COMP 3311: Database Management Systems
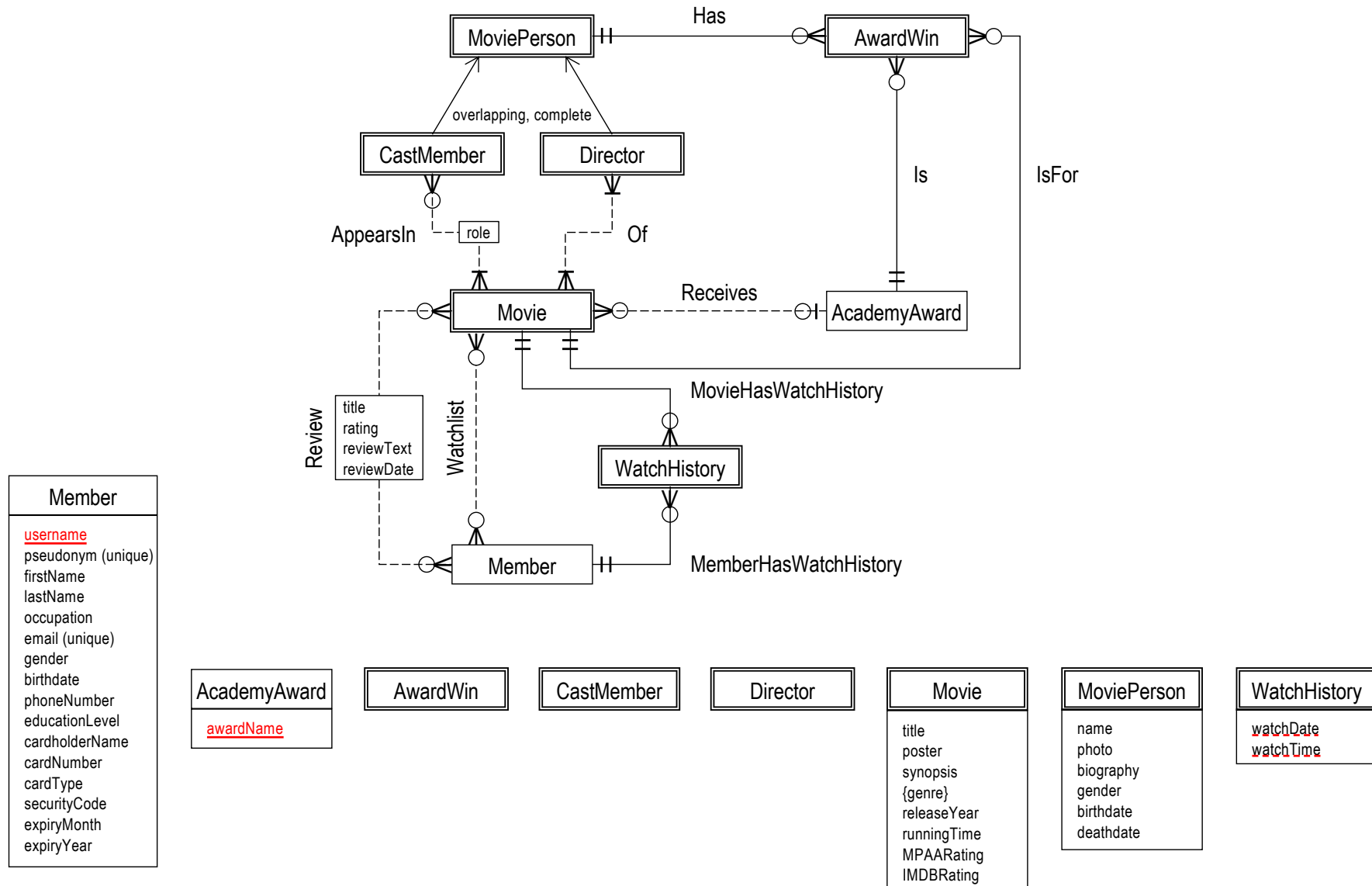
Movie Streaming Management System

Task 1: Entity-Relationship Schema Example Design

MoviePerson —||— **Has** — AwardWin

overlapping, complete

CastMember   Director

Is   **IsFor**

AppearsIn — role — **Of**

Movie — **Receives** — AcademyAward

MovieHasWatchHistory

Review — title, rating, reviewText, reviewDate

Watchlist

WatchHistory

Member — **MemberHasWatchHistory**

Member

- username
- pseudonym (unique)
- firstName
- lastName
- occupation
- email (unique)
- gender
- birthdate
- phoneNumber
- educationLevel
- cardholderName
- cardNumber
- cardType
- securityCode
- expiryMonth
- expiryYear

AcademyAward

- awardName

AwardWin

CastMember

Director

Movie

- title
- poster
- synopsis
- {genre}
- releaseYear
- runningTime
- MPAARating
- IMDBRating

MoviePerson

- name
- photo
- biography
- gender
- birthdate
- deathdate

WatchHistory

- watchDate
- watchTime

Marking Scheme

Concept	Count	Marks per	Total Marks	Notes
Entities	8	2	16	AcademyAward, AwardWin, Actor, Director, Member, Movie, MoviePerson, WatchHistory
Attributes of entities	32	0.5	16	
multi-valued attributes	1	2	2	genre
Key/unique attributes	4	2	8	keys: awardName, username; unique: pseudonym, email
Relationships	10	2	20	
Attributes of relationships	5	1	5	
Relationship constraints	40	0.5	20	
Identifying relationships	5	1	5	
MoviePerson generalization	1	3	3	2 marks for generalization; 1 mark for coverage constraint
Presentation	1	5	5	
TOTAL			100	

Notes:

1. Different concepts from the sample solution can get the same marks if they represent the requirements correctly/adequately.
2. The Relationships mark is for having a correct <u>and</u> named relationship.
3. The Relationship constraints mark is for each cardinality and each participation constraint for each end of a relationship.
4. The Identifying relationships mark is for each identifying relationship.

Deductions

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