

Database Lab Work #1

Abdik Nurzhan

Task 1.1

Relation A: Employee

Employee(EmpID, SSN, Email, Phone, Name, Department, Salary)

Sample Data:

EmpID	SSN	Email	Phone	Name	Department	Salary
101	123-45-6789	john@company.com	555-0101	John	IT	75000
102	987-65-4321	mary@company.com	555-0102	Mary	HR	68000
103	456-78-9123	bob@company.com	555-0103	Bob	IT	72000

- 1) {EmpID}, {SSN}, {Email}, {Phone}, {SSN, Email}, {EmpID, Name}, {EmpID, SSN, Department}
- 2) {EmpID}, {SSN}, {Email}, {Phone}
- 3) {EmpID}. Because it is simple and very stable
- 4) Yes, if it office phone number

Relation B: Course Registration

Registration(StudentID, CourseCode, Section, Semester, Year, Grade, Credits)

Business Rules:

- A student can take the same course in different semesters
- A student cannot register for the same course section in the same semester
- Each course section in a semester has a fixed credit value

1) {StudentID, CourseCode, Section, Semester, Year}

2) StudentID and CourseCode to know which student takes which course. Section, Semester and Year so a student will not register for the same course section in the same semester, but could do it in next semester or year

3) {StudentID, CourseCode, Section, Semester, Year, Grade}

Task 1.2

Given Tables:

Student(StudentID, Name, Email, Major, AdvisorID)

Professor(ProfID, Name, Department, Salary)

Course(CourseID, Title, Credits, DepartmentCode)

Department(DeptCode, DeptName, Budget, ChairID)

Enrollment(StudentID, CourseID, Semester, Grade)

Student.StudentID (PK) → Enrollment.StudentID (FK)

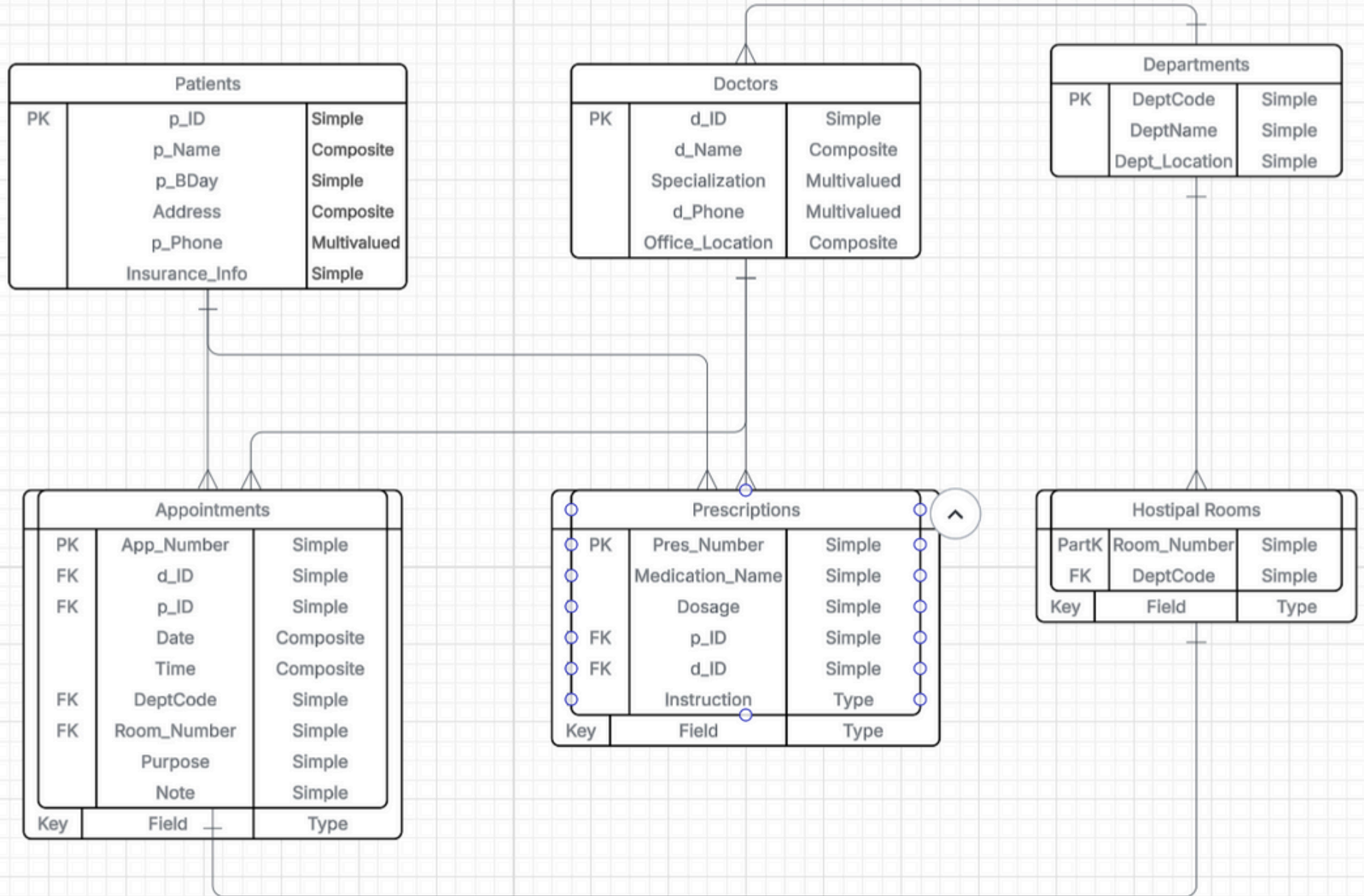
Course.CourseID (PK) → Enrollment.CourseID (FK)

