**Lahore Garrison University**

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**DATABASE MANAGEMENT SYSTEM**

**Project Report Review**

**Student Record Keeping Software**

**Team Members:**

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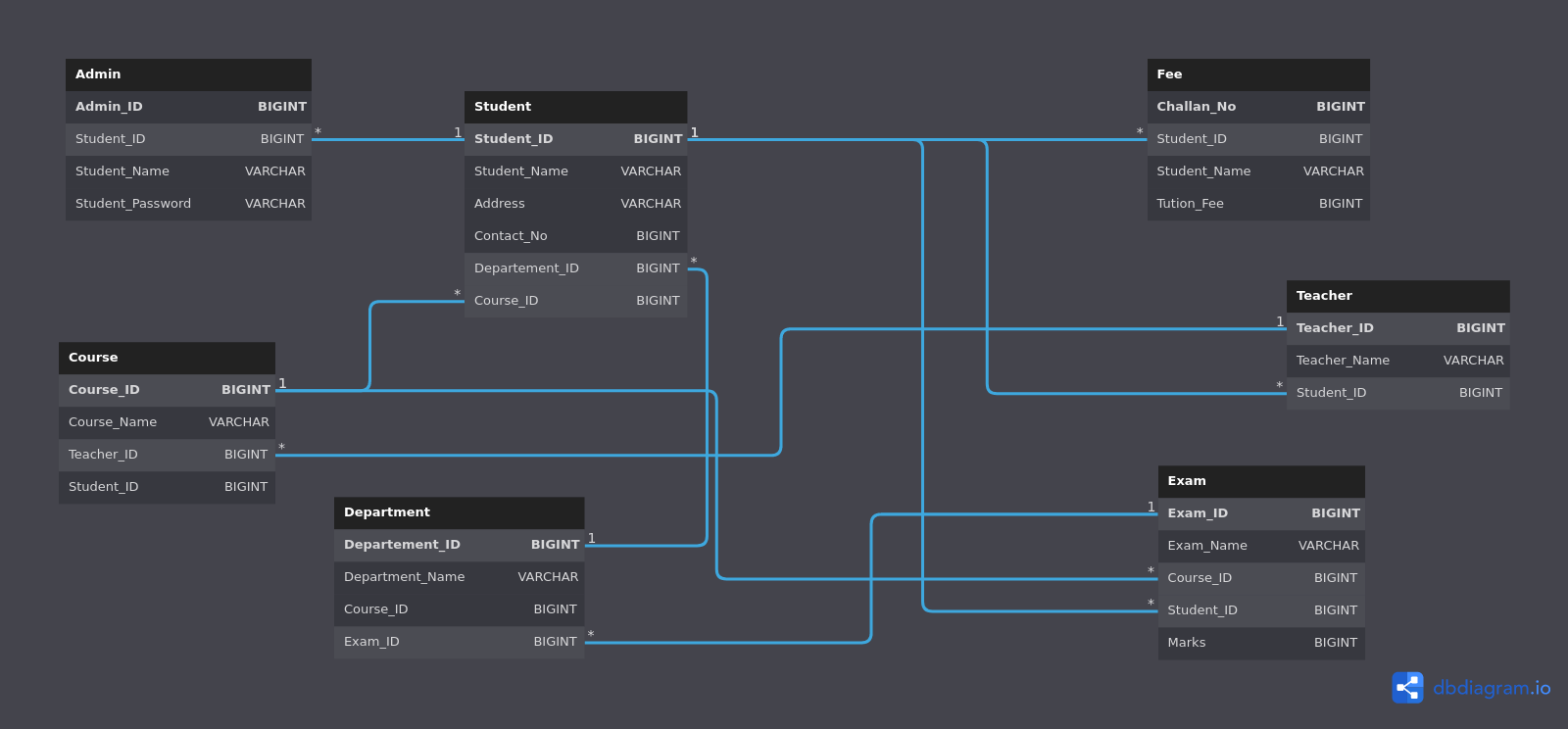
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**ABSTRACT:**

This project is basically creating a database management system for Student Record Keeping Software. Aim of the project is to creating a backend program of the processes taking place using SQL. This model deals with the relationship between Students, Teachers, Departments, and Exams. The other entities play a supportive weak role. So basically this helps the Students , Teachers and University to keep records.

