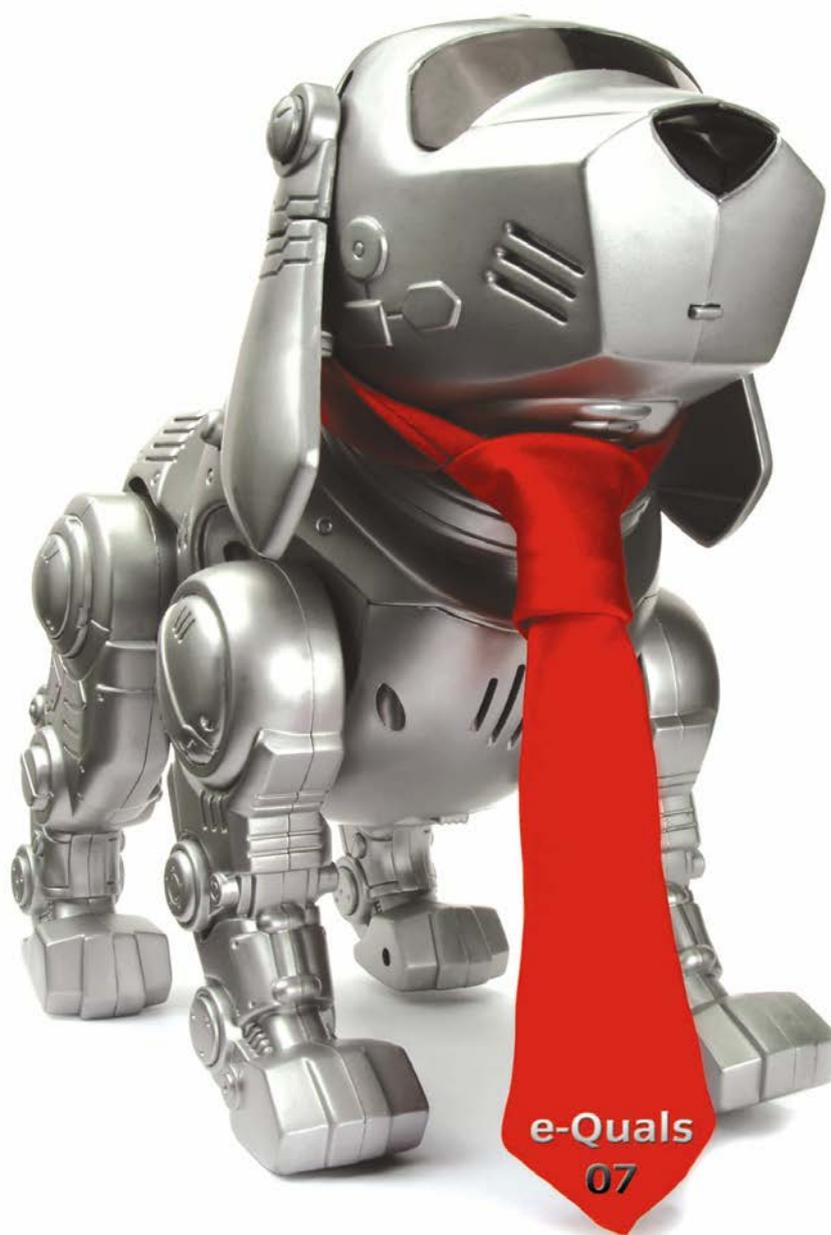


Level 3 Develop software using SQL (Structured Query Language) (7266/7267-310)

(7540-389)

e-Quals
Assignment guide for Candidates
Assignment B



About City & Guilds

City & Guilds is the UK's leading provider of vocational qualifications, offering over 500 awards across a wide range of industries, and progressing from entry level to the highest levels of professional achievement. With over 8500 centres in 100 countries, City & Guilds is recognised by employers worldwide for providing qualifications that offer proof of the skills they need to get the job done.

City & Guilds Group

The City & Guilds Group includes City & Guilds, ILM (the Institute of Leadership & Management) which provides management qualifications, learning materials and membership services, NPTC which offers land-based qualifications and membership services, and HAB (the Hospitality Awarding Body). City & Guilds also manages the Engineering Council Examinations on behalf of the Engineering Council.

Equal opportunities

City & Guilds fully supports the principle of equal opportunities and we are committed to satisfying this principle in all our activities and published material. A copy of our equal opportunities policy statement is available on the City & Guilds website.

Copyright

The content of this document is, unless otherwise indicated, © The City and Guilds of London Institute 2007 and may not be copied, reproduced or distributed without prior written consent.

However, approved City & Guilds centres and learners studying for City & Guilds qualifications may photocopy this document free of charge and/or include a locked PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching learners working towards a City & Guilds qualification, or for internal administration purposes
- learners may copy the material only for their own use when working towards a City & Guilds qualification

The *Standard Copying Conditions* on the City & Guilds website also apply.

Please note: National Occupational Standards are not © The City and Guilds of London Institute. Please check the conditions upon which they may be copied with the relevant Sector Skills Council.

