Implémentation SQL des Diagrammes de classes

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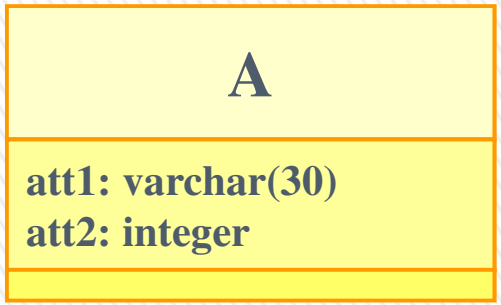
Implémentation SQL de Diagrammes de classes

- **Classe**
- **Relation d'Association**
- **Classe Association**
- **Relation Généralisation/Spécialisation**
  - **Cf. cours dédié**

Classe

» **Modèle d'analyse d'une Classe**

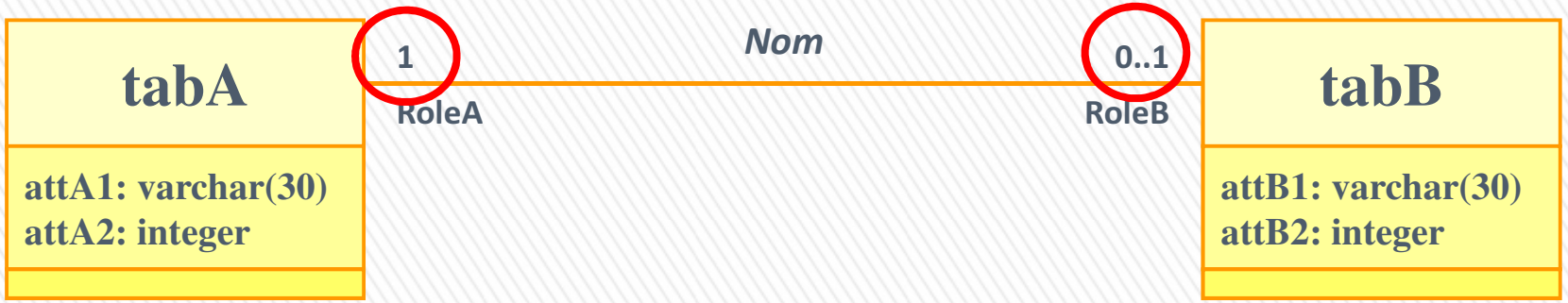


» **Code SQL**

```
> CREATE TABLE A(
    + IDA INTEGER,
    + ATT1 VARCHAR(30),
    + ATT2 INTEGER,
    + CONSTRAINT A_PK PRIMARY KEY(IDA));
```

Association – Cardinalités 1, 0..1

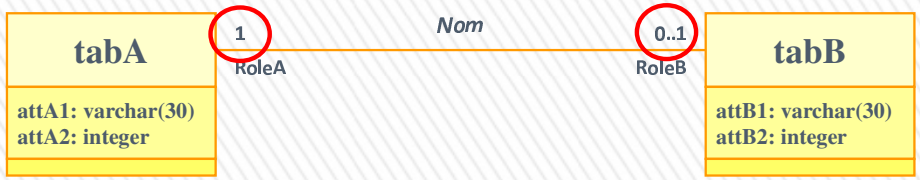
- Modèle d'analyse d'une **Association**
  - CardA = **1**
  - CardB = **0..1**



Association – Cardinalités 1, 0..1

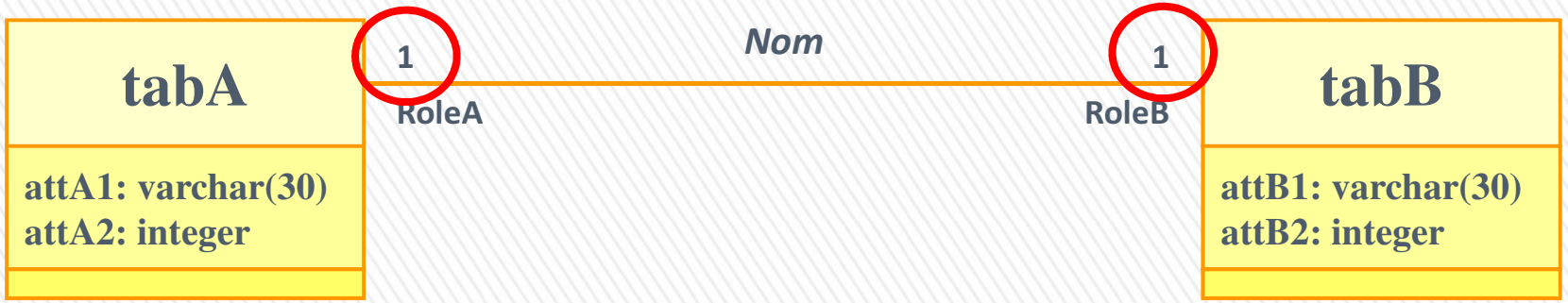
- **CREATE TABLE TABA(**
  - IDA INTEGER PRIMARY KEY,
  - ATTA1 VARCHAR(30),
  - ATTA2 INTEGER);

