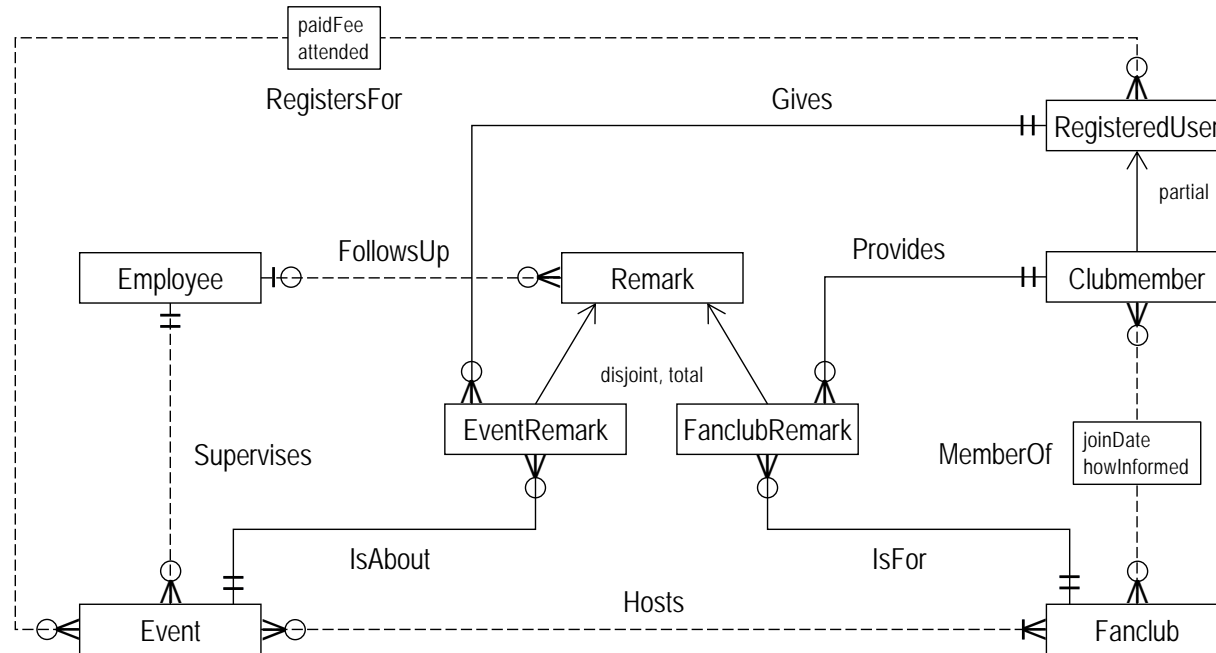# MSBD 6000L: Database Systems

Fanclub Management System

Assignment 1: Entity-Relationship Schema Design 1

Clubmember

- birthdate
- occupation
- educationLevel

Employee

- *employeeId*
- employeeName
- post
- username (*unique*)

Event

- *eventId*
- eventName
- eventDate
- eventTime
- venue
- memberFee
- nonmemberFee
- quota
- status
- eventType

Fanclub

- *clubId*
- clubName
- description
- establishedDate

RegisteredUser

- *username*
- firstName
- lastName
- gender
- phoneNo
- email (*unique*)

