**RDBMS MINI PROJECT**

**(SPRINT 1 &2)**

**BROADBAND BILLING 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 the queries related to Broadband Billing System. This document contains information about the attributed 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 - 550 MHz minimum
* Video Adapter - 256 colors
  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.

1. **Problem Statement**
   1. **Objective**

Designing the database, developing the queries and basic reports required for Airport Management System.

* 1. **Abstract of the Project**

## Broadband provides high speed data transmission to Internet and 4G networks were developed to transform broadband technology with higher data rate and enhanced quality of service. The billing system of broadband network in terms of availability, subscription plans and payment mode is evaluated in the work.

* 1. **Functional components of the project**

Design the normalized relational database using the 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.)

Some of the entities and attributes are as follows:

* **Cust\_details**- Customer id, Customer mobile number, Customer City, Customer area , Customer type, Customer id proof.
* **User\_login**- User id, password, Customer type.
* **Transaction\_details** – Transaction id, bill no, date of issue, paid amount, pay method.
* **Customer\_subscription**- Customer id, subscription id, subscription area, for month.
* **Subscription-** Subscription id, subscription cost, subscription details, subscription area, subscription speed.
* **Bill**- bill number, Customer id, subscription id, month, cost, status.
* **Billing Parameters**:
* Billing will be done at the end of Every month
* Total plans available: 12

This Mini project will be done individually. Implement the Software development life cycle for the project and develop code for the respective functionality. Billing will be done using online presentation mode, where customer will choose their plan.

This project shall be done in 3 parts:

* Customer login and registration.
* Choosing suitable plan by the customer as per his area and requirement.
* Billing and transaction status for the plan chosen.

Some of the guidelines/protocols are given below:- Normalize the tables.

* Create additional tables, if necessary.
* One subscription can be assigned for one single customer and one single person can choose only that subscription which is present in his locality.
* Many customer can choose many plans
  1. **Technology Used**

Databases:

Oracle 11G Express Edition

1. **Implementation in RDBMS LOT**
   1. **Guidelines on the functionality to be built:**

* Create a procedure which gets customer name, customer mobile number, id proof, type, city, area and password as inputs and registers the customer for choosing any suitable plan of broadband as per his locality.
* Create a procedure which gets user id and password as input and login the customer to their respective accounts which shows their currently using subscription plans, if any, and show them total plans available for them.
* Create a procedure which gives customer all the plans available and customer can choose anyone plan out of them as per his need and locality by taking subscription id, customer id and month as input.
* Create a procedure which will generate the bill for the customer’s chosen subscription plan by taking subscription id, month, and customer id as inputs.
* Create a procedure to make transaction for payment for the chose transaction and will show the transaction details of the customer’s payment status.
* Create a trigger which gets triggered when there is any update on bill table after successful transaction of payment and this trigger has to change the status of bill payment from pending to paid.

**SPRINT 2**

1. Perform performance tuning on the database and the pl/sql code built.
2. Create the entire database in mongo db.
3. **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)