

Solution TP1 : Création et manipulation des bases de données relationnelles

Partie 1 : Création de la base de données

Les NOT NULL ne sont pas nécessaires pour les PRIMARY KEY.

```
CREATE TABLE Station (nomStation VARCHAR2 (30),
                      capacite NUMBER (10) NOT NULL,
                      lieu VARCHAR2(30) NOT NULL,
                      region VARCHAR2 (30),
                      tarif NUMBER (10,2) DEFAULT 0,
                      CONSTRAINT cle_station PRIMARY KEY (nomStation)
                      );
```

```
CREATE TABLE Activite (nomStation VARCHAR2 (30),
                       libelle VARCHAR2(30),
                       prix NUMBER (10,2) DEFAULT 0,
                       PRIMARY KEY (nomStation, libelle)
                       );
```

```
CREATE TABLE Client (id NUMBER (10),
                      nom VARCHAR2(30) NOT NULL,
                      prenom VARCHAR2 (30),
                      ville VARCHAR2 (30) NOT NULL,
                      region VARCHAR2(30),
                      solde NUMBER (10,2) DEFAULT 0 NOT NULL,
                      PRIMARY KEY (id)
                      );
```

```
CREATE TABLE Sejour (idClient NUMBER (10),
                      station VARCHAR2 (30),
                      debut NUMBER (10),
                      nbPlaces NUMBER (4) NOT NULL,
                      PRIMARY KEY (idClient, station, debut)
                      );
```

Partie 2 : Modification de la structure de la base de données :

```
ALTER TABLE Station ADD(CONSTRAINT cle_lieu_region UNIQUE (lieu, region),
                          CONSTRAINT nom_region
                          CHECK (region IN ('Ocean Indien',
                                             'Antilles', 'Europe',
                                             'Ameriques', 'Extreme Orient')))
                          );
```

```
ALTER TABLE Activite ADD(FOREIGN KEY (nomStation) REFERENCES Station
                          ON DELETE CASCADE);
```

```
ALTER TABLE Sejour ADD (FOREIGN KEY (idClient) REFERENCES Client,
                          FOREIGN KEY (station) REFERENCES Station
                          ON DELETE CASCADE);
```

Partie 3 : insertion des données dans la base de données

```
INSERT INTO Station (NomStation, Capacite, Lieu, Region, tarif)
VALUES ('Venusa', 350, 'Guadeloupe', 'Antilles', 1200);
```

```
INSERT INTO Activite (NomStation, Libelle, prix)
VALUES ('Venusa', 'Voile', 150);
```

```
INSERT INTO Activite (NomStation, Libelle, prix)
VALUES ('Venusa', 'Plongee', 120);
```

```
INSERT INTO CLIENT (id, nom, prenom, ville, region, solde)
VALUES (10, 'Fogg', 'Phileas', 'Londres', 'Europe', 12465);
```

```
INSERT INTO CLIENT (id, nom, prenom, ville, region, solde)
VALUES (20, 'Pascal', 'Blaise', 'Paris', 'Europe', 6763);
```

```
INSERT INTO CLIENT (id, nom, prenom, ville, region, solde)
VALUES (30, 'Kerouac', 'Jack', 'New York', 'Amérique', 9812);
```

```
INSERT INTO SEJOUR (idClient, station, debut, nbPlaces)
VALUES (20, 'Venusa', 19980803, 4);
```

Ou tout simplement

```
INSERT INTO Station VALUES ('Venusa', 350, 'Guadeloupe', 'Antilles', 1200);
```

```
INSERT INTO Activite VALUES ('Venusa', 'Voile', 150);
```

```
INSERT INTO Activite VALUES ('Venusa', 'Plongee', 120);
```

```
INSERT INTO CLIENT VALUES (10, 'Fogg', 'Phileas', 'Londres', 'Europe', 12465);
```

```
INSERT INTO CLIENT VALUES (20, 'Pascal', 'Blaise', 'Paris', 'Europe', 6763);
```

```
INSERT INTO CLIENT VALUES (30, 'Kerouac', 'Jack', 'New York', 'Amérique', 9812);
```

```
INSERT INTO SEJOUR VALUES (20, 'Venusa', 19980803, 4);
```