**Questionnaire for Dundas Dashboard Associate**

**Objective:**

* To assess the candidate’s the level of technical competency in the areas of databases and business intelligence
* To better understand how an applicant processes and solves problems, such as design, implementation, attention to detail, etc.,

\*\*\*Note: This test must be written by the candidate that is applying for a position. How we judge this test is based on the job being applied for. All candidates that meet or exceed our criteria for this test are then invited for interview to get more detailed understanding of the candidate’s skill sets and personalities.

**Contents:**

This questionnaire consists of two parts:

Part I: Basic SQL Exercise

Part II: Dashboard design Exercise

**Deadline:**

Please submit your answer at your earliest time. For Part II, you can either submit a scanned copy with your other answers or mail to the address provided below (be sure to include your name and email address so we can confirm we received your answers).

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Thank you for your time and effort. Good luck!

**Part I:** The questions below are designed to test your knowledge of SQL database.

Below are some data tables:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Products table   |  |  |  | | --- | --- | --- | | ProductID | Name | UnitPrice | | 1 | Chart | 999 | | 2 | Gauge | 599 | | 3 | Map | 599 | | SalesPersons table   |  |  |  | | --- | --- | --- | | PersonID | Name | City | | 101 | Andy | Toronto | | 102 | Bob | Montreal | | 103 | Mathew | Vancouver | |
| Customers table   |  |  |  | | --- | --- | --- | | CustomerID | Company | City | | 10089 | IBM | Toronto | | 24535 | Johnsons | Toronto | | 33555 | Goodies | Montreal | |  |
| Orders table   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | OrderID | CustomerID | PersonID | ProductID | Quantity | Discount | | 1 | 75353 | 103 | 2 | 5 |  | | 2 | 24535 | 102 | 1 | 20 | 5% | | 3 | 10089 | 101 | 3 | 3 |  | | 4 | 10089 | 101 | 1 | 55 | 20% | | 5 | 33555 | 101 | 1 | 2 |  | | |

QI-1: Identify the relationships between each table if you think it is applicable. You can modify the table if you think it’s necessary.

QI-2: Based on the relationships defined in QI-1, write a SQL query that shows the total sales amount by each sales person for each product.

QI-3: Based on the relationships defined in QI-1, write a SQL query that shows all the products ordered by IBM, including number of units and total sales amount.

**Part II:** Now imagine you are hired as a business analyst.

QII-1: In an organization of disparate data sources, what would you do to deliver a successful dashboard initiative? If you need to make any assumptions, please state them. Make sure to explain why you would take each action in your plan.

QII-2: How would you design the following dashboard with these requirements? A sketch on a piece of paper is acceptable, but be sure to be clear on what you are showing (it’s open for interpretation for a reason, so do your best).

Metrics with sample data:

Sales by Month

|  |  |
| --- | --- |
| SalesMonth | Sales |
| Dec. 1, 2008 | $100,000.00 |
| Jan. 1, 2009 | $150,000.00 |
| Feb. 1, 2009 | $180,000.00 |

Target Sales by Month

|  |  |
| --- | --- |
| SalesMonth | Sales Target |
| Dec. 1, 2008 | $90,000.00 |
| Jan. 1, 2009 | $170,000.00 |
| Feb. 1, 2009 | $150,000.00 |

Rep Sales Performance

|  |  |
| --- | --- |
| Rep | Revenue |
| John | $30,000.00 |
| Harry | $50,000.00 |
| Anna | $90,000.00 |

Sales by US region (NorthEast, NorthWest, SouthEast, SouthWest)

|  |  |
| --- | --- |
| Region | Revenue |
| NorthEast | $130,000.00 |
| NorthWest | $190,000.00 |
| SouthEast | $220,000.00 |
| SouthWest | $320,000.00 |

What other metrics do you think would be relevant with this dashboard?