**ER Diagram:**



**Table:**

1. Admin
2. Student
3. Fee
4. Department
5. Course
6. Teacher
7. Exam

**Admin**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Admin\_ID | Bigint | Primary Key |
| Student\_ID | Varchar (20) | None |
| Student\_Name | Varchar (20) | None |
| Student\_Password | Varchar (20) |  |

**Student**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Student\_ID | Bigint | None |
| Student \_Name | Varchar (20) | Foreign Key |
| Address | Varchar (50) | None |
| Contant\_No | Bigint | None |
| Department\_ID | Bigint | None |
| Course\_ID | Bigint | None |

**Teacher**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Teacher\_ID | Bigint | Foreign Key |
| Teacher\_Name | Varchar(20) | None |
| Student\_ID | Bigint | None |

**Course Table**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Course\_ID | Bigint | Foreign Key |
| Course\_Name | Varchar(20) | None |
| Teacher\_ID | Bigint | Foreign Key |
| Student\_ID | Bigint |  |

**Department**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Department\_ID | Bigint | Primary Key |
| Department\_Name | Varchar(20) | None |
| Course\_ID | Bigint | Foreign Key |
| Exam\_ID | Bigint | Foreign Key |

**Exam**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Exam\_ID | Bigint | Primary Key |
| Exam\_Name | Varchar(20) | None |
| Course\_ID | Bigint | Foreign Key |
| Student\_ID | Bigint | Primary Key |
| Marks | Bigint | Primary Key |

**Fee Table**

|  |  |  |
| --- | --- | --- |
| Attribute | Data type | Constraint |
| Challan\_No | Bigint | Primary Key |
| Student\_ID | Bigint | None |
| Student\_Name | Varchar(20) | Primary Key |
| Tution Fee | Bigint | Foreign Key |

**Code:**

IF NOT EXISTS

(SELECT \* FROM sys.databases WHERE name = 'Project')

BEGIN

CREATE DATABASE Project;

END;

Use Project;

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-- Table Structure for Administartor Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Admin' )

CREATE TABLE Admin (

Admin\_ID BIGINT Primary Key Not Null,

Student\_ID BIGINT ,

Student\_Name VARCHAR(20),

Student\_Password VARCHAR(20),

CONSTRAINT Fk\_Student\_ID

FOREIGN KEY (Student\_ID)

REFERENCES Student (Student\_ID)

);

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-- Table Structure for Student Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Student' )

CREATE TABLE Student (

Student\_ID BIGINT Primary Key Not Null,

Student\_Name VARCHAR(20),

Address VARCHAR(50),

Contact\_No BIGINT,

Departement\_ID BIGINT,

Course\_ID BIGINT,

CONSTRAINT Fk\_Course\_ID

FOREIGN KEY (Course\_ID)

REFERENCES Course (Course\_ID) ,

CONSTRAINT Fk\_Departement\_ID

FOREIGN KEY (Departement\_ID)

REFERENCES Department (Departement\_ID)

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Table Structure for Fee Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Fee' )

CREATE TABLE Fee (

Challan\_No BIGINT Primary Key IDENTITY(1,1),

Student\_ID BIGINT,

Student\_Name VARCHAR(20),

Tution\_Fee BIGINT ,

CONSTRAINT Fk\_Student\_ID

FOREIGN KEY (Student\_ID)

REFERENCES Student (Student\_ID),

CONSTRAINT Fk\_Student\_Name

FOREIGN KEY (Student\_Name)

REFERENCES Student (Student\_Name)

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Table Structure for Teacher Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Teacher' )

CREATE TABLE Teacher (

Teacher\_ID BIGINT Primary Key Not Null,

Teacher\_Name VARCHAR(20),

Student\_ID BIGINT ,

CONSTRAINT Fk\_Student\_ID

FOREIGN KEY (Student\_ID)

REFERENCES Student (Student\_ID)

