A

IT23303-Database Management Systems

Date: 05/8/25

Session 4-Comparison and Pattern Matching Operators

Design and implement the following database schema for a university. The system should manage students, faculty, courses, departments, enrollments, attendance, and course-teaching information.

Department(DepartmentID, DeptName, HOD)
Student(StudentID, Name, Gender, DOB, DepartmentID)
Faculty(FacultyID, Name, Email, DepartmentID)
Course(CourseID, CourseName, Credits, DepartmentID)
Enrollment(StudentID, CourseID, Semester, Grade)
Teaches(FacultyID, CourseID, Semester)
Attendance(StudentID, CourseID, Date, Status)

1. Display the details of students who were born after the year 2002.
2. Show the names of faculty members whose DepartmentID is not equal to 2.
3. Display courses that offer either 3 or more credits.
4. List the courses taken in Semester 'Sem2'.
5. Display course names that contain the word ‘Data’.
6. List all students whose names start with the letter 'A'.
7. Find all student names that contain the letter ‘e’ as the second character.
8. Display all student names that start with 'S' and are exactly 5 characters long.

B

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Session 4-Comparison and Pattern Matching Operators

Design and implement the following database schema for a hospital. The system should manage patients, doctors, departments, treatments, appointments, and prescriptions.

Department(DepartmentID, DeptName, HeadOfDept)
Doctor(DoctorID, Name, Specialization, Email, DepartmentID)
Patient(PatientID, Name, Gender, DOB, BloodGroup)
Treatment(TreatmentID, TreatmentName, Cost, DepartmentID)
Appointment(PatientID, DoctorID, AppointmentDate, Slot, Status)
Prescription(PrescriptionID, PatientID, DoctorID, DateIssued, Notes)
PatientTreatment(PatientID, TreatmentID, StartDate, EndDate)

1. List all patients who were born before the year 1990.
2. Find doctors who belong to department ID 1 or 2.
3. Find treatments that cost more than ₹50,000.
4. Show all patients whose blood group is not 'O+'.
5. Find treatment names that contain the word ‘Surgery’
6. List department names that start with ‘Cardio’
7. Find all doctor names that end with ‘n’.
8. Display patient names that are exactly 6 characters long.