**Answer Script**

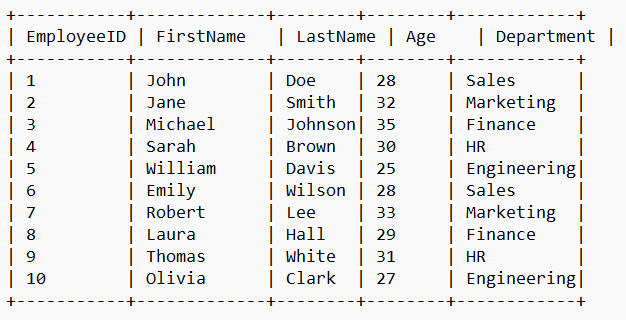
| Question No. 01 |
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| Create tables - 15 Marks   * 1. Make a student table   2. Make a Library table   3. Make a Fees table   Create table with proper relations. |
| Answer No. 01 |
| CREATE DATABASE Assignment\_1;  USE Assignment\_1;  CREATE TABLE Student (  Roll CHAR(4),  Name VARCHAR(100),  Email VARCHAR(50),  Address VARCHAR(200),  Age INT  );  INSERT INTO Student (Roll, Name, Email, Address, Age)  VALUES ('0001', 'Shaikh Zarif', 'zarif@gmail.com', 'kalabagan, Dhaka', 50);  INSERT INTO Student (Roll, Name, Email, Address, Age)  VALUES ('0002', 'Mahir Siam', 'Mahirsiam@gmail.com', 'badda, Dhaka', 30);  INSERT INTO Student (Roll, Name, Email, Address, Age)  VALUES ('0003', 'Ghalib', 'ghalib@gmail.com', 'uttara, Dhaka', 100);  CREATE TABLE Library (  BookID INT,  BookName VARCHAR(50),  Who\_Hired\_Roll CHAR(4),  FOREIGN KEY (Who\_Hired\_Roll) REFERENCES Student(Roll)  );  INSERT INTO Library (BookID, BookName, Who\_Hired\_Roll)  VALUES (1, 'Data Structures', '0001');  INSERT INTO Library (BookID, BookName, Who\_Hired\_Roll)  VALUES (2, 'Database Management', '0002');  CREATE TABLE Fees (  FeeID INT,  Roll CHAR(4),  Amount DECIMAL(10, 2),  FOREIGN KEY (Roll) REFERENCES Student(Roll)  );  INSERT INTO Fees (FeeID, Roll, Amount)  VALUES (1, '0001', 5000.00);  INSERT INTO Fees (FeeID, Roll, Amount)  VALUES (2, '0002', 7000.00); |

| Question No. 02 |
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| Add proper constraints with the No 1 question - 5 Marks |
| Answer No. 02 |
| CREATE DATABASE Assignment\_1;  USE Assignment\_1;  CREATE TABLE Student (  Roll CHAR(4) PRIMARY KEY,  Name VARCHAR(100) NOT NULL,  Email VARCHAR(50) UNIQUE,  Address VARCHAR(200) UNIQUE,  Age INT CHECK (Age > 10)  );  INSERT INTO Student (Roll, Name, Email, Address, Age)  VALUES ('0001', 'Shaikh Zarif', 'zarif@gmail.com', 'kalabagan, Dhaka', 50);  INSERT INTO Student (Roll, Name, Email, Address, Age)  VALUES ('0002', 'Mahir Siam', 'Mahirsiam@gmail.com', 'badda, Dhaka', 30);  INSERT INTO Student (Roll, Name, Email, Address, Age)  VALUES ('0003', 'Ghalib', 'ghalib@gmail.com', 'uttara, Dhaka', 100);  CREATE TABLE Library (  BookID INT PRIMARY KEY,  BookName VARCHAR(50),  Who\_Hired\_Roll CHAR(4),  FOREIGN KEY (Who\_Hired\_Roll) REFERENCES Student(Roll)  );  INSERT INTO Library (BookID, BookName, Who\_Hired\_Roll)  VALUES (1, 'Data Structures', '0001');  INSERT INTO Library (BookID, BookName, Who\_Hired\_Roll)  VALUES (2, 'Database Management', '0002');  CREATE TABLE Fees (  FeeID INT PRIMARY KEY,  Roll CHAR(4),  Amount DECIMAL(10, 2),  FOREIGN KEY (Roll) REFERENCES Student(Roll)  );  INSERT INTO Fees (FeeID, Roll, Amount)  VALUES (1, '0001', 5000.00);  INSERT INTO Fees (FeeID, Roll, Amount)  VALUES (2, '0002', 7000.00); |

