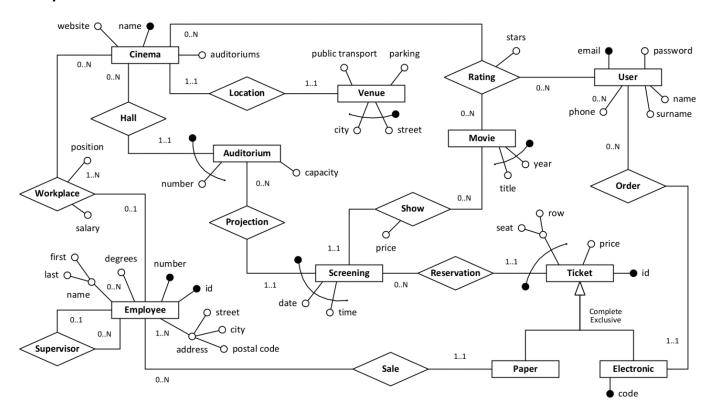
# B0B36DBS: Database Systems | Class 4: Relational Model

# 01: System



### 02: Cinema

Cinema (name, website, auditoriums)

# 03: Venue

Solution A

Cinema(name, website, auditoriums)

Venue(street, city, transport, parking)

Location(cinema, street, city)

FK: (cinema) ⊆ Cinema(name)

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

Solution B

 $\textbf{Cinema} \, (\underline{\texttt{name}}, \,\, \texttt{website}, \,\, \texttt{auditoriums}, \,\, \underline{\texttt{street}, \,\, \texttt{city}}, \,\, \texttt{transport}, \,\, \texttt{parking})$ 

## 04: Employee

```
Solution A
Employee(id, number)
Name (employee, first, last)
  FK: (employee) ⊆ Employee(id)
Degrees (employee, degree)
  FK: (employee) ⊆ Employee(id)
Address (employee, street, city, postalCode)
  FK: (employee) ⊆ Employee(id)
Solution B
Employee(id, number, first, last)
Degrees (employee, degree)
  FK: (employee) ⊆ Employee(id)
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, salary)
  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)
\textbf{PaperTicket}\,(\underline{\text{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)
```