

Given ERD Diagram:

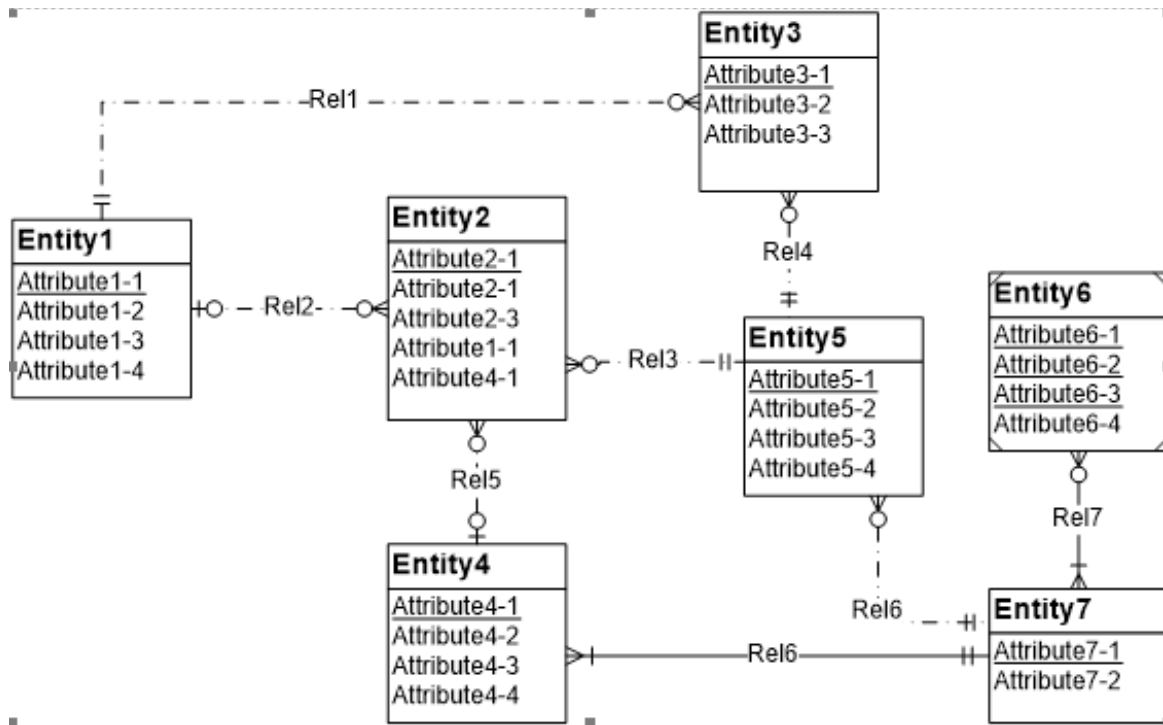


Figure 1: ERD for Problem 4

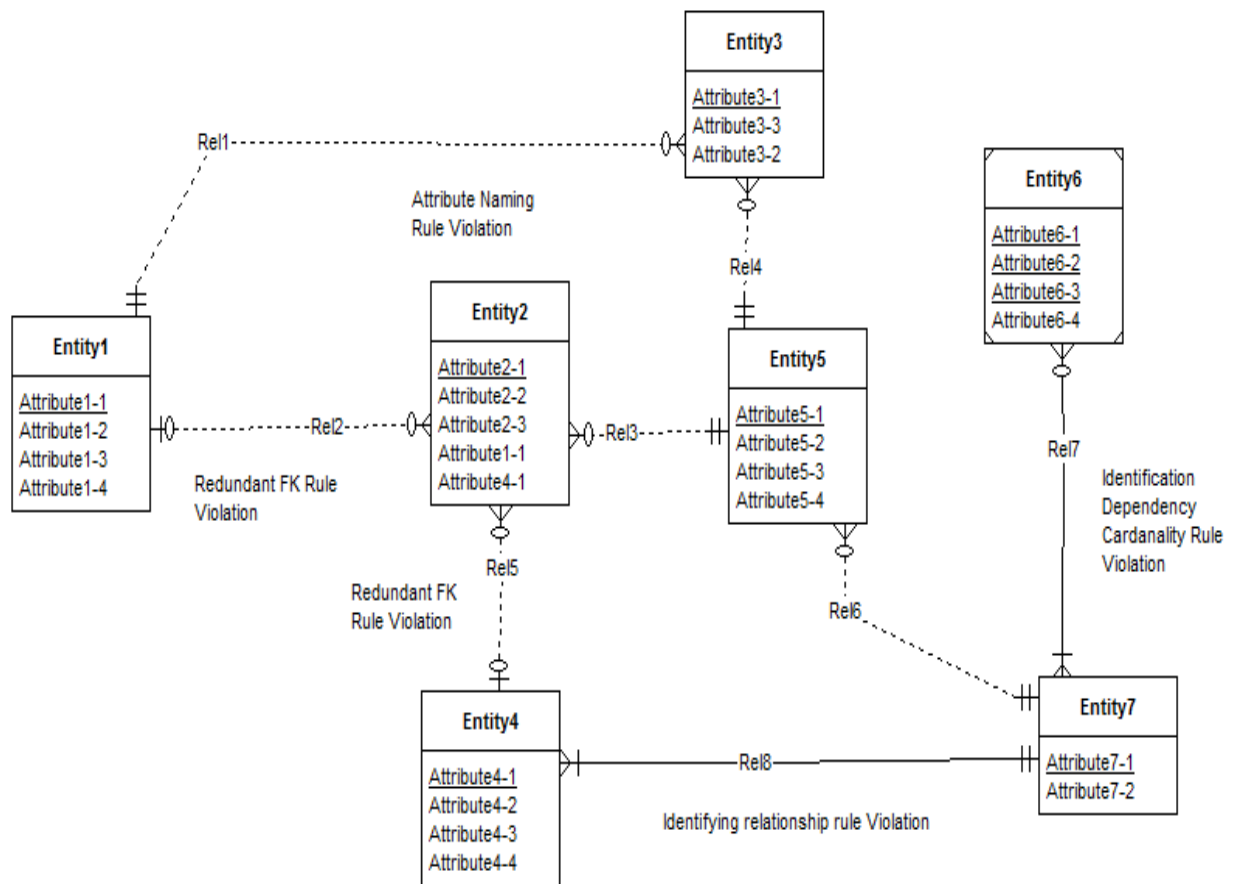
Above ERD Diagram has **5 errors**:

1. *Identification Dependency Cardinality Rule Violation* (At **Rel7**). **Cardinality of Weak Entity should be (1,1)**
2. *Redundant FK(Foreign Key) Rule Violation*(At **Rel2**, **Entity 2 is having Attribute1-1 which is primary key of Entity 1.**
3. *Redundant FK(Foreign Key) Rule Violation*(At **Rel5**, **Entity 2 is having Attribute4-1 which is primary key of Entity 4.**

4. Identifying Relationship Rule Violation. The relationship between Entity4 and Entity7 is given identifying but none of them is weak entity.

5. Attribute Name Rule Violation: Entity 2 is having 2 attributes with same name Attribute2-1.

Diagram showing Errors:



Resolution to these errors:

- 1.** Resolution of *Identification Dependency Cardinality Rule* (At **Rel7**) : **Cardinality of 'Rel7' near Entity7 is made to be (min,max) = (1,1)**
- 2.** Resolution of *Redundant FK(Foreign Key) Rule* (At **Rel2**): **Remove the redundant foreign key (Entity2.Attribute1-1)**
- 3.** Resolution of *Redundant FK(Foreign Key) Rule*(At **Rel5**): **Remove the redundant foreign key (Entity2.Attribute4-1)**
- 4.** Resolution of *Identifying Relationship Rule*(Relationship between **Entity4 and Entity7**)
:Make this relationship non-identifying.
- 5.** Resolution to Attribute Name Rule (in Entity2):
Rename the Attribute2-1 which is not primary key to Attribute2-2.

Corrected Diagram:

