

HW2 CS-425

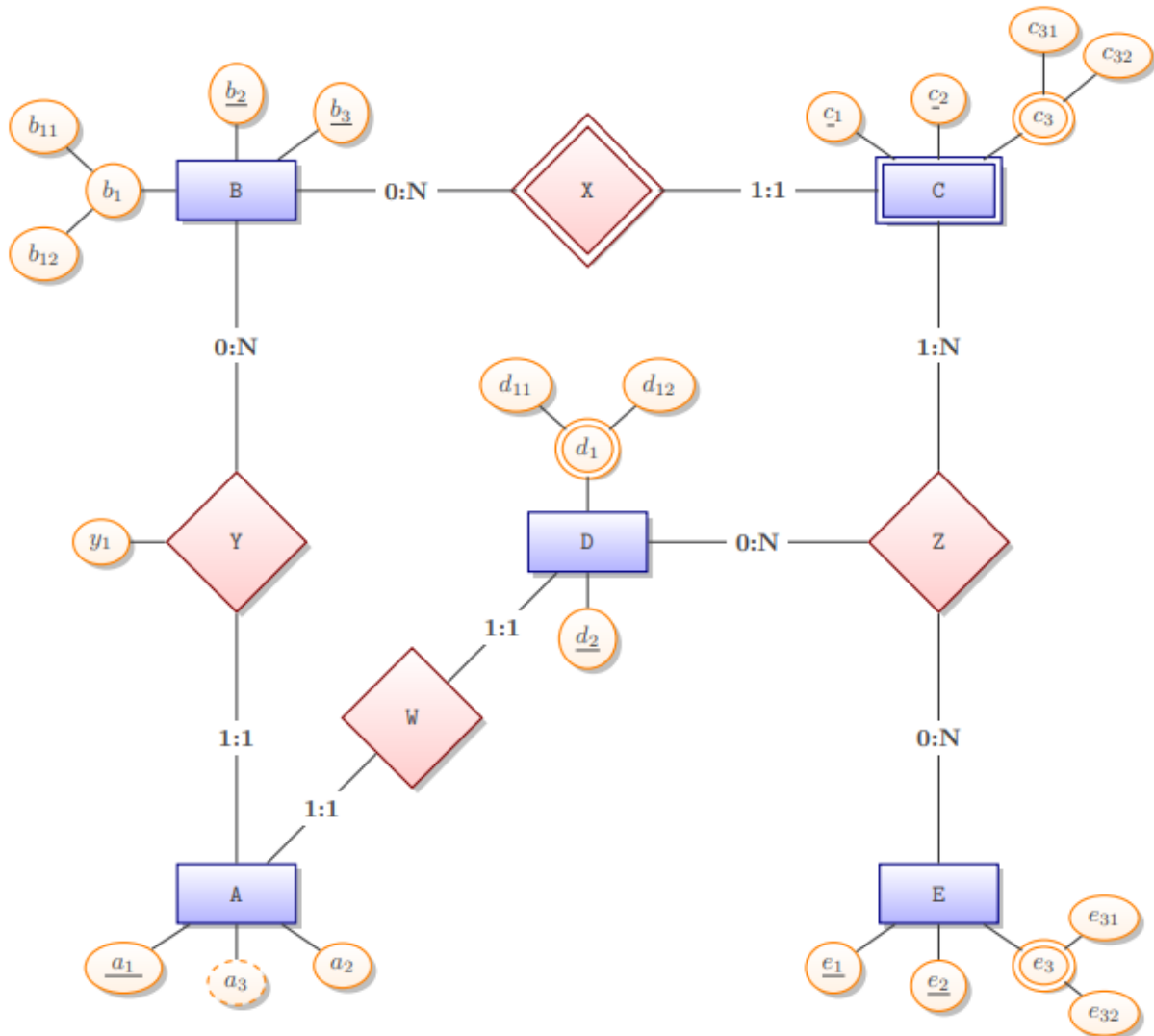
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Part 2.1 Database Design (Total: 20 Points)

Question 2.1.1 Translation of ER into Relational Model (20 Points)

Take the following ER-model and translate it into a relational schema using the rules presented in class. Present the relational schema as we did in the class. Present the results of the following intermediate steps in this order:

1. Translate strong entities + unnest composite attributes
2. Translate weak entities
3. Translated multi-valued attributes
4. Translate relationships



1) Translate strong entities + unnest composite attributes:

A(a1, a2)

B(b2, b3, b11, b12)

D(d2)

E(e1, e2)

2) Translate weak entities:

A(a1, a2)

B(b2, b3, b11, b12)

C(b2, b3, c1, c2)

D(d2)

E(e1, e2)

3) Translate multi-valued attributes:

A(a1, a2)

B(b2, b3, b11, b12)

C(b2, b3, c1, c2)

C3(b2, b3, c1, c2, c31, c32)

D(d2)

D1(d2, d11, d12)

E(e1, e2)

E3(e1, e2, e31, e32)

4) Translate Relationship:

A(a1, a2, b2, b3, y1)

B(b2, b3, b11, b12)

C(b2, b3, c1, c2)

C3(b2, b3, c1, c2, c31, c32)

D(d2)

D1(d2, d11, d12)

E(e1, e2)

E3(e1, e2, e31, e32)

W(a1, d2)

Z(b2, b3, c1, c2, d2, e1, e2)