



**Database Design and Development
Testing & Evaluation**

Name: _____

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Testing

It is important to test your database queries to ensure the **expected output** matches the **actual output**. Below is an example of how we should test a database:

Consider the **Customer** table shown below.

custo	foreName	surname	street	town	package	directDebit	paymentDu
101	Lauren	Calder	2 Paisley Street	Wemyss Bay	Premier	<input checked="" type="checkbox"/>	12/04/2016
102	Abigail	Cameron	16 Paisley Street	Wemyss Bay	Standard	<input type="checkbox"/>	12/04/2016
103	Ryan	Collins	17 Dunoon Drive	Gourock	Premier	<input checked="" type="checkbox"/>	19/05/2016
104	Nicole	Rutherford	5A Panama Place	Port Glasgow	Large	<input type="checkbox"/>	13/04/2016
105	Justine	O'Docherty	7 High Street	Kilmacolm	Premier	<input checked="" type="checkbox"/>	18/04/2016
106	Shelby	Sweeney	3 Paisley Road	Port Glasgow	Premier	<input checked="" type="checkbox"/>	26/05/2016
107	Donald	McAndrew	1 Big Hill Avenue	Inverkip	Standard	<input checked="" type="checkbox"/>	01/08/2016
108	Rowan	Hastings	6 Clydeview Crescent	Gourock	Large	<input checked="" type="checkbox"/>	05/05/2016
109	Grant	Donaldson	9 Dunoon Drive	Gourock	Premier	<input type="checkbox"/>	07/04/2016
110	Christine	Flowers	63 Hamilton Drive	Greenock	Large	<input checked="" type="checkbox"/>	19/04/2016
111	Ross	Lambie	12 Paisley Road	Kilmacolm	Standard	<input checked="" type="checkbox"/>	27/03/2016
112	Paul	McGill	3C Cow Lane	Kilmacolm	Premier	<input type="checkbox"/>	10/04/2016
113	Jack	Shields	4 Brookside Close	Port Glasgow	Large	<input type="checkbox"/>	10/05/2016
114	Pauline	Milne	32 High Street	Kilmacolm	Premier	<input checked="" type="checkbox"/>	09/05/2016
115	Margaret	Rice	5 Drumchapel Square	Greenock	Standard	<input type="checkbox"/>	14/04/2016

Query testing

A query is required to display the full name and town of all customers who live in Gourock. The details should be listed in alphabetical order of customer surname.

Expected output

This table shows the output predicted from the query.

Expected output	Forename	Surname	Town
Details of customer listed first	Ryan	Collins	Gourock
Details of customer listed last	Rowan	Hastings	Gourock

Actual output

This is the output from the query used to perform the task.

surname	town
Collins	Gourock
Donaldson	Gourock
Hastings	Gourock

Comparing the answer table with the predicted output, it is possible to evaluate the query.

The query output is accurate because it displays details of the three customers who live in Gourock however it does not display the correct fields so it is not fit for purpose.

Evaluation

When evaluating a completed database system, there are two aspects to consider:

- Fitness for purpose
- Accuracy of output

Fitness for purpose

This is concerned with reviewing whether or not the completed solution carries out all of the functional requirements identified in the initial analysis.

If the solution does not do everything it was supposed to do (and that the user requires) then it is not fit for purpose.

Accuracy of Output

If the SQL queries do not produce the correct results then the database is unreliable. This prevents the database from being an effective and trustworthy system.

It is vital that thorough testing of SQL queries is carried out to ensure that they produce accurate output every time.