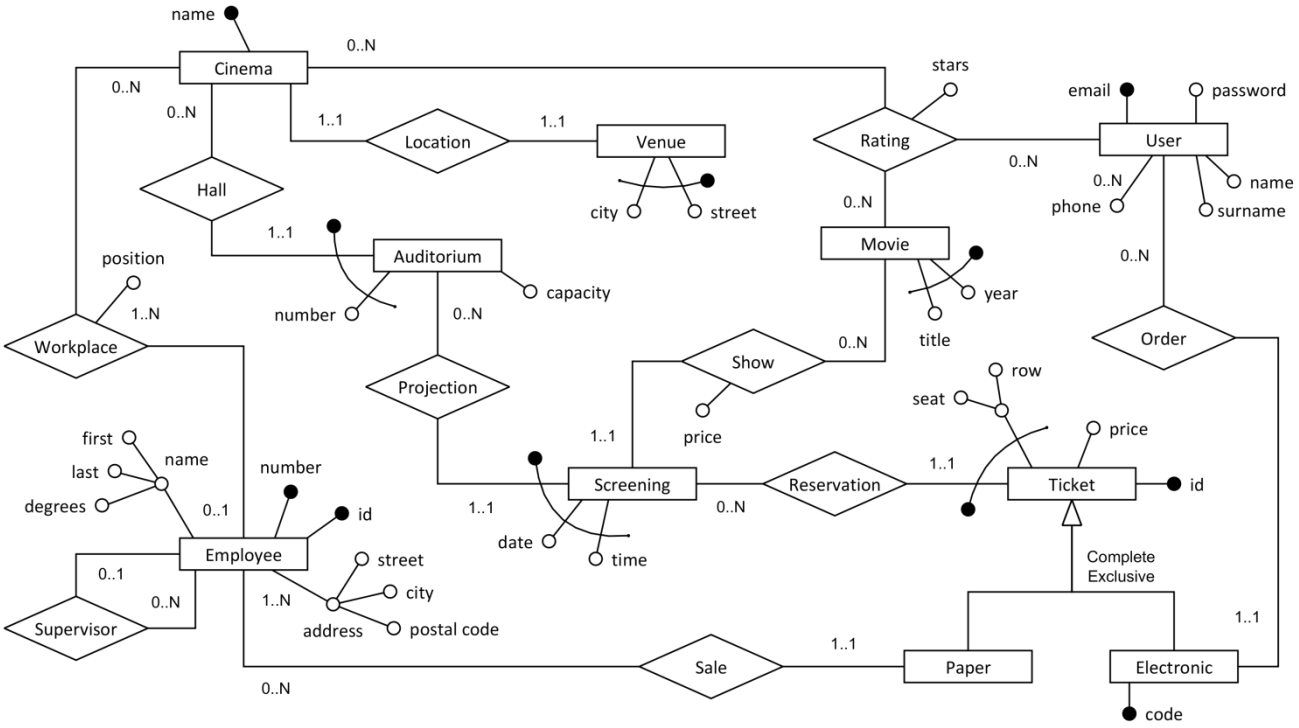
B0B36DBS: **Database Systems** | Class 4: **Relational Model**

01: System



02: Cinema

Cinema(name)

03: Venue

Solution A

Cinema(name)

Venue(street, city)

Location(cinema, street, city)

FK: (cinema) ⊆ Cinema(name)

FK: (street, city) ⊆ Venue(street, city)

Solution B

Cinema(name, street, city)

04: Employee

Solution A

Employee(id, number)

Name(employee, first, last, degrees)
FK: (employee) ⊆ Employee(id)

Address(employee, street, city, postalCode)
FK: (employee) ⊆ Employee(id)

Solution B

Employee(id, number, first, last, degrees)

Address(employee, street, city, postalCode)
FK: (employee) ⊆ Employee(id)

05: Workplace

Boss(employee, superior)
FK: (employee) ⊆ Employee(id)
FK: (superior) ⊆ Employee(id)

Workplace(employee, cinema)
FK: (employee) ⊆ Employee(id)
FK: (cinema) ⊆ Cinema(name)

Position(employee, position)
FK: (employee) ⊆ Workplace(employee)

06: Auditorium

Auditorium(number, cinema, capacity)
FK: (cinema) ⊆ Cinema(name)

07: Screening

Movie(title, year)

Screening(date, time, auditorium, cinema, movie, year, price)
FK: (auditorium, cinema) ⊆ Auditorium(number, cinema)
FK: (movie, year) ⊆ Movie(title, year)

08: Ticket

Ticket(id, seat, row, date, time, auditorium, cinema, price)
FK: (date, time, auditorium, cinema) ⊆ Screening(date, time, auditorium, cinema)

PaperTicket(id)
FK: (id) ⊆ Ticket(id)

ElectronicTicket(id, code)
FK: (id) ⊆ Ticket(id)

09: Purchase

User(email, password, name, surname)

Phone(user, phone)
FK: (user) ⊆ User(email)

PaperTicket(id, employee)
FK: (id) ⊆ Ticket(id)
FK: (employee) ⊆ Employee(id)

ElectronicTicket(id, code, user)
FK: (id) ⊆ Ticket(id)
FK: (user) ⊆ User(email)

10: Rating

Rating(user, movie, year, cinema, stars)
FK: (user) ⊆ User(email)
FK: (movie, year) ⊆ Movie(title, year)
FK: (cinema) ⊆ Cinema(name)