**IS664 - Project**

**Phase 1.**

Create an ER diagram and tables in MySQL workbench for the following entities in a schema named **“sync”,** and upload screenshots of the diagrams to Blackboard.

**Access Rules table**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | **Field Name** | **Description** | | **Role** | ex: Analyst, Administrator, etc | | | **Start time** | Earliest time of the day access is allowed , ex: 08:00:00 | | | **End time** | Latest time of the day access is allowed , ex: 17:00:00 | | | **Component** | ex: Element, Table, Node, Cluster, etc | | | **Request type** | ex: Select, Append, etc | | |  |
| **Model table**   |  |  | | --- | --- | | **Field Name** | **Description** | | **Time** | Time of day of the transaction, ex: 18:00:00 | | **Requestor** | ex: Tom, Harvinder, Sally, User A, etc | | **Role** | ex: Analyst, Administrator, Business, etc | | **Component** | ex: Element, Table, Node, Cluster, etc | | **Request type** | ex: Select, Append, etc | | **Violation type** | ex: Non-Normal Time, No Authorization, etc | | **Score** | ex: True or False |   **Discrepancies table**   |  |  | | --- | --- | | **Field Name** | **Description** | | **Time** | Time of day of the transaction, ex: 18:00:00 | | **Requestor** | ex: Tom, Harvinder, Sally, User A, etc | | **Role** | ex: Analyst, Administrator, Business, etc | | **Component** | ex: Element, Table, Node, Cluster, etc | | **Request type** | ex: Select, Append, etc | | **Violation type** | ex: Non-Normal Time, No Authorization, etc | | **Score** | ex: True or False | |  |
|  |  |
|  |  |

Background information:

The tables will be utilized operationally by a program that will use the following logic:

For each row in the **Model table** with a score of TRUE

Find each row in the **Access Rules table**

Compare corresponding columns in the **Model table** to their equivalent columns in the **Access Rules table**

If any of the values of a row in each the columns of the **Model Table** conform to the criteria of the columns in the Access Rule Table row, continue with the next row in the **Access Rules table**

else

If any of the values of a row in each the columns of the **Model Table** do not conform to the criteria of the columns in the Access Rule Table row, insert a row in the **Discrepancies** table using the values of the row being compared from the **Model table.**

The Access Rule and Model tables will be populated by files provided by the instructor in phase 2 of this project.

NOTE: The time attribute is valid if it falls between the start and end times allowed. All other attributes are valid if they have equal values in their equivalent columns.