

EXO 1

FormalismeAffichagePointeurMCD

enterprise
IDE INT
nom VARCHAR(50)
siage VARCHAR(50)

Dep
nomdep VARCHAR(50)
localisation VARCHAR(50)

Employee
numero INT
nom VARCHAR(50)
grade VARCHAR(50)

employeeenterprise
contrat VARCHAR(50)

travailler

enterprise
IDE INT
nom VARCHAR(50)
siage VARCHAR(50)

Dep
nomdep VARCHAR(50)
localisation VARCHAR(50)

Employee
numero INT
nom VARCHAR(50)
grade VARCHAR(50)
nomdep VARCHAR(50)

employeeenterprise
IDE INT
numero INT
contrat VARCHAR(50)

SQL

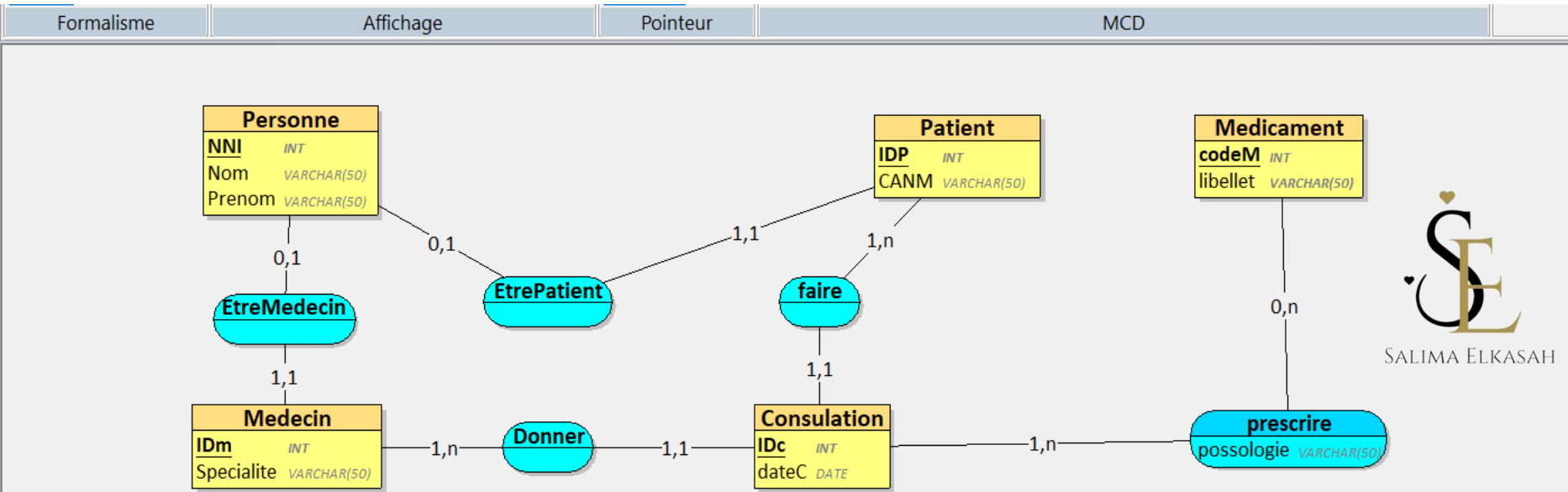
```
CREATE TABLE enterprise(  
  IDE INT,  
  nom VARCHAR(50),  
  siage VARCHAR(50),  
  PRIMARY KEY(IDE)  
);  
  
CREATE TABLE Dep(  
  nomdep VARCHAR(50),  
  localisation VARCHAR(50),  
  PRIMARY KEY(nomdep)  
);  
  
CREATE TABLE Employee(  
  numero INT,  
  nom VARCHAR(50),  
  grade VARCHAR(50),  
  nomdep VARCHAR(50) NOT NULL,  
  PRIMARY KEY(numero),  
  FOREIGN KEY(nomdep) REFERENCES Dep(nomdep)  
);  
  
CREATE TABLE employeeenterprise(  
  IDE INT,  
  numero INT,  
  contrat VARCHAR(50),  
  PRIMARY KEY(IDE, numero),  
  FOREIGN KEY(IDE) REFERENCES enterprise(IDE),  
  FOREIGN KEY(numero) REFERENCES Employee(numero)  
);
```