Remark

- subject
- text
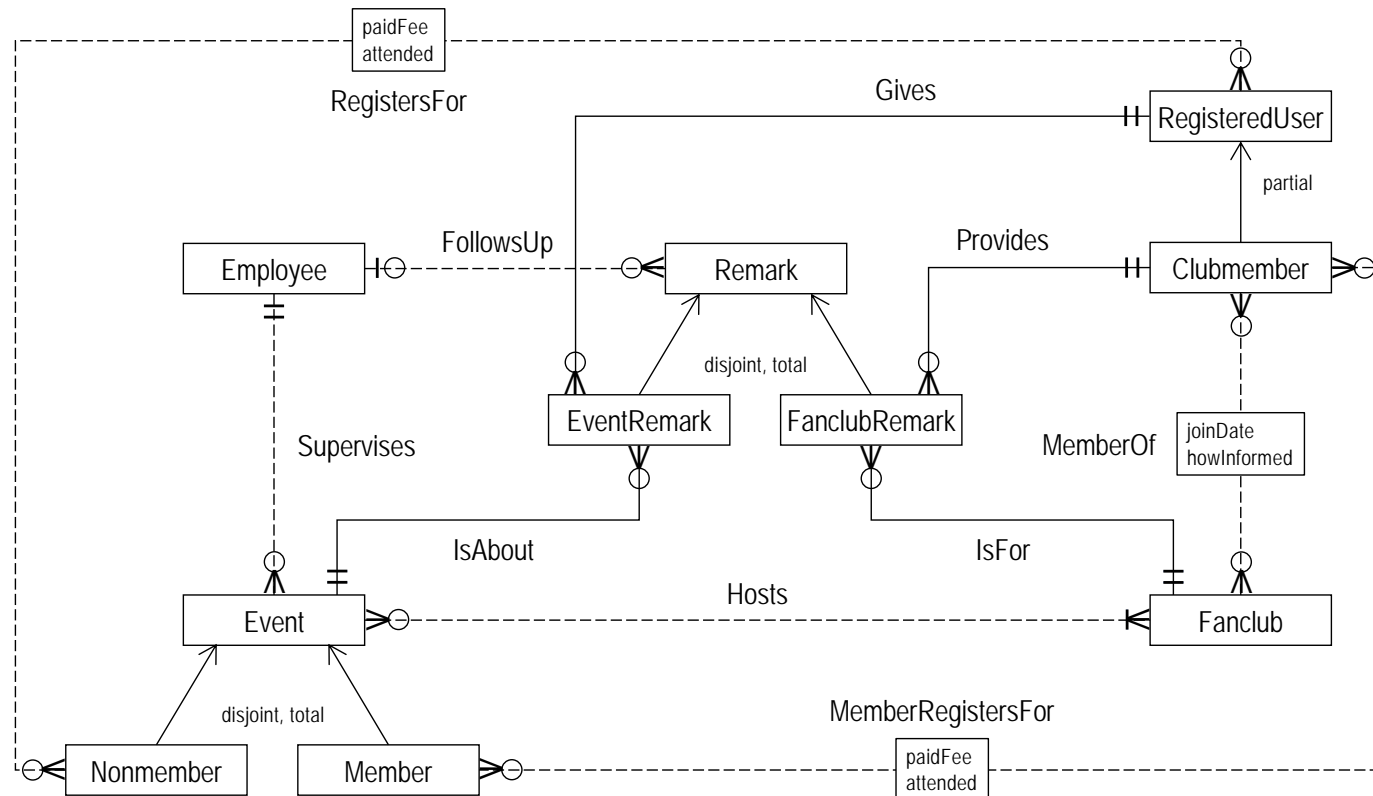- submissionDate
- status
- actionTaken

EventRemark

FanclubRemark

MSBD 6000L: Database Systems

Fanclub Management System
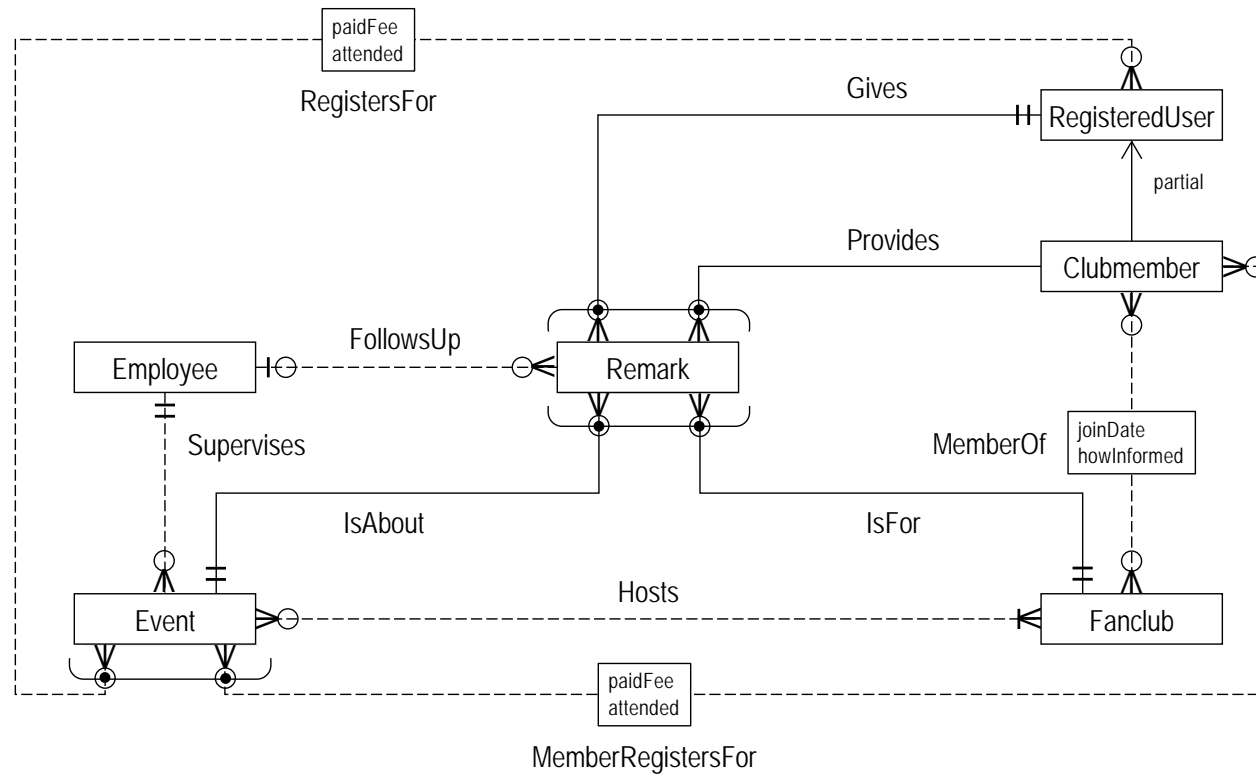
Assignment 1: Entity-Relationship Schema Design 2