Publications

City & Guilds publications are available on the City & Guilds website or from our Publications Sales department at the address below or by telephoning +44 (0)20 7294 2850 or faxing +44 (0)20 7294 3387.

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

City & Guilds

1 Giltspur Street

London EC1A 9DD

T +44 (0)20 7294 2800

F +44 (0)20 7294 2400

www.cityandguilds.com

learnersupport@cityandguilds.com

Contents

Introduction – Information for Candidates	2
Level 3 Develop software using SQL (Structured Query Language) (7266/7267-310) (7540-389)	
Candidate instructions	3

Level 3 Develop software using SQL (Structured Query Language) (7266/7267-310) (7540-389) Assignment B

Introduction – Information for Candidates

About this document

This assignment comprises all of the assessment for Level 3 Develop software using SQL (Structured Query Language) (7266/7267-310) (7540-389).

Health and safety

You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will **not** be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

Time allowance

The recommended time allowance for this assignment is **4 hours**.

Level 3 Develop software using SQL (Structured Query Language) (7266/7267-310) (7540-389)

Candidate instructions

Candidates are advised to read **all instructions** carefully before starting work and to check with your assessor, if necessary, to ensure that you have fully understood what is required.

Time allowance: 4 hours

Assignment set up: A scenario is provided in the form of requests for services required.

This assignment is made up of **one** task

- **Task A** - requires candidates to create and test scripts to fulfil the requirements specified.

Scenario

A company, Delta Books who supply educational books, have their Head Office in America and operate other branches in several locations. You work as an IT Assistant accessing the company database, fulfilling requests for information and services from other departments or branches. Your job involves writing and testing SQL scripts to provide the information and services required.

The following requests have been received today, via fax and e-mail, from Finance, Human Resources and the Database Administrator.

	Finance Requirements
Request 1	List the last name, first name and employee number of all employees that have a last name starting with M.
Request 2	List the department number, last name, first name and phone number of all sales representatives who were hired on or after 24 Mar 1998 sorted in ascending order of last name.
Request 3	List all the data for all jobs where the minimum salary is less than or equal to 4500 sorted in descending order of the minimum salary.
Request 4	Which jobs are found in the Marketing and Accounting departments?
Request 5	List the department name, location, last name and salary of employees who work in location 1700 sorted in ascending order of department name.
Request 6	List the last name and first name for all employees who were hired in the months of June or August (for all years) sorted in ascending order of last name.
Request 7	Show the average salary for employees for one year (rounded to 2 decimal places).
Request 8	Show the total monthly salaries figure (0 decimal places) for all employees in departments 80 and 60.

Human Resources Requirements	
Request 9	List the department number, department name and the number of employees for each department that has less than 4 employees grouping by department number and department name.
Request 10	List the department number, department name and the number of employees for the department that has the lowest number of employees using appropriate grouping.
Request 11	List the department number and name for all departments where no sales representatives work.
Request 12	Add the following new job IT_ASST, IT Assistant, 5000, 8000
Request 13	Update all the minimum salaries for jobs with an increase of 500.
Request 14	List all the data for jobs sorted in ascending order of job id.

Database Administrator Requirements	
Request 15	<p>The database administrator has found the following entity-relationship diagram. He thinks that the diagram is incorrect. Check the diagram and draw a corrected diagram.</p> <pre> erDiagram DEPARTMENTS --o{ EMPLOYEES : "has" LOCATIONS --o{ DEPARTMENTS : "has" JOBS --o{ EMPLOYEES : "has" </pre>
Request 16	Print a copy of the data dictionary entry for the table departments.
Request 17	Drop the table for job history.
Request 18	Create a new table called SAL_HISTORY to include the fields EMPID, FIRSTNAME, LASTNAME, HIREDATE and SAL with the same data types as the employees table. The EMPID must not be NULL.
Request 19	Insert data from the employees table where the employee number is less than or equal to 130 into the SAL_HISTORY table.
Request 20	Display all the records and all the fields in the SAL_HISTORY table.

Task A

In this task you are required to plan testing and write and test scripts to fulfil the requirements specified by Finance, Human Resources and the Database Administrator.

- 1 Prepare a test plan to carry out the testing of the SQL scripts.
- 2 Prepare the test scripts to be used with the test plan.

- 3 Use the test plan and test scripts to carry out the tests and record results of testing in a test log comparing the expected results to the actual results. The test scripts must be saved with an appropriate name eg Request1.
- 4 Provide evidence of testing i.e. printout of script file and output which must be cross referenced to the correct test number.

Note

- Candidates should produce the following for their Assessor:
 - test plan
 - test data (scripts)
 - test log
 - cross-referenced evidence of testing i.e. printout of script file and test output as necessary to show test results.
- At the conclusion of this assignment, hand all paperwork to the test supervisor.
- Ensure that your name is on all documentation.
- If the assignment is taken over more than one period, all paperwork must be returned to the test supervisor at the end of each sitting.

**Published by City & Guilds
1 Giltspur Street
London
EC1A 9DD
T +44 (0)20 7294 2468
F +44 (0)20 7294 2400
www.cityandguilds.com**

**City & Guilds is a registered charity
established to promote education
and training**