MLD

```
enterprise = (IDE INT, nom VARCHAR(50), siage VARCHAR(50));  
Dep = (nomdep VARCHAR(50), localisation VARCHAR(50));  
Employee = (numero INT, nom VARCHAR(50), grade VARCHAR(50), #nomdep);  
employeeenterprise = (#IDE, #numero, contrat VARCHAR(50));
```

SALIMA ELKASAH

EXO 2



SQL

```
CREATE TABLE Personne(
  NNI INT,
  Nom VARCHAR(50),
  Prenom VARCHAR(50),
  PRIMARY KEY(NNI)
);

CREATE TABLE Patient(
  IDP INT,
  CANM VARCHAR(50),
  NNI INT NOT NULL,
  PRIMARY KEY(IDP),
  UNIQUE(NNI),
  FOREIGN KEY(NNI) REFERENCES Personne(NNI)
);

CREATE TABLE Medecin(
  IDm INT,
  Specialite VARCHAR(50),
  NNI INT NOT NULL,
  PRIMARY KEY(IDm),
  UNIQUE(NNI),
  FOREIGN KEY(NNI) REFERENCES Personne(NNI)
);

CREATE TABLE Consulation(
  IDc INT,
  dateC DATE,
  IDP INT NOT NULL,
  IDm INT NOT NULL,
  PRIMARY KEY(IDc),
  FOREIGN KEY(IDP) REFERENCES Patient(IDP),
  FOREIGN KEY(IDm) REFERENCES Medecin(IDm)
);

CREATE TABLE Medicament(
  codeM INT,
  libellet VARCHAR(50) NOT NULL,
  PRIMARY KEY(codeM)
);

CREATE TABLE prescrire(
  IDc INT,
  codeM INT,
  possologie VARCHAR(50),
  PRIMARY KEY(IDc, codeM),
  FOREIGN KEY(IDc) REFERENCES Consulation(IDc),
  FOREIGN KEY(codeM) REFERENCES Medicament(codeM)
);
```

MLD

Personne = (NNI INT, Nom VARCHAR(50), Prenom VARCHAR(50));

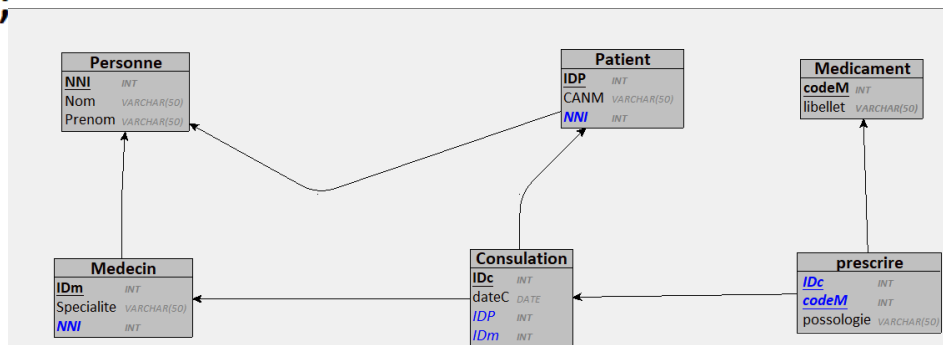
Patient = (IDP INT, CANM VARCHAR(50), #NNI);

Medecin = (IDm INT, Specialite VARCHAR(50), #NNI);

Consulation = (IDc INT, dateC DATE, #IDP, #IDm);

Medicament = (codeM INT, libellet VARCHAR(50));

prescrire = (#IDc, #codeM, possologie VARCHAR(50));



