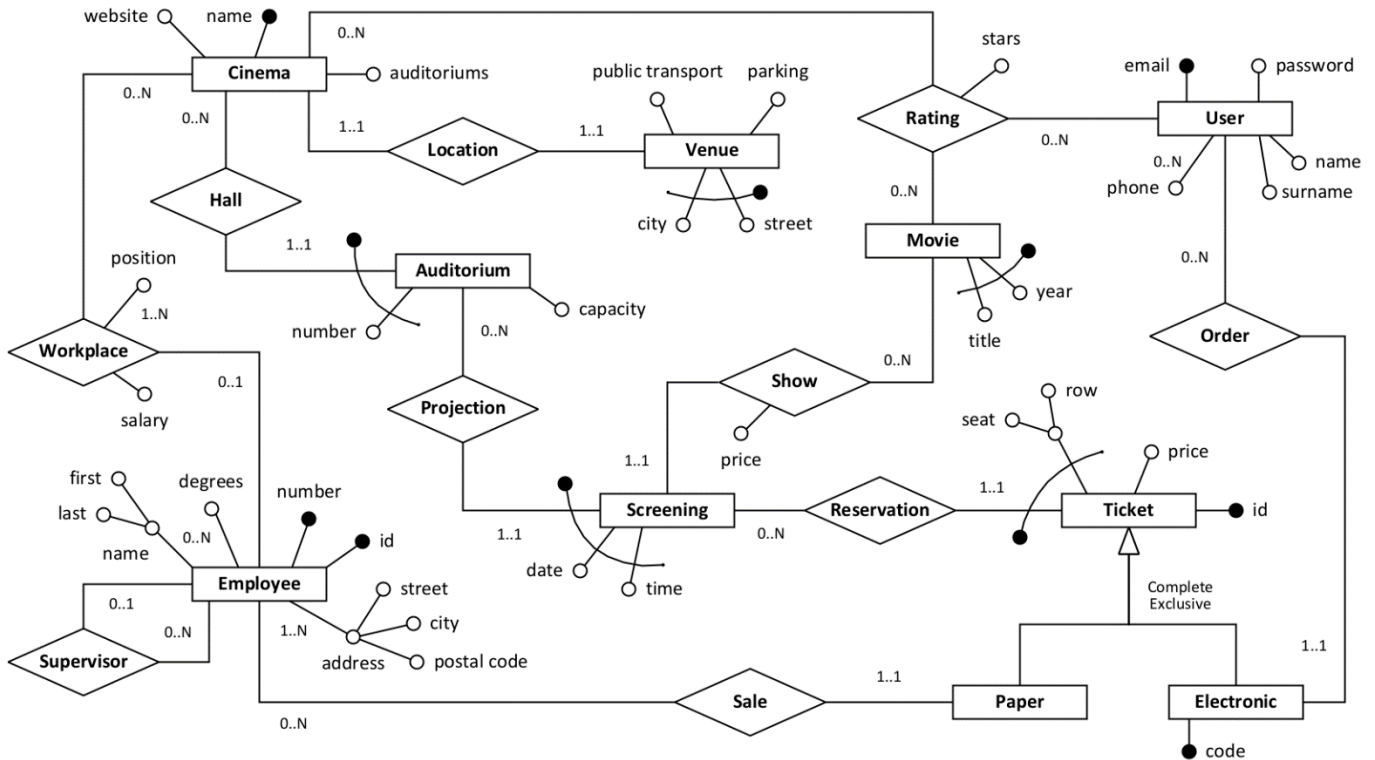# BOB36DBS: **Database Systems** | Practical Class: **Relational Model**

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01: System

02: Cinema

Cinema(<u>name</u>, website, auditoriums)

03: Venue

Solution A

Cinema(<u>name</u>, website, auditoriums)

Venue(<u>street, city</u>, transport, parking)

Location(<u>cinema</u>, <u>street, city</u>)
  FK: (cinema) ⊆ Cinema(name)
  FK: (street, city) ⊆ Venue(street, city)

Solution B

Cinema(<u>name</u>, website, auditoriums, <u>street, city</u>, transport, parking)

04: Employee

Employee(<u>id</u>, <u>number</u>)

Name(<u>employee</u>, first, last)
  FK: (employee) ⊆ Employee(id)

Degrees(<u>employee, degree</u>)
  FK: (employee) ⊆ Employee(id)

Address(<u>employee</u>, street, city, postalCode)
  FK: (employee) ⊆ Employee(id)

Employee(<u>id</u>, <u>number</u>, first, last)

Degrees(<u>employee, degree</u>)
  FK: (employee) ⊆ Employee(id)

Address(<u>employee</u>, street, city, postalCode)
  FK: (employee) ⊆ Employee(id)

05: Workplace

Boss(<u>employee</u>, superior)
  FK: (employee) ⊆ Employee(id)
  FK: (superior) ⊆ Employee(id)

Workplace(<u>employee</u>, cinema, salary)
  FK: (employee) ⊆ Employee(id)
  FK: (cinema) ⊆ Cinema(name)

Position(<u>employee, position</u>)
  FK: (employee) ⊆ Workplace(employee)

06: Auditorium

Auditorium(<u>number, cinema</u>, capacity)
  FK: (cinema) ⊆ Cinema(name)

07: Screening

Movie(<u>title, year</u>)

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

08: Ticket

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

PaperTicket(<u>id</u>)
  FK: (id) ⊆ Ticket(id)

ElectronicTicket(<u>id</u>, <u>code</u>)
  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)