| Question No. 03 |
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| Write the differences between data and information - 10 Marks |
| Answer No.3 |
| **Data**  Data is any fact or detail that is unprocessed or that is not arranged. It is in such a way that we cannot get any logical meaning from it.  Example of data might be "Blue", 10, etc.. In this data we can’t get any explanation on what this actually is.  **Information**  Information is the type of data which is processed or arranged in a way so that there is meaning in it. By using information we can have an idea about what this is and what we can do with it.  Example of information - age of rahim is 7. This is an information. |

| Question No. 04 |
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| In MySQL, Update and Delete query wasn’t executing, what was the reason and how to run those query? Write the code to enable the feature. (If you followed the class, you should know this). - 10 Marks |
| Answer No. 04 |
| In MySQL , to execute update and delete query we have to use :  SET SQL\_SAFE\_UPDATES = 0;  SET SQL\_SAFE\_UPDATES = 1;  Because, to update and delete the data we need to have permission. To enable the permission we have to write this command : SET SQL\_SAFE\_UPDATES = 0;  And to disable the permission again we have to write this command : SET SQL\_SAFE\_UPDATES = 1; |

Answer the following questions with this table data. Table name Employee.



Code for the above table :

USE assignment\_1;

CREATE TABLE Employee (

EmployeeID INT PRIMARY KEY,

FirstName VARCHAR(50),

LastName VARCHAR(50),

Age INT,

Department VARCHAR(50)

);

INSERT INTO Employee (EmployeeID, FirstName, LastName, Age, Department) VALUES

(1, 'John', 'Doe', 28, 'Sales'),

(2, 'Jane', 'Smith', 32, 'Marketing'),

(3, 'Michael', 'Johnson', 35, 'Finance'),

(4, 'Sarah', 'Brown', 30, 'HR'),

(5, 'William', 'Davis', 25, 'Engineering'),

(6, 'Emily', 'Wilson', 28, 'Sales'),

(7, 'Robert', 'Lee', 33, 'Marketing'),

(8, 'Laura', 'Hall', 29, 'Finance'),

(9, 'Thomas', 'White', 31, 'HR'),

(10, 'Olivia', 'Clark', 27, 'Engineering');

SELECT DISTINCT Department

FROM Employee;

SELECT LastName, Age

FROM Employee

ORDER BY Age DESC;

SELECT LastName, Age

FROM Employee

WHERE Age > 30 AND Department = 'Marketing';

SELECT \*

FROM Employee;

SELECT \*

FROM Employee

WHERE FirstName LIKE '%son%' OR LastName LIKE '%son%';

SELECT \*

FROM Employee

WHERE Department = 'Engineering';

| Question No. 5 |
| --- |
| Write a query to show the distinct department names - 10 Marks |
| Answer No. 05 |
| SELECT DISTINCT Department  FROM Employee; |

| Question No. 06 |
| --- |
| Write a query to show the LastNames of the employees sorted by descending ages - 10 Marks |
| Answer No. 06 |
| SELECT LastName, Age  FROM Employee  ORDER BY Age DESC; |

| Question No. 07 |
| --- |
| Write a query to show the employee LastName whose age is greater than 30 and works in Marketing department. - 10 Marks |
| Answer No. 07 |
| SELECT LastName, Age  FROM Employee  WHERE Age > 30 AND Department = 'Marketing'; |

| Question No. 08 |
| --- |
| Write a query to select all the employees - 10 Marks |
| Answer No. 08 |
| SELECT \*  FROM Employee; |

| Question No. 09 |
| --- |
| Write a query to get employees whose names includes ‘son’ - 10 Marks |
| Answer No. 9 |
| SELECT \*  FROM Employee  WHERE FirstName LIKE '%son%' OR LastName LIKE '%son%'; |

| Question No. 10 |
| --- |
| Write a query to get the engineers - 10 Marks |
| Answer No. 10 |
| SELECT \*  FROM Employee  WHERE Department = 'Engineering'; |