CSC2001F - Assignment 4 - Part 1 of 2

Assignment 4 has 2 separate parts requiring 2 separate submissions. This document is the specification of Part 1, which must be submitted to the Automarker.

Part 2 is the "Creativity" part and so it will be manually marked - but only if you have 100% for part 1. Its specification can be found separately on Amathuba Assignments. Part 1 will be marked out of 100 and part 2 out of 12, so Assignment 4 is out of 112 altogether, i.e. approximately 90% of your mark for the assignment is for Part 1.

1. Instructions

In this assignment you will:

1. Create and load your own MySQL database using the SQL file '`classicModels.sql`', available from the Amathuba assignment page.
2. Write SQL queries to answer the questions below and run them against your database. **Your queries must be correct for any instance of the database schema, and not just for the given sample data**.

A diagram of the database schema may be found at the end of this document.

Please use the Amathuba forum for all questions on this assignment, so all information is in 1 place accessible to all. Emails will not be answered. **Check Amathuba and the forum frequently** for messages on this assignment.

2. Marking

There are 20 questions. Each correct question earns 5 marks, for a total of 100.

3. Submission

Submit one zip file, containing separate files for each query, to the automatic marker.

Call the file with your answer to question 1 '`query1.sql`', the one with your answer to question 2 '`query2.sql`', and so forth.

Make sure that you use lowercase and uppercase letters exactly as in the assignment question - the output of each of your files will be compared with the expected output.

NOTE:

- Your ZIP file must only contain your answer files. It should not contain a folder containing your answer files.
- Do ***not*** have any comments in these files, only the SQL statements (automatic marker expects no comments).
- Avoid pasting from PDFs or Word documents.
- You do not need to complete all questions before trying out your answers on the automatic marker – it will just report that it can't find some.
- The automatic marker is used by all CS students and at times can be under heavy load. If there is not an immediate response when submitting your work, please be patient.

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4. Questions

1. Show all information in the **productlines** relation.
2. Show the **city** and **country** of all our **offices**, in alphabetical order of country. If there are offices in more than one **city** in the same **country,** show the cities of each country in alphabetical order.
3. Show the **productVendor**, **productName** and **quantityInStock** for all "diecast" **products** that are running low. A product is running low if there is less than 2000 of it in stock. A "diecast" product is one bought from a **productVendor** that has that word (spelled either diecast or dyecast) in its name.
4. Show any 1 tuple in the **productlines** relation (just one).
5. Give the **country** of **offices** where the **state** is missing.
6. Give the average payment **amount**, and the total of all **payments** in the database. Call the first value **mean** and the second value **total**. Round to two decimal places.
7. Get the **city** and **postalCode** of the USA and UK **offices**.
8. What cities are our **offices** in?
9. Based on the **products** relation, how many **productVendor**s (supply companies) do we do business with? Call the answer **numVendors**.
10. All **products** are sold at 1.7 times their **buyPrice** (e.g. if **buyPrice** is say 100, selling prices is 170). What is the selling price of our most expensive product? Call the answer **top**.
11. Show each **officeCode** along with its **state;** but if there is no **state** value, then show its **country;** and if that too is missing, show its **city.** Call the 2nd value **location.**
12. For each customer, give their **customerNumber** and the total of all **payments** by that customer. Call the second column **total**.
13. For each customer, give their **customerName** and the total of all **payments** by that customer. Call the second column **total**.
14. For each customer, give their **customerName** and the total of all **payments** by that customer, but only for Paris customers who have made more than 4 payments. Call the second column **total**.
15. Which customers have never made any **payments**? Give their **customerName** and **phone** number.
16. Give the **productName**, **quantityInStock** and product line **textDescription** for all products that have a quantity in stock below 100.
17. What product(s) have been ordered the most in all the time that this database has been used? Give the **productCode**(s) and the total quantity ordered. Call the second column **total**.
18. Give the emails of **employees** who are sales rep for fewer **customers** than employee 1166. Only show **employees** whose job title is '`Sales Rep`' in your answer.
19. For customer 121, give the total cost (**priceEach** * **quantityOrdered**) of all their orders. Call the answer **totalCost**.
20. Give the total **payments** obtained from the **customers** of each sales rep in office 7. Call the answer columns **firstName**, **lastName** and **total** (in that order i.e., **lastName** of the employee is the middle column).

