

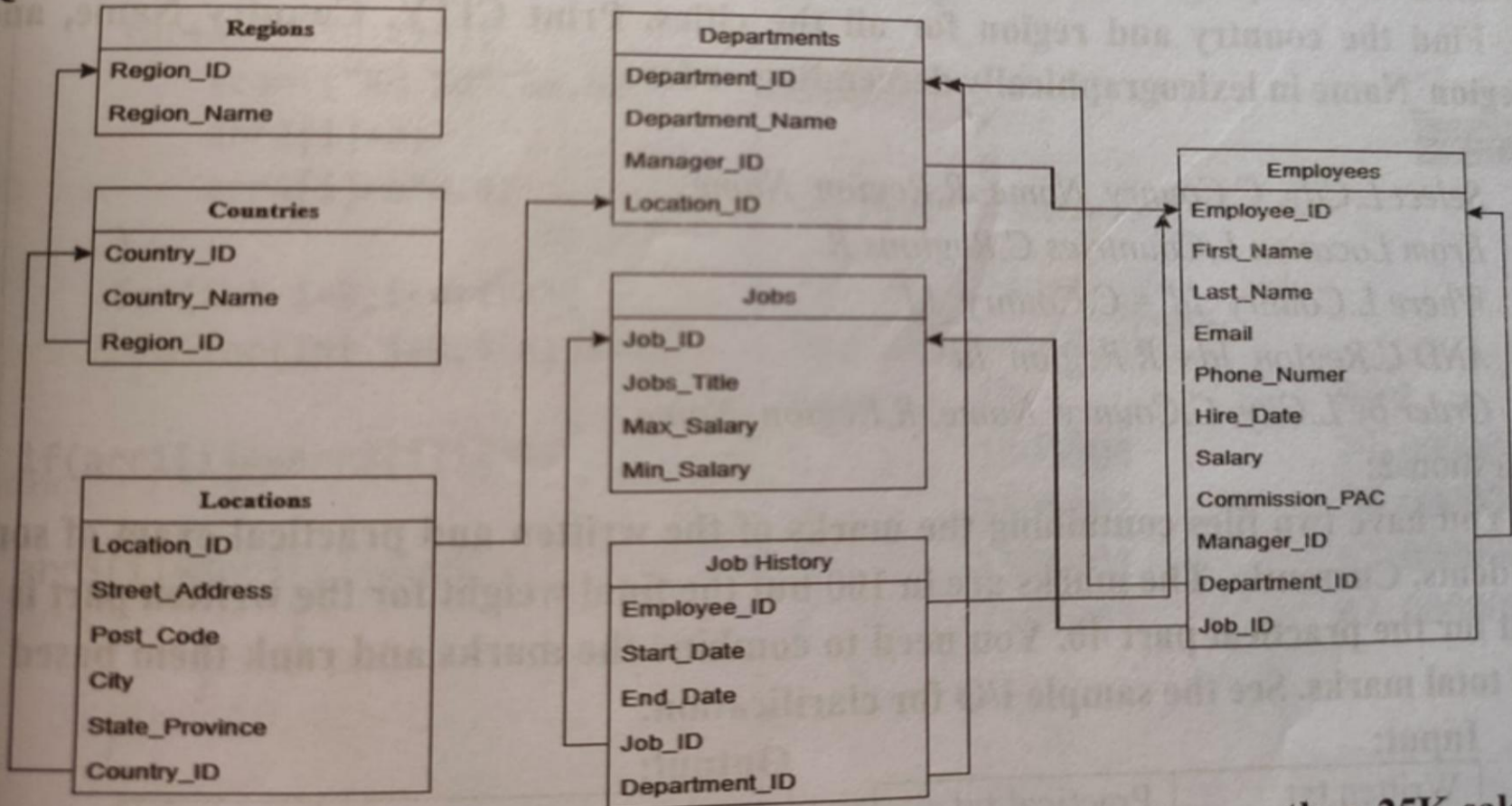
Written-01

Bangladesh Industrial Technical Assistance Center (BITAC) AME (SAT)