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Table Structure for Course Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Course' )

CREATE TABLE Course (

Course\_ID BIGINT Primary Key Not Null,

Course\_Name VARCHAR(20),

Teacher\_ID BIGINT,

Student\_ID BIGINT ,

CONSTRAINT Fk\_Student\_ID

FOREIGN KEY (Student\_ID)

REFERENCES Student (Student\_ID) ,

CONSTRAINT Fk\_Teacher\_ID

FOREIGN KEY (Teacher\_ID)

REFERENCES Teacher (Teacher\_ID)

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Table Structure for Department Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Department' )

CREATE TABLE Department (

Departement\_ID BIGINT Primary Key Not Null,

Department\_Name VARCHAR(20),

Course\_ID BIGINT,

Exam\_ID BIGINT ,

CONSTRAINT Fk\_Course\_ID

FOREIGN KEY (Course\_ID)

REFERENCES Course (Course\_ID)

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Table Structure for Exam Table.

IF NOT EXISTS (SELECT \* FROM sysobjects WHERE name='Exam' )

CREATE TABLE Exam (

Exam\_ID BIGINT Primary Key Not Null,

Exam\_Name VARCHAR(20),

Course\_ID BIGINT,

Student\_ID BIGINT,

Marks BIGINT ,

CONSTRAINT Fk\_Student\_ID

FOREIGN KEY (Student\_ID)

REFERENCES Student (Student\_ID) ,

CONSTRAINT Fk\_Course\_ID

FOREIGN KEY (Course\_ID)

REFERENCES Course (Course\_ID)

);

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Admin Table

INSERT INTO Admin

VALUES

(1 , 010 , 'Armoghan' , 'Armoghan\_Password'),

(2 , 033 , 'Aftab Shah' , 'Aftab\_Password');

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Student Table

INSERT INTO Student

VALUES

(1 , 'Armoghan' , 'Lahore' , 03330000000 2 , 3 ),

(2 , 'Aftab Hussain' , 'Lahore' , 03330000001 2 , 3 );

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Department Table

INSERT INTO Department

VALUES

(1 , 'Bs CS' , 1 , 3 ),

(2 , 'Bs IT' , 3 , 2),

(3 , 'Bs DFCS' , 2 , 1 );

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Teacher Table

INSERT INTO Teacher

VALUES

(1 , 'Imran Khalid' , 2 ),

(2 , 'Saud Bin Farooq' , 1 );

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Fee Table

INSERT INTO Fee ( Student\_Id , Student\_Name , Tution\_Fee)

VALUES

(1 , 'Armoghan' , 50000 ),

(2 , 'Afta Hussain' , 50000 );

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Exam Table

INSERT INTO Exam

VALUES

(1 , 'Mids' , 1 , 1 , 80 ),

(2 , 'Finals' , 2 , 1 , 80 );

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Dumping Data into Course Table

INSERT INTO Course

VALUES

(1 , 'Fa-21' , 1 , 2 ),

(2 , 'Sp-21' , 2 , 1 );

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Admin Table

CREATE PROCEDURE Admin\_Table

AS

SELECT \* FROM Admin

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Student Table

CREATE PROCEDURE Student\_Table

AS

SELECT \* FROM Student

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Fee Table

CREATE PROCEDURE Fee\_Table

AS

SELECT \* FROM Fee

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Course Table

CREATE PROCEDURE Course\_Table

AS

SELECT \* FROM Course

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Department Table

CREATE PROCEDURE Department\_Table

AS

SELECT \* FROM Department

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Teacher Table

CREATE PROCEDURE Teacher\_Table

AS

SELECT \* FROM Teacher

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-- Procedure to Print Exam Table

CREATE PROCEDURE Exam\_Table

AS

SELECT \* FROM Exam

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EXEC Admin\_Table

EXEC Student\_Table

EXEC Fee\_Table

EXEC Course\_Table

EXEC Department\_Table

EXEC Teacher\_Table

EXEC Exam\_Table

Project Details: https://github.com/Armoghan-ul-Mohmin/Student-Record-Keeping-System