- **CREATE TABLE TABB(**
  - IDB INTEGER PRIMARY KEY,
  - ATTB1 VARCHAR(30),
  - ATTB2 INTEGER,
  - IDBA INTEGER NOT NULL,
  - CONSTRAINT BTOA_FK FOREIGN KEY (IDBA) REFERENCES TABA(IDA),
  - CONSTRAINT IDBA_UK UNIQUE (IDBA));



Association – Cardinalités 1, 1

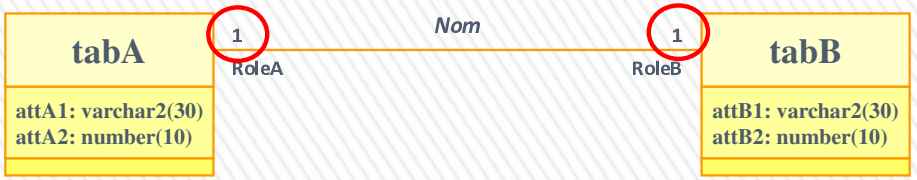
- Modèle d'analyse d'une **Association**
  - CardA = **1**
  - CardB = **1**



Association – Cardinalités 1, 1

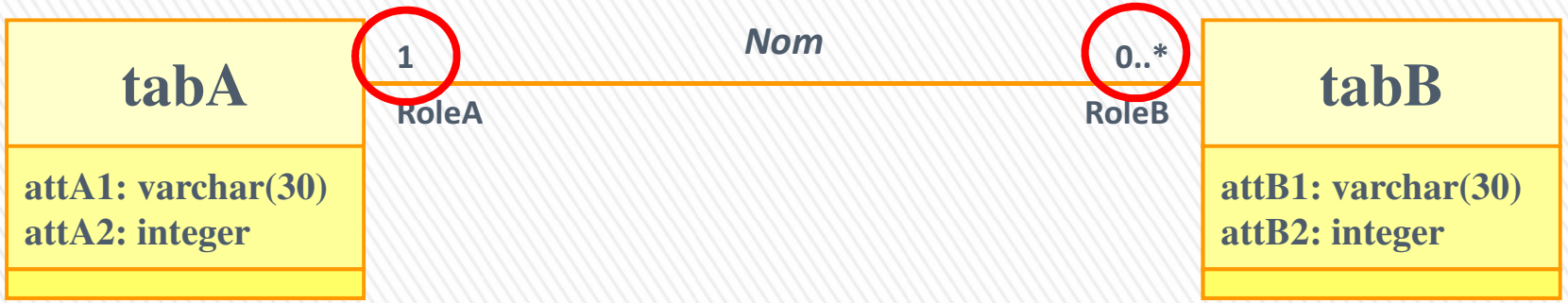
- **CREATE TABLE TABA(**
  - IDA INTEGER PRIMARY KEY,
  - ATTA1 VARCHAR(30),
  - ATTA2 INTEGER,
  - IDAB INTEGER NOT NULL,
  - CONSTRAINT IDAB_UK UNIQUE (IDAB));
- **ALTER TABLE TABA**
  - ADD CONSTRAINT ATOB_FK FOREIGN KEY (IDAB) REFERENCES TABB(IDB);

- **CREATE TABLE TABB(**
  - IDB INTEGER PRIMARY KEY,
  - ATTB1 VARCHAR(30),
  - ATTB2 INTEGER,
  - IDBA INTEGER NOT NULL,
  - CONSTRAINT IDBA_UK UNIQUE (IDBA));
- **ALTER TABLE TABB**
  - ADD CONSTRAINT BTOA_FK FOREIGN KEY (IDBA) REFERENCES TABA(IDA);