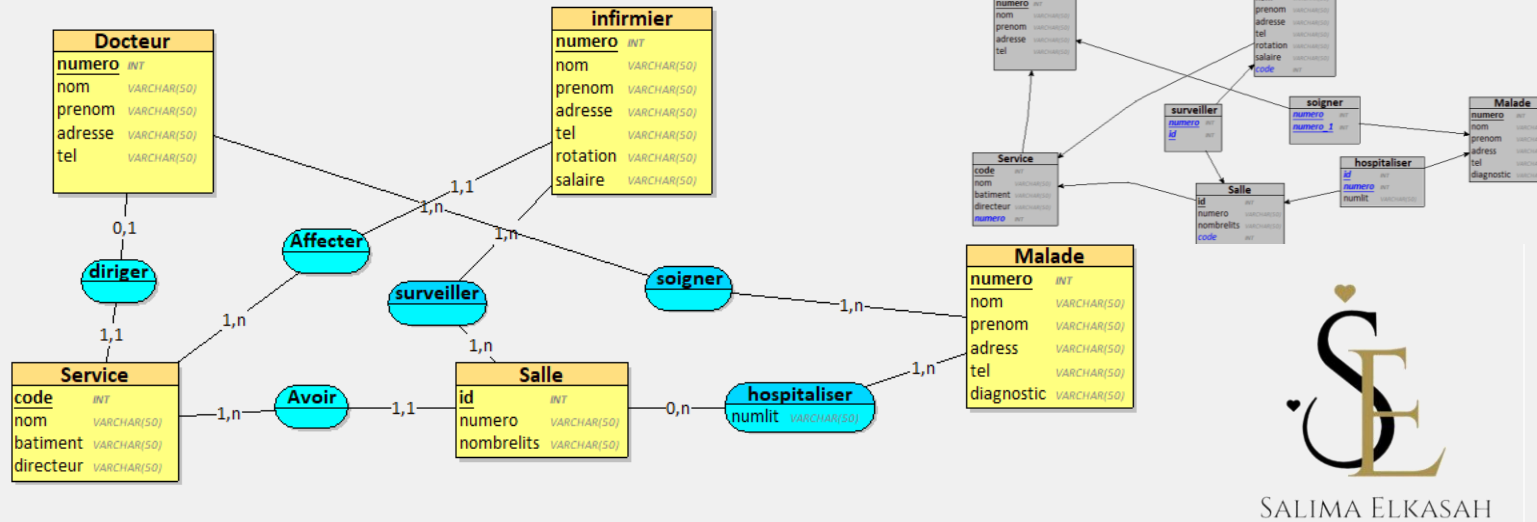
EXO 3

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SQL

```
CREATE TABLE Docteur(
    numero INT,
    nom VARCHAR(50),
    prenom VARCHAR(50),
    adresse VARCHAR(50),
    tel VARCHAR(50),
    PRIMARY KEY(numero)
);
```

```
CREATE TABLE Service(
    code INT,
    nom VARCHAR(50),
    batiment VARCHAR(50),
    directeur VARCHAR(50),
    numero INT NOT NULL,
    PRIMARY KEY(code),
    UNIQUE(numero),
    FOREIGN KEY(numero) REFERENCES Docteur(numero)
);
```

```
CREATE TABLE Salle(
    id INT,
    numero VARCHAR(50),
    nombrelits VARCHAR(50),
    code INT NOT NULL,
    PRIMARY KEY(id),
    FOREIGN KEY(code) REFERENCES Service(code)
);
```

```
CREATE TABLE Malade(
    numero INT,
    nom VARCHAR(50),
    prenom VARCHAR(50),
    adress VARCHAR(50),
    tel VARCHAR(50),
    diagnostic VARCHAR(50),
    PRIMARY KEY(numero)
);
```

```
CREATE TABLE infirmier(
    numero INT,
    nom VARCHAR(50),
    prenom VARCHAR(50),
    adresse VARCHAR(50),
    tel VARCHAR(50),
    rotation VARCHAR(50),
    salaire VARCHAR(50),
    code INT NOT NULL,
    PRIMARY KEY(numero),
    FOREIGN KEY(code) REFERENCES Service(code)
);
```


SALIMA ELKASAH

MLD

Docteur = (numero INT, nom VARCHAR(50), prenom VARCHAR(50), adresse VARCHAR(50), tel VARCHAR(50));

Service = (code INT, nom VARCHAR(50), batiment VARCHAR(50), directeur VARCHAR(50), #numero);

Salle = (id INT, numero VARCHAR(50), nombrelits VARCHAR(50), #code);

