

# Database Management System Laboratory (MCA 291)

1. **A)** CREATE TABLE Departments(DepartmentID NUMBER NOT NULL CONSTRAINT DepartmentID\_pk PRIMARY KEY, DepartmentName VARCHAR2(50) NOT NULL);

```
INSERT INTO Departments(DepartmentID, DepartmentName)
VALUES((1, 'HR'), (2, 'IT'), (3, 'Finance'), (4,'Marketing'));
```

```
SELECT * FROM Departments;
```

DEPARTMENTID	DEPARTMENTNAME
2	IT
3	FINANCE
4	MARKETING
1	HR

- B)** CREATE TABLE Employees(EmployeeID NUMBER NOT NULL CONSTRAINT EmployeeID\_pk PRIMARY KEY, FirstName VARCHAR2(50) NOT NULL, LastName VARCHAR2(50) NOT NULL, Age NUMBER, DepartmentID NUMBER, Salary DECIMAL(10,2), Email VARCHAR2(100) UNIQUE, HireDate DATE);

```
INSERT INTO Employees(EmployeeID, FirstName, LastName,
Age, Salary, Email, HireDate) VALUES
(1, 'John', 'Doe', 28, 1, 50000.00, 'john.doe@example.com',
TO_DATE('2020-03-15','YYYY-MM-DD')),
(2, 'Alice', 'Smith', 32, 2, 70000.00, 'alice.smith@example.com',
TO_DATE('2019-07-22','YYYY-MM-DD')),
(3, 'Bob', 'Johnson', 45, 3, 80000.00,
'bob.johnson@example.com', TO_DATE('2015-11-05','YYYY-
MM-DD'));
```

```
(4, 'Emma', 'Davis', 29, 4, 55000.00,
'emma.davis@example.com', TO_DATE('2021-06-10','YYYY-
MM-DD')),
(5, 'Charlie', 'Brown', 35, 2, 75000.00,
'charlie.brown@example.com', TO_DATE('2018-09-30','YYYY-
MM-DD'))),
```

```
SELECT * FROM Employees;
```

EMPLOYEEID	FIRSTNAME	LASTNAME	AGE	DEPARTMENTID	SALARY	EMAIL	HIREDATE
3	Bob	Johnson	45	3	80000	bob.johnson@example.com	2015-11-05T00:00:00Z
4	Emma	Davis	29	4	55000	emma.davis@example.com	2021-06-10T00:00:00Z
5	Charlie	Brown	35	2	75000	charlie.brown@example.com	2018-09-30T00:00:00Z
1	John	Doe	28	1	50000	john.doe@example.com	2020-03-15T00:00:00Z
2	Alice	Smith	32	2	70000	alice.smith@example.com	2019-07-22T00:00:00Z

```
C) CREATE TABLE Projects(ProjectId NUMBER NOT NULL
CONSTRAINT ProjectId_pk PRIMARY KEY, ProjectName
VARCHAR2(50) NOT NULL, EmployeeID NUMBER,
ProjectDeadline DATE);
```

```
INSERT INTO Projects(ProjectId, ProjectName, EmployeeID,
ProjectDeadline) VALUES
(101, 'Employee Management System', 2, TO_DATE('2024-06-
30','YYYY-MM-DD')),
(102, 'Financial Analysis Tool', 3, TO_DATE('2024-09-15','YYYY-
MM-DD')),
(103, 'Marketing Strategy Plan', 4, TO_DATE('2024-07-
20','YYYY-MM-DD')),
(104, 'HR Onboarding Process', 1, TO_DATE('2024-05-
10','YYYY-MM-DD')),
(105, 'CyberSecurity Audit', 5, TO_DATE('2024-12-01','YYYY-
MM-DD'));
```

```
SELECT * FROM Projects;
```

PROJECTID	PROJECTNAME	EMPLOYEEID	PROJECTDEADLINE
103	Marketing Strategy Plan	4	2024-07-20T00:00:00Z
101	Employee Management System	2	2024-06-30T00:00:00Z
102	Financial Analysis Tool	3	2024-09-15T00:00:00Z
104	HR Onboarding Process	1	2024-05-10T00:00:00Z
105	Cybersecurity Audit	5	2024-12-01T00:00:00Z

## 2. A) SELECT \* FROM Employees;

EMPLOYEEID	FIRSTNAME	LASTNAME	AGE	DEPARTMENTID	SALARY	EMAIL	HIREDATE
3	Bob	Johnson	45	3	80000	bob.johnson@example.com	2015-11-05T00:00:00Z
4	Emma	Davis	29	4	55000	emma.davis@example.com	2021-06-10T00:00:00Z
5	Charlie	Brown	35	2	75000	charlie.brown@example.com	2018-09-30T00:00:00Z
1	John	Doe	28	1	50000	john.doe@example.com	2020-03-15T00:00:00Z
2	Alice	Smith	32	2	70000	alice.smith@example.com	2019-07-22T00:00:00Z

## B) SELECT DepartmentNames FROM Departments;

```

DEPARTMENTNAME
-----
IT
FINANCE
MARKETING
HR

```

## C) SELECT ProjectName, ProjectDeadline FROM Projects;

PROJECTNAME	PROJECTDEADLINE
Marketing Strategy Plan	2024-07-20T00:00:00Z
Employee Management System	2024-06-30T00:00:00Z
Financial Analysis Tool	2024-09-15T00:00:00Z
HR Onboarding Process	2024-05-10T00:00:00Z
Cybersecurity Audit	2024-12-01T00:00:00Z

**D)** SELECT \* FROM Employees WHERE HireDate > '2020-01-01';

**E)** SELECT \* FROM Projects WHERE ProjectDeadline < '2024-09-01';

**F)** SELECT FirstName, LastName FROM Employees;

FIRSTNAME	LASTNAME
Bob	Johnson
Emma	Davis
Charlie	Brown
John	Doe
Alice	Smith

**G)** SELECT \* FROM Employees WHERE Age>30;

EMPLOYEEID	FIRSTNAME	LASTNAME	AGE	DEPARTMENTID	SALARY	EMAIL	HIREDATE
3	Bob	Johnson	45	3	80000	bob.johnson@example.com	2015-11-05T00:00:00Z
5	Charlie	Brown	35	2	75000	charlie.brown@example.com	2018-09-30T00:00:00Z
2	Alice	Smith	32	2	70000	alice.smith@example.com	2019-07-22T00:00:00Z

**H)** SELECT \* FROM Employees WHERE Salary>60000;

EMPLOYEEID	FIRSTNAME	LASTNAME	AGE	DEPARTMENTID	SALARY	EMAIL	HIREDATE
3	Bob	Johnson	45	3	80000	bob.johnson@example.com	2015-11-05T00:00:00Z
5	Charlie	Brown	35	2	75000	charlie.brown@example.com	2018-09-30T00:00:00Z
2	Alice	Smith	32	2	70000	alice.smith@example.com	2019-07-22T00:00:00Z