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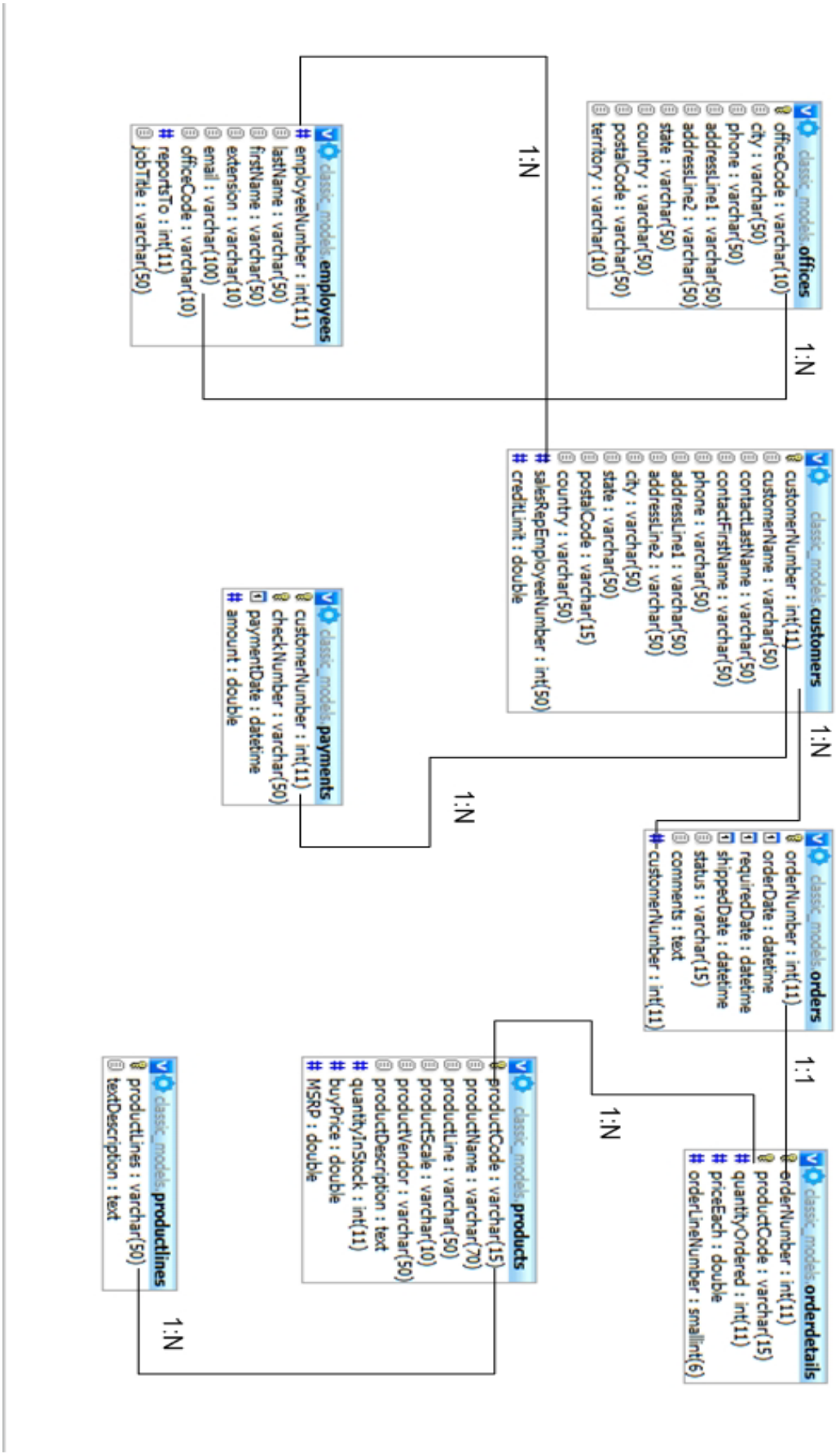
5. Appendices



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