Exam Taker: BUET; Exam Date: 29.01.2021

Written Part

Question-1:



A. For all departments, find the number of employees who get more than 25K salary.

```
CREATE TABLE Regions (  
    Region_ID INT PRIMARY KEY,  
    Region_Name VARCHAR(100)  
);
```

```
CREATE TABLE Countries (  
    Country_ID INT PRIMARY KEY,  
    Country_Name VARCHAR(100),  
    Region_ID INT,  
    FOREIGN KEY (Region_ID) REFERENCES Regions(Region_ID)  
);
```

```
CREATE TABLE Locations (  
    Location_ID INT PRIMARY KEY,  
    Street_Address VARCHAR(200),  
    City VARCHAR(100),  
    State_Province VARCHAR(100),  
    Post_Code VARCHAR(20),  
    Country_ID INT,  
    FOREIGN KEY (Country_ID) REFERENCES Countries(Country_ID)  
);
```

```
CREATE TABLE Departments (  
    Department_ID INT PRIMARY KEY,  
    Department_Name VARCHAR(100),  
    Manager_ID INT,  
    Location_ID INT,  
    FOREIGN KEY (Location_ID) REFERENCES Locations(Location_ID)  
    -- Manager_ID later reference korbe Employees(Employee_ID)  
);
```

```
CREATE TABLE Jobs (  
    Job_ID INT PRIMARY KEY,  
    Job_Title VARCHAR(100),  
    Min_Salary DECIMAL(10,2),  
    Max_Salary DECIMAL(10,2)  
);
```

```
CREATE TABLE Employees (  
    Employee_ID INT PRIMARY KEY,  
    First_Name VARCHAR(50),  
    Last_Name VARCHAR(50),  
    Email VARCHAR(100),  
    Phone_Number VARCHAR(20),  
    Hire_Date DATE,  
    Job_ID INT,  
    Salary DECIMAL(10,2),  
    Commission_PCT DECIMAL(5,2),  
    Manager_ID INT,  
    Department_ID INT,  
    FOREIGN KEY (Job_ID) REFERENCES Jobs(Job_ID),  
    FOREIGN KEY (Manager_ID) REFERENCES Employees(Employee_ID),  
    FOREIGN KEY (Department_ID) REFERENCES Departments(Department_ID)  
);
```

```
SELECT
```

```
    e.Employee_ID,  
    e.First_Name,  
    e.Last_Name,  
    e.Email,  
    e.Phone_Number,  
    e.Salary,  
    j.Job_Title,  
    d.Department_Name,  
    l.City,  
    c.Country_Name,  
    r.Region_Name
```

```
FROM Employees e
```

```
JOIN Jobs j ON e.Job_ID = j.Job_ID
```

```
JOIN Departments d ON e.Department_ID = d.Department_ID
```

```
JOIN Locations l ON d.Location_ID = l.Location_ID
```

```
JOIN Countries c ON l.Country_ID = c.Country_ID
```

```
JOIN Regions r ON c.Region_ID = r.Region_ID;
```

```
CREATE TABLE Job_History (
```

```
    Employee_ID INT,
```

```
    Start_Date DATE,
```

```
    End_Date DATE,
```

```
    Job_ID INT,
```

```
    Department_ID INT,
```

```
    PRIMARY KEY (Employee_ID, Start_Date),
```

```
    FOREIGN KEY (Employee_ID) REFERENCES Employees(Employee_ID),
```

```
    FOREIGN KEY (Job_ID) REFERENCES Jobs(Job_ID),
```

```
    FOREIGN KEY (Department_ID) REFERENCES Departments(Department_ID)
```

```
);
```

"For all departments, find the number of employees who get more than 25K salary."

```
SELECT
    d.Department_Name,
    COUNT(e.Employee_ID) AS Num_Employees_Above_25K
FROM Employees e
JOIN Departments d ON e.Department_ID = d.Department_ID
WHERE e.Salary > 25000
GROUP BY d.Department_Name;
```