**RDBMS MINI PROJECT**

**(SPRINT 1 &2)**

**EXAMINATION AND EVALUATION SYSTEM**

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1. **Introduction:**

This document outlines a mini project for the RDBMS LOT. The project is to design the database, reports and queries related to Examination & Evaluation System. This document contains information about the attributes that will be participating in the system and guidelines about reports.

* 1. **Setup Checklist for Mini Project**

Minimum System Requirements

* Physical Memory (RAM) - 1GB Minimum
* Virtual Memory - Double the amount of RAM
* Disk space - Total 5 GB
* Processor - Intel Pentium 90 or higher
  1. **Instructions**
* Follow standards while coding
* Create a directory by your name in drive <drive>. In this directory, create a subdirectory MiniProject. Store your Project here.
* You can refer to your course material.
* The total time required to complete this mini project is 8 hrs.
* Maintain the code.

**2.Problem Statement**

**2.1 Objective:**

Designing the database, developing the queries and basic reports required for Examination & Evaluation System.

**2.2 Abstract:**

This database is used as Examination & Evaluation system for employees. Also, some basic reports have to be developed. Since this database is to be used by a front-end system, it also requires some backend query and procedure designing.

Some of the entities and attributes are as follows:-

Employee- Name

* Designation- The values are Asst S/W Engineer, S/W Engineer only. Qualification- The values are B.E., BSC. IT and MCA.
* Batch- Batch ID, Name, Start Date, Batch Mentor, etc.
* LOT – LOT ID, LOT Name, LOT Mentor, etc.
* Course- Course ID, Name.
* Faculty- Faculty ID, Name, Designation, etc.
* Test- Test ID, Test Date, Test Name, Test Scores etc.

## **2.3 Functional components of the project**

## Design the normalized relational database using following details. You can make appropriate assumptions wherever required. Some of the attributes are given below with the restrictions on data it can contain.

## Find the required attributes for all the tables and create appropriate constraints on it. (For ex. Primary key, Foreign key... etc)

**2.4 Technology Used**

Databases:

Oracle 11G Express Edition

**3.Implementation in RDBMS LOT**

## 3.1 **Guidelines on the functionality to be built**:

**SPRINT 1 -**

* 1. Normalize the attributes. You can add supplementary attributes if needed for maintaining information properly.
  2. Create the database tables accordingly. Specify constraints appropriately.
  3. Write the following queries
     1. Insert meaningful data into the tables. (Minimum 10 records)
     2. Write a query to display report on various courses that belongs to the given batch. Batch name should be accepted from user.
     3. Write a query to display test marks for an individual employee across all courses in an assigned batch. Employee details should be accepted from user.
     4. Write a query to display details of batches those are stared in the month of January irrespective of the year.
  4. Write a procedure which accepts employee name and displays the test results including DQs, MTTs and MTPs across all courses pertaining to a batch.
  5. Write a query to display the name of employee who is getting highest marks in a particular course. Also display the examination grade of the employee along with his test marks for all assessment components. Batch and Course name should be accepted from user.
  6. Create a function to calculate the total of all assessment components and return the grade for the given course.
  7. Write a trigger which will check that number of attempts for an employee for a particular course test in a batch should not exceed 2.
  8. Write a trigger which will check that given course is belonging to assigned batch or not. For ex. if the batch is RDBMS, it should not have course details for COBOL course. In that case, trigger should fire telling that ‘INVALID COURSE FOR THE BATCH’
  9. Create the batch wise employees test report.

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1. Perform performance tuning on the database and the pl/sql code built.
2. Create the entire database in mongo db.

**4. Evaluation and assessment parameters:**

* 1. **Evaluation**
* Evaluation will be done at the end of Oracle training
* Total Marks: 100
* Marks Distribution mentioned below.

This Mini project will be done individually. Implement the Software development life cycle for the project and develop code for the respective functionality. Evaluation will be done using online presentation mode, where participant will present their work.

This project shall be evaluated in two parts:

* Marks distribution is for one part of project evaluation (Marks: 90)
* Project Presentation is another part of project evaluation (Marks: 10)