Malade = (numero INT, nom VARCHAR(50), prenom VARCHAR(50), adress VARCHAR(50), tel VARCHAR(50), diagnostic VARCHAR(50));

infirmier = (numero INT, nom VARCHAR(50), prenom VARCHAR(50), adresse VARCHAR(50), tel VARCHAR(50), rotation VARCHAR(50), salaire VARCHAR(50), #code);

hospitaliser = (#id, #numero, numlit VARCHAR(50));

soigner = (#numero, #numero_1);

surveiller = (#numero, #id);

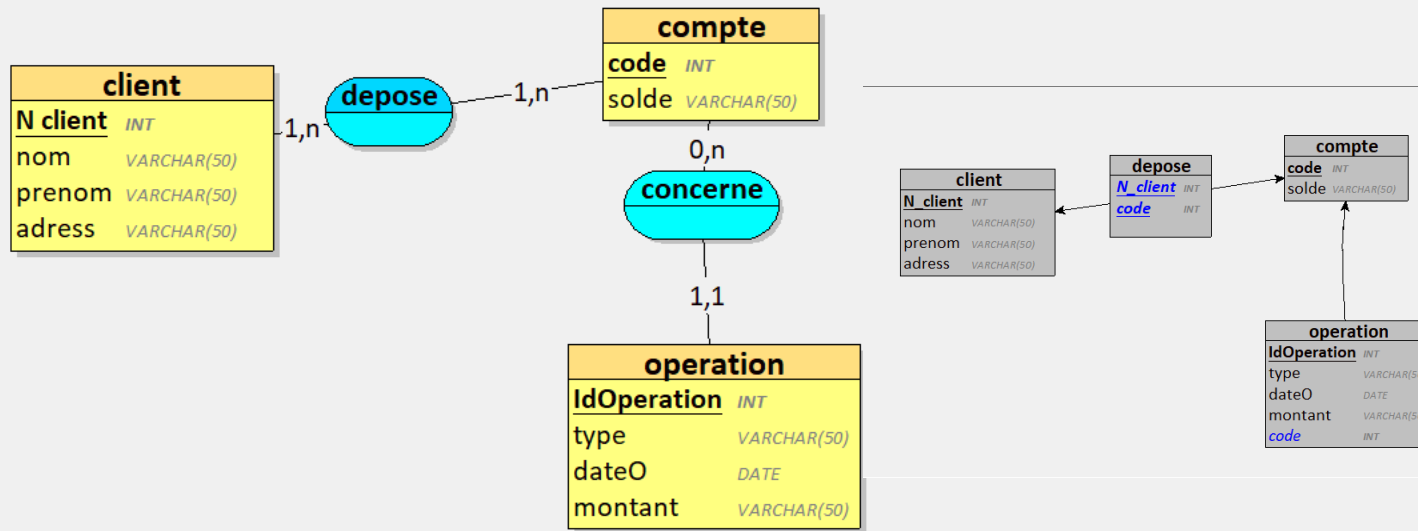
EXO 4

Formalisme

Affichage

Pointeur

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SQL

```
CREATE TABLE client(
  N_client INT,
  nom VARCHAR(50),
  prenom VARCHAR(50),
  adress VARCHAR(50),
  PRIMARY KEY(N_client)
);
```

```
CREATE TABLE compte(
  code INT,
  solde VARCHAR(50),
  PRIMARY KEY(code)
);
```

```
CREATE TABLE operation(
  IdOperation INT,
  type VARCHAR(50),
  dateO DATE,
  montant VARCHAR(50),
  code INT NOT NULL,
  PRIMARY KEY(IdOperation),
  FOREIGN KEY(code) REFERENCES compte(code)
);
```

```
CREATE TABLE depose(
  N_client INT,
  code INT,
  PRIMARY KEY(N_client, code),
  FOREIGN KEY(N_client) REFERENCES client(N_client),
  FOREIGN KEY(code) REFERENCES compte(code)
);
```

MLD

```
client = (N_client INT, nom VARCHAR(50), prenom VARCHAR(50), adress VARCHAR(50));
compte = (code INT, solde VARCHAR(50));
operation = (IdOperation INT, type VARCHAR(50), dateO DATE, montant VARCHAR(50), #code);
depose = (#N_client, #code);
```