



Unit: Database Design and Development

Assignment title: Clinton Letting and Management

December 2017

Important notes

- Please refer to the Assignment Presentation Requirements for advice on how to set out your assignment. These can be found on the NCC Education *Campus*. Click on Policies and Advice in the left-hand menu and look under the Advice section.
- You must read the NCC Education documents 'What is Academic Misconduct? Guidance for Candidates' and 'Avoiding Plagiarism and Collusion: Guidance for Candidates' and ensure that you acknowledge all the sources that you use in your work. These documents are available on *Campus*. Click on Policies and Advice in the left-hand menu and look under the Policies section.
- You **must** complete the '**Statement and Confirmation of Own Work**'. The form is available on *Campus*. Click on Policies and Advice in the left-hand menu and look under the Policies section.
- Please make a note of the recommended word count. You could lose marks if you write 10% more or less than this.
- You must submit a paper copy and digital copy (on disk or similarly acceptable medium). Media containing viruses, or media that cannot be run directly, will result in a fail grade being awarded for this assessment.
- All electronic media will be checked for plagiarism.

Introduction

This assignment is in five parts, design, data and queries, derived data, analysis and an evaluation.

All parts of the assessment relate to the Clinton Letting and Management scenario below.

Scenario

Clinton Letting and Management is a property management company based in London, United Kingdom. They manage properties for owners. An owner will have one or more portfolios of properties, which will consist of one or more properties. Properties are defined as being of a particular type such as residential house, residential flat or commercial property.

A particular property will be rented by a tenant. The terms of that rental are defined as a tenancy. Tenant are defined by type ('Private', 'Business', 'Government', 'Other').

As well as managing the tenancies of properties Clinton Letting and Management maintain the property by carrying out repairs when they are needed.

A property repair will involve one or more members of staff, and can involve one or more parts.

The system should be capable of storing all the information needed for Clinton Letting and Management to carry out their business. A number of additional requirements are outlined as in Task 2 below, including data entry and queries.

Please state any assumptions you have made about the scenario.

Please Note: The data shown in the assignment is not necessarily normalised, and that it the candidate's task to organise the data in the most optimal way possible. For example, the paper records shown below will not necessarily map directly to database tables. The candidate is expected to use these tables as a starting point for their own normalisation and optimisation of the Clinton Letting and Management.

Please note also that all SQL scripts should be shown along with their results.

Below are a sample of the paper records currently kept by the company

Document 1. Property Portfolio Records

Portfolio ID	Client ID	Client	Property ID	Property Address	Property Type
201	23	Roger Picard	2431	80 Overmeer Rd, SE15 6NQ	Residential House
201	23	Roger Picard	8901	99a Queen Street, N1 2ER	Residential Flat
203	23	Roger Picard	9088	23 Redding Yard, Bromley-by-Bow, E2 89Y	Commercial Property
203	23	Roger Picard	1990	23 St Anne's Place, N1 8RR	Commercial Property
301	11	Alison Brown	3099	99 Kings Street, N1 988	Residential House
301	11	Alison Brown	3097	11 Kings Street, N1 988	Residential House

NOTE: Roger Picard is shown as having two separate portfolios.

Document 2. Tenancies

Tenant ID	Tenant Name	Tenant Type	Property ID	Start Date	End Date	Monthly Rent
T77	Gaslight Software	Business	1990	01-MAR-2005	01-MAR-2018	1000.00
T99	Michell Throssell	Private	2431	01-MAR-2017	01-MAR-2018	2500.00
T81	Edgar Kanne	Private	8901	03-APR-2017	01-APR-2018	2000.00
T88	Helpline One-Stop Shop	Government	9088	01-MAR-2017	01-MAR-2021	1500.00
T100	Dewitt Julio	Private	3099	01-MAR-2017	01-DEC-2017	1000.00
T101	Charisse Spinello	Private	3097	01-FEB-2017	01-FEB-2018	5500.00

Document 3. Example of Property Repair Sheet

Property ID 2431

Address 80 Overmeer Rd, SE15 6NQ

Repair Details: Replacement Front windows

Parts Used

Part Code	Part Name	Quantity
SF	Standard Frame	4
WF	Window Fitting	4

Staff

Staff ID	Name
S78	Dave Smith
S23	Holly Leman

Task 1 – 30 Marks

- 1) An entity relationship model for the proposed database system for Clinton Letting and Management.
- 2) A discussion of the normalisation taken to produce a set of third normal form relations for the proposed system.
- 3) A data dictionary for your proposed system.

Task 2 – 32 Marks

- 4) Create the tables in SQL and show the CREATE scripts as running in the programming environment.
- 5) Data on all the owners, portfolios and properties. Give a listing of this.
- 6) Data for customers and tenancies. Give a listing of this.
- 7) Data on all staff.
- 8) Data on property repairs including staff involved and parts used.
- 9) Write a query that selects all the portfolios and properties for a particular owner.
- 10) Write a query that selects the tenants and their tenancy dates.
- 11) Write a query that selects all the staff.
- 12) Write a query that shows all parts involved in the repair of a particular property.
- 13) Write a query that shows all the tenants for a particular owner.
- 14) Write a query that produces the output that could be used to show all the details of staff working on a repair job on a property.

Task 3 – 13 Marks

- 15) The company have said they would like to extend the database to include costing information for repair work. Data should be kept on the cost of parts and the rate of pay of staff. There should be a way of calculating how much work costs for particular properties, the portfolio they belong to and their owners. You should include an outline of how you would derive this data using SQL and specify the method of implementing it.

Task 4 – 10 marks

- 16) In the future Clinton Letting and Management could expand as an organisation. Describe the factors that might make them consider implementing a distributed database.

Task 5 – 15 Marks

- 17) Give an evaluation of how the work you have done has met the requirements of the firm. This should include data storage and applications. You should also discuss how you have standardised the company's data.

Submission requirements

- Your submission should be in the form of a single word-processed document that includes any necessary diagrams.
- The word count for the document is **2000 words** (excluding text in any diagrams). You should explain any assumptions you have made.
- A digital version must be submitted on a CD, USB flash drive or other similarly acceptable medium, **along with a copy of the developed database.**

Candidate checklist

Please use the following checklist to ensure that your work is ready for submission.

Have you read the NCC Education documents 'What is Academic Misconduct? Guidance for Candidates' and 'Avoiding Plagiarism and Collusion: Guidance for Candidates' and ensured that you have acknowledged all the sources that you have used in your work? ☐

Have you completed the 'Statement and Confirmation of Own Work' form and attached it to your assignment? **You must do this.** ☐

Have you ensured that your work has not gone over or under the recommended word count by more than 10%? ☐

Have you ensured that your work does not contain viruses and can be run directly? ☐