Association – Cardinalités 1, 0..*

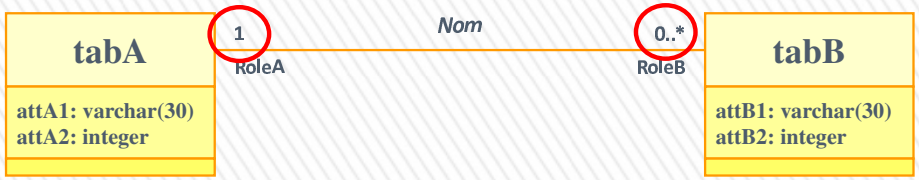
- Modèle d'analyse d'une **Association**
  - CardA = **1**
  - CardB = **0..***



Association – Cardinalités 1, 0..*

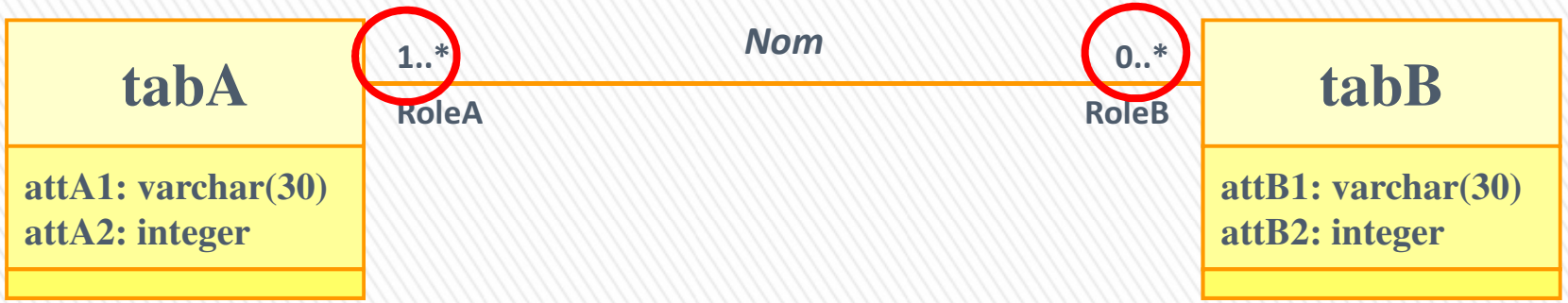
- **CREATE TABLE TABA(**
  - **IDA INTEGER PRIMARY KEY,**
  - **ATTA1 VARCHAR(30),**
  - **ATTA2 INTEGER);**

- **CREATE TABLE TABB(**
  - **IDB INTEGER PRIMARY KEY,**
  - **ATTB1 VARCHAR(30),**
  - **ATTB2 INTEGER,**
  - **IDBA INTEGER NOT NULL,**
  - **CONSTRAINT BTOA_FK FOREIGN KEY (IDBA) REFERENCES TABA(IDA));**



Association – Cardinalités 1..*, 0..*

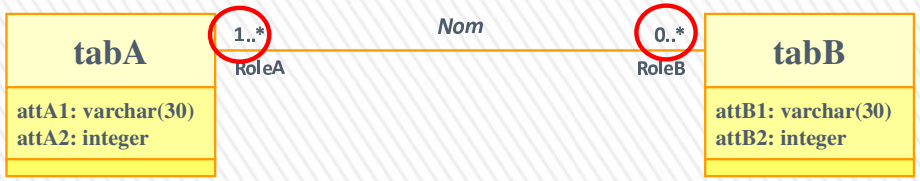
- Modèle d'analyse d'une **Association**
  - CardA = **0..*** ou **1..***
  - CardB = **0..*** ou **1..***