The RegistersFor relationship can be represented as two relationships if subtypes Nonmember and Member are created for Event.

Clubmember
birthdate
occupation
educationLevel

Employee
employeeId
employeeName
post
username (*unique*)

Event
eventId
eventName
eventDate
eventTime
venue
memberFee
nonmemberFee
quota
status

Fanclub
clubId
clubName
description
establishedDate

RegisteredUser
username
firstName
lastName
gender
phoneNo
email (*unique*)

Remark
subject
text
submissionDate
status
actionTaken

EventRemark

FanclubRemark

Nonmember

Member

MSBD 6000L: Database Systems

Fanclub Management System

Assignment 1: Entity-Relationship Schema Design 3

Either one or both generalization relationships can be replaced by an exclusive *OR* constraint.

Clubmember

birthdate
occupation
educationLevel

Employee

employeeId
employeeName
post
username (*unique*)

Event

eventId
eventName
eventDate
eventTime
venue
memberFee
nonmemberFee
quota
status
eventType

Fanclub

clubId
clubName
description
establishedDate

RegisteredUser

username
firstName
lastName
gender
phoneNo
email (*unique*)

Remark

subject
text
submissionDate
status
actionTaken
remarkType

General Marking Scheme (based on Design 1)

Concept	Count	Marks per	Total Marks	Notes
Entities	6	2	12	Clubmember, Employee, Event, Fanclub, RegisteredUser, Remark (excludes sub-entities of Event and Remark entities—see Remark generalization marks)
Attributes of entities	32	0.5	16	
Key/unique attributes	6	0.5	3	keys: employeeId, eventId, clubId, RegisteredUser.username; unique: Employee.username, email
Relationships	9	2	18	
Attributes of relationships	4	1	4	
Relationship constraints	36	0.5	18	
Identifying relationships	4	1	4	
RegisteredUser generalization	1	2	2	1.5 marks for generalization; 0.5 marks for coverage constraint
Remark generalization	1	3	3	2 marks generalization; 1 mark coverage OR 1.5 marks for each exclusive or constraint
Design quality	1	20	20	
TOTAL			100	

Notes:
1. Different concepts from the sample solution can get the same marks if they represent the requirements adequately and correctly.
2. The Relationships mark is for having a correct and named relationship.
3. The Relationship constraints mark is for each cardinality and participation constraint for each end of a relationship.
4. The Identifying relationships mark is for each identifying relationship.
5. No additional marks are given if RegisteredUser and Employee are generalized to Person.

Deductions
- 0.5 marks for each missing relationship name or incorrect identifying relationship.
- 0.5 marks for each unnecessary attribute, unnecessary surrogate key, incorrect discriminator or incorrect unique attribute.
- 1 mark for each unnecessary relationship.
- 1 mark for each operation that is included in the design.
- 3 marks for an incorrect relationship (i.e., it relates the wrong entities).