate of 1.35 (i.e., EUR 1.0 = USD 1.35) and that all currency values in the database are in USD.
4. List the Ford model cars by model name.
5. List the names of the sales representatives for the Californian customers. Sort by sales representative name.

Hard (6 points each)

1. List the products not ordered in March 2005.
2. Find the names and cities of Australian customers who are north of the Sydney office. Sort so that the northernmost city is at the top of the list. Remember that latitudes below the equator have negative values.
3. What was the total payment received in 2004 by customer’s country for each month? Sort the report by country and month? Format the result to two decimal places.
4. Assume that a sales representative gets a 5% commission on all orders for the customers that representative serves, how much did each representative receive in 2004? Sort by commission received with the highest commission at the top of the report. Format without any decimal places.
5. Report the total value of orders for each product as a percent of total orders for Classic Models and sort by this percentage descending. Format with two decimal places.
Data visualization (10 points)
Prepare a bar chart of the number of customers by country.

XML (10 points)
The IMF has asked several of its country clients who have financial problems to file a report indicating for each outstanding loan the following details: amount in US dollars, interest rate, frequency of interest payments per year (e.g., 4 for quarterly), holder of the loan, and the loan repayment due date. You have been asked to design a schema for this report. The IMF requires each country to include its name in the report so it can easily amalgamate multiple reports into a single file. Prepare an XML document with some sample data for three loans for one country.

Data modeling (15 points each)
1. The SEC has asked you to create a database to record which businesses have been audited by which audit firm for the last 25 years. Design the database. Show all relevant attributes, including which office (e.g., Atlanta) of the audit firm did the audit and its fee for that year.
2. A URL is a link from one web site to another. Draw a data model to show the linkages between web sites.