Department.DeptCode (PK) → Course.DepartmentCode (FK)

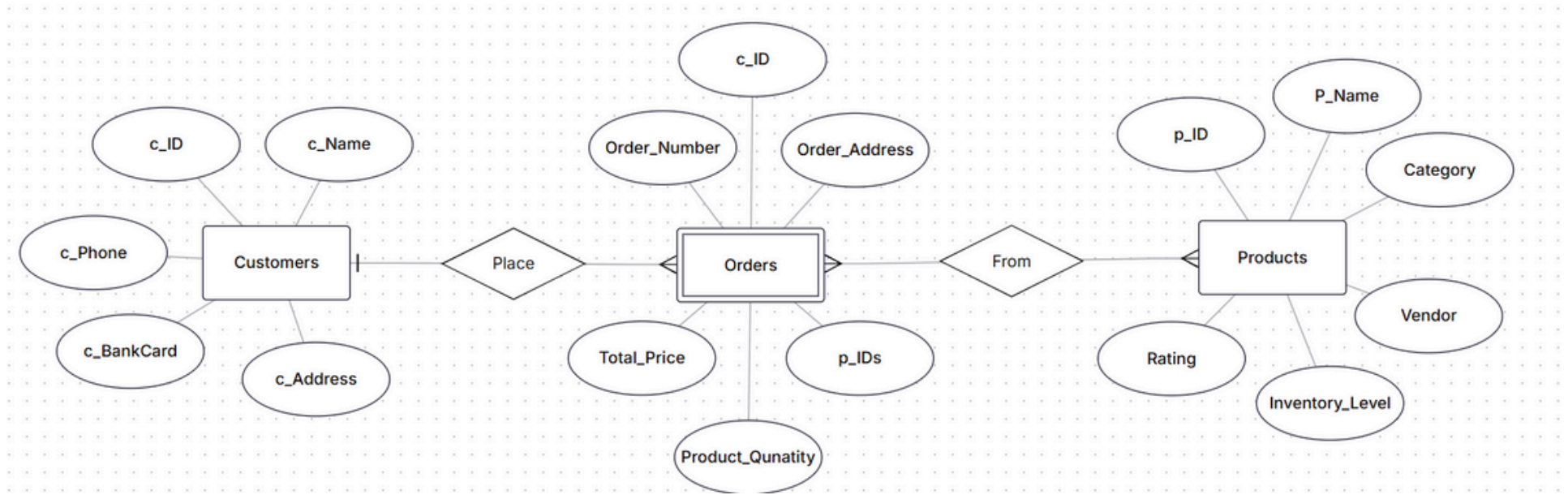
Department.DeptCode (PK) → Professor.Department (FK)

Department.DeptName (AK) → Professor.Department (FK)

Task 2.1



Task 2.2



Orders is weak because it is depend on Customers and Products