National School of Business Management

**BMIS105 Database Management Systems**

**Group Assignment (group of 4 students)**

**Batch: MIS 16.1/Ply16.1/SE16.1**

**Hand out date: 22/08/2016**

**Hand in date: 23/09/2016**

**This assessment contributes to 25% of the module mark**

You are required to analyze the scenario given below and design and develop a DB solution to answer the queries of interest.

**Scenario:**

The Singer Mega, Nugegoda deals with the selling, maintenance and service of televisions, washing machines refrigerators and Video record players. These items have both a cost price [the cost that Singer Mega pays the manufacturers for the equipment] and a retail price [the cost that Singer Mega charges the customers].

The equipment is sold to customers via specialized retail shops. Customers can be classified as either ‘Normal’ customers or ‘Faithful’ customers. A customer is classified as faithful on the basis of purchases he or she made (amount and recurrence) and get a discounted price on the items.

The company has several warehouses, one in each area supplying to all the retail shops in the area. Several service depots provide maintenance services for the sold equipment. Each depot deals with several retail shops within the area.

All equipments are sold with a one year warrantee period and during which the equipment will be serviced free of charge. Customers can also purchase, at an extra cost, a service agreement to service the equipment after the warrantee period. Depending on the equipment the validity of the agreement can be one, three or five years. The charge varies according to the length of the agreement and the type of equipment and the sold price. Service agreements are deleted once they have expired.

An Engineer will respond to each after sales service request and the details of the service is recorded [time and date, description of the repair, cost of any replaced parts together with other important details].

A system is required to support daily operations of Singer Mega, Nugegoda and generate necessary reports for monitoring and management of sales and after sales operations. The system should facilitate the following reports.

1. Available stock details (Item, brand, price, etc)
2. Sales, warranty and after sales operations
3. Customer details and items they purchased or repaired.
4. Employee details and their payments

Please clearly specify any assumptions you make.

**Deliverables:**

1. Report including,

* The problem scenario with any assumptions you made
* ER diagram
* Relational mapping
* Normalized tables
* Conclusion with a justification of your solution and limitations.

1. CD that includes

* A soft copy of your report
* A SQL script to generate the database with any constraints
* A SQL script to insert sample data for the tables
* A SQL script carrying the SQLs to generate all the required reports

**Marking Criteria:**

Following items carry a group mark.

1. Quality of the documentation – 10 Marks
2. Introduction to the problem and assumptions – 10 marks

Following items are assessed on individual student basis

1. ER Diagram - 20 Marks
2. Normalization - 10 Marks
3. SQLs to create the database and constraints - 20 Marks
4. SQLs to load the sample data – 10 Marks
5. SQLs to generate the reports – 20 Marks