Association – Cardinalités 1..*, 0..*

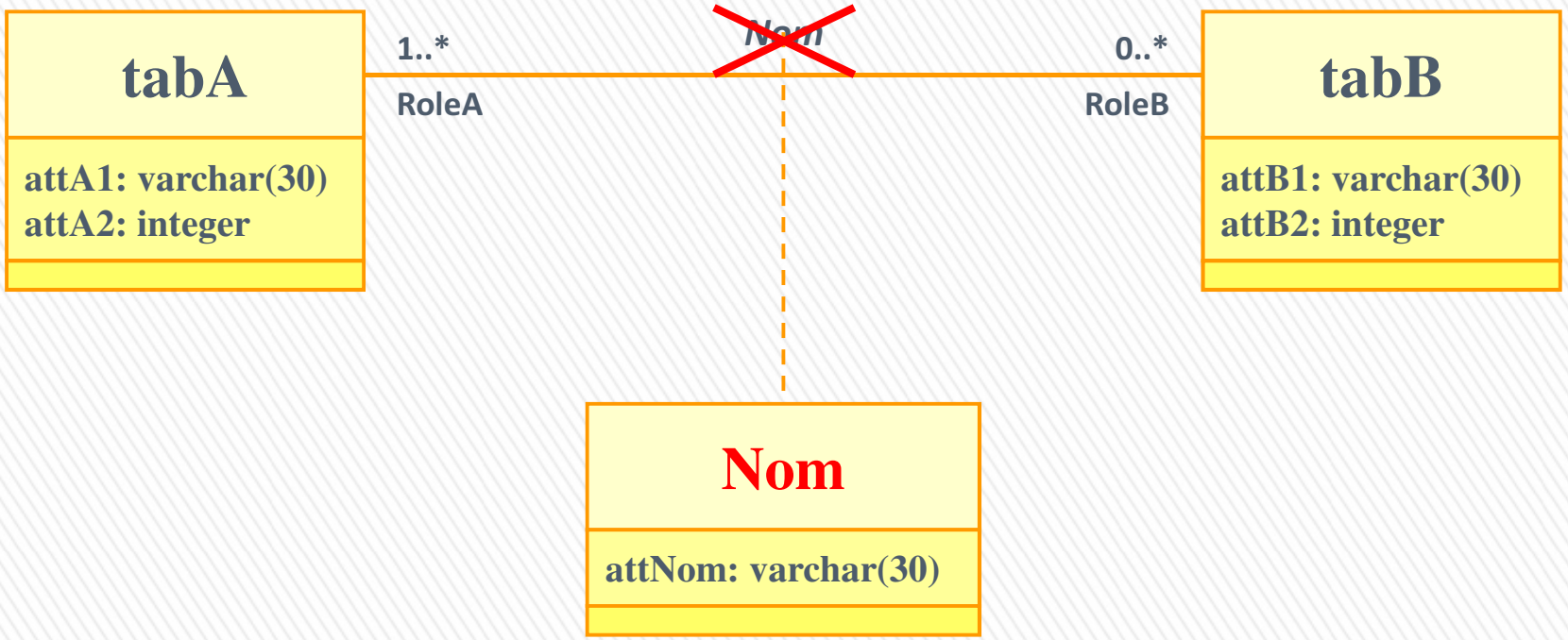
- CREATE TABLE TABA(
  - IDA INTEGER PRIMARY KEY,
  - ATTA1 VARCHAR(30),
  - ATTA2 INTEGER);
- CREATE TABLE TABB(
  - IDB INTEGER PRIMARY KEY,
  - ATTB1 VARCHAR(30),
  - ATTB2 INTEGER);

- CREATE TABLE TABRELAB(
  - IDRELA INTEGER NOT NULL,
  - IDRELB INTEGER NOT NULL,
  - CONSTRAINT TABRELAB_PKEY PRIMARY KEY(IDRELA,IDRELB),
  - CONSTRAINT RELABTOA_FK FOREIGN KEY (IDRELA) REFERENCES TABA(IDA),
  - CONSTRAINT RELABTOB_FK FOREIGN KEY (IDRELB) REFERENCES TABB(IDB));



Classe Association

» Modèle d'analyse d'une **Classe Association**



Classe Association

- CREATE TABLE TABA(
  - IDA INTEGER PRIMARY KEY,
  - ATTA1 VARCHAR(30),
  - ATTA2 INTEGER);
- CREATE TABLE TABB(
  - IDB INTEGER PRIMARY KEY,
  - ATTB1 VARCHAR(30),
  - ATTB2 INTEGER);
- CREATE TABLE NOM(
  - IDNOMA INTEGER NOT NULL,
  - IDNOMB INTEGER NOT NULL,
  - ATTNOM VARCHAR(30),
  - CONSTRAINT NOM_PKEY PRIMARY KEY(IDNOMA, IDNOMB),
  - CONSTRAINT NOMTOA_FK FOREIGN KEY (IDNOMA) REFERENCES TABA(IDA),
  - CONSTRAINT NOMTOB_FK FOREIGN KEY (IDNOMB) REFERENCES TABB(IDB));