Data Warehousing & Business Intelligence

Assignment 2

**Part 1**

Complete following tasks and demonstrate the same with SQL Server (any version & edition).

Additionally, document the steps followed in completing the tasks. Include the screen shots of the steps you followed with a short description for each step in the report and submit before the deadline.

Step 1: Data source for the assignment 2

* Use the data warehouse you implemented and loaded with data in Assignment 1 as the data source for the assignment 2.

Step 2: SSAS Cube implementation

* Use data warehouse as the data source and create an SSAS cube.
* Design the cube by including necessary measures in fact table(s) and connecting dimensions.
* Implement at least one hierarchy in the cube.

Step 3: Demonstration of OLAP operations

* Connect an Excel workbook to the Cube.
* By creating pivot tables or pivot charts demonstrate OLAP operations
  + Roll-up
  + Drill-down
  + Slice
  + Dice
  + Pivot

Step 4: SSRS Reports

* Develop and publish following reports in SSRS Web Portal. Reports should be demonstrated by opening in SSRS Web Portal
  + Report 1: Report with a matrix
  + Report 2: Report with more than one parameter. Parameters should have lists of values. Selection of the value of first parameter, should change the list of available values in the second parameter. You can use any one or more items in the report to visualize data.
  + Report 3: Create an SSRS drill-down report.
  + Report 4: Create an SSRS drill-through report.

**Part 2**

Build a suitable dashboard in Power BI. Use the data either from your data warehouse or data cube. While designing the dashboard please pay attention to the followings and document them in a word document and submit it with your Power BI dashboard.

* Your audience
* The story that you are going to tell to your audience
* Any KPI that you can think of.
* The reason for selecting a particular display type.
* Any possible alert that can be generated.

**Marks will be based on:**

* Completeness of the design of the CUBE (facts, dimensions, hierarchies in the CUBE).
* Demonstration of OLAP operations in Excel - Completeness and correctness of reports.
* Demonstration of best practices in designing and building Dashboard (Selection of display types and justifications, etc)

**Due Date: 15th May 2020.**

**Submission Method:**

1. Create a folder named ‘DataWarehouse’ and put the backup of the data warehouse into folder. 2. Create a folder named ‘CubeProject’ and put the SSAS (SSDT) solution folder.

3. Create a folder named ‘Excel’ and put Excel work book(s).

4. Create a folder named ‘SSRSReports’ and put report files into this folder.

5. Create a folder named ‘Document’ and put your document in PDF format.

6. Create a folder named ‘Part 2’ and put the document and Power BI file.

7. Create a folder named ‘DWBI-Assignment 02 Answer’ and copy all following folders into it:

a. DataWarehouse

b. CubeProject

c. Excel

d. SSRSReport

e. Document

f. Part 2

8. Zip the folder and email to ([Jesuthasan.a@sliit.lk](mailto:Jesuthasan.a@sliit.lk), [nimesha.a@sliit.lk](mailto:nimesha.a@sliit.lk))