



**Unit:
Database Design and Development**

**Assignment title:
Rupert Roof Conversions**

December 2015 – Sample Assignment

Marking Scheme

Markers are advised that, unless a task specifies that an answer be provided in a particular form, then an answer that is correct (factually or in practical terms) **must** be given the available marks. If there is doubt as to the correctness of an answer, the relevant NCC Education materials should be the first authority.

This marking scheme has been prepared as a **guide only** to markers and there will frequently be many alternative responses which will provide a valid answer.

Each candidate's script must be fully annotated with the marker's comments (where applicable) and the marks allocated for each part of the tasks.

Throughout the marking, please credit any valid alternative point.

Where markers award half marks in any part of a task, they should ensure that the total mark recorded for the task is rounded up to a whole mark.

Task	Guide	Maximum Marks
1	<p>a) Entity model (30 marks)</p> <p>1 to 9 marks: There is little correct beyond a few of the entities.</p> <p>10 to 19 marks: If choice of entities is correct (alternative names are acceptable) but most relationships are wrong then give 1 mark for each correct entity. Give additional marks for any correct relationships.</p> <p>20 to 24 marks: If largely correct but still with some mistakes, give 1 mark for each correct entity and attribute.</p> <p>25 to 30 marks: Excellent solution that is correct in all but a few details.</p> <p>Details: core of the system is the job. Systems should be capable of assigning staff to a job and equipment and materials to a job. The job should be classified by type.</p> <p>b) Data dictionary (10 marks)</p> <p>The data dictionary should match the ER. It should clearly indicate Primary Keys and Foreign Keys. Full marks cannot be given for data dictionary if ER is incorrect.</p> <p>1 mark for each correct entity with attributes, PKs and FKs defined up to 10 marks.</p>	<hr/> <p style="text-align: right;">40</p>

Task	Guide	Maximum Marks
2	<p>a) Candidate has created all the tables using SQL. Candidate has shown their Create scripts and the finished tables. (10 marks)</p> <p>b) Candidate has produced data on all the jobs and the details of those jobs. Candidate has given a listing of this. (1 mark)</p> <p>c) Candidate has produced data for the members of staff including those listed in the scenario and assigned staff to jobs. Candidate has given a listing of this. (1 mark)</p> <p>d) Candidate has produced data on the materials that are used on a job. Candidate has given a listing of this. (1 mark)</p> <p>e) Candidate has written a query that selects all the jobs and which staff have worked on them. (2 marks)</p> <p>f) Candidate has written that selects the materials that have been used on jobs of type 'Full Conversion'. (2 marks)</p> <p>g) Candidate has written a query that selects all the jobs that Muhammad Ya has worked on. (3 marks)</p> <p>h) Candidate has written a query that shows all jobs that have taken place in addresses that contain 'SE15' or 'SE16'. (3 marks)</p> <p>i) Candidate has written a query that counts the number of jobs that have used electrical wiring. (3 marks)</p> <p>j) Candidate has written a query that produces the output that could be used to prepare an invoice. This should include a calculation for VAT charged on a job (Calculated at 20% of total cost of job) (4 marks)</p> <p>k) Candidate has updated the daily rate of pay for a Full Conversion to £120.00. (2 marks)</p>	<hr/> <p style="text-align: right;">32</p>
3	<p>The discussion could include a written specification, table diagrams with attributes shown and/or SQL. Credit should be given to any valid approach. Points that might be discussed include:</p> <ul style="list-style-type: none"> • ensuring that the materials used on a job are recorded correctly (up to 5 marks) • adding a column on materials to record their costs (up to 5 marks) • using aggregate fields to hold the total cost of materials calculated from the ones recorded as being used on a job (up to 3 marks). 	<hr/> <p style="text-align: right;">13</p>

Task	Guide	Maximum Marks
4	<p>This discussion should show an understanding of what the original requirements were (up to 5 marks), contain a discussion of how the initial design attempted to meet them (up to 5 marks) and an overall assessment of how well the requirements have been met (up to 5 marks).</p> <p>Alternatively structured discussions should be credited.</p>	<hr/> <p style="text-align: right;">15</p>
Total: 100 Marks		

Learning Outcomes matrix

Task	Learning Outcomes assessed	Marker can differentiate between varying levels of achievement
1	2	Yes
2	5	Yes
3	2	Yes
4	1	Yes

Grade descriptors

Learning Outcome	Pass	Merit	Distinction
Understand the enterprise application of database systems	Demonstrate adequate level of understanding	Demonstrate robust level of understanding	Demonstrate highly comprehensive level of understanding
Understand how to enhance the design of and further develop a database system	Demonstrate ability to perform the task	Demonstrate ability to perform the task consistently well	Demonstrate ability to perform the task to the highest standard
Be able to enhance a logical database design	Demonstrate ability to perform the task	Demonstrate ability to perform the task consistently well	Demonstrate ability to perform the task to the highest standard
Be able to develop a physical database design	Show adequate development	Show sound and appropriate development	Show innovative and highly appropriate development
Be able to enhance a database system using SQL	Demonstrate ability to perform the task	Demonstrate ability to perform the task consistently well	Demonstrate ability to perform the task to the highest standard