```
//ENGINE=InnoDB DEFAULT CHARSET=utf8_general_ci
```

create database baseseptexos CHARACTER SET utf8 COLLATE utf8_general_ci;

create table vehicules (immatriculation INTEGER, marque VARCHAR(20), kilometrage INTEGER)

```
create table personnes (
   id_personne integer,
   nom CHARACTER(50),
   prenom CHARACTER(50),
   num_rue varchar(10),
   rue varchar(100),
   cp integer,
   ville CHARACTER(50))
```

alter table personnes add CONSTRAINT pk_personnes Primary KEY (id_personne)
alter table personnes add CONSTRAINT ct_cp CHECK (cp < 96000)

ALTER TABLE vehicules ADD
id_personne integer

alter table vehicules add constraint fk_personnes FOREIGN KEY (id_personne) REFERENCES personnes(id_personne)

énoncé 2

```
create table etudiant (
   id_etudiant integer,
   nom CHARACTER(50),
   prenom CHARACTER(50),
         date_E Date,
   CONSTRAINT pk_etudiant PRIMARY KEY (id_etudiant))

create table matiere (
   id_matiere integer,
   lib_matiere CHARACTER(50),
   coefficient integer,
   CONSTRAINT pk_matiere PRIMARY KEY (id_matiere),
   CONSTRAINT u_matiere UNIQUE (lib_matiere))

create table controle(
   id_etudiant integer,
   id_matiere integer,
   note integer,
         CONSTRAINT pk_controle PRIMARY KEY (id_etudiant, id_matiere),
         CONSTRAINT FOREIGN KEY (id_etudiant) REFERENCES etudiant (id_etudiant),
   CONSTRAINT FOREIGN KEY (id_matiere) REFERENCES matiere (id_matiere))
```

énoncé 3

```
create table etudiantbis (
   id_etudiant integer not null,
   nom CHARACTER(50) not null,
   prenom CHARACTER(50) not null,
        date_E Datetime not null DEFAULT CURRENT_TIMESTAMP,
   CONSTRAINT pk_etudiant PRIMARY KEY (id_etudiant))


create table matierebis (
   id_matiere integer not null,
   lib_matiere CHARACTER(50) not null,
   coefficient integer not null CHECK (coefficient < 10),
   CONSTRAINT pk_matiere PRIMARY KEY (id_matiere),
   CONSTRAINT u_matiere UNIQUE (lib_matiere))


create table controlebis(
   id_etudiant integer not null,
   id_matiere integer not null,
   dateControle datetime not null,
   moyenne integer not null CHECK (moyenne < 10),
        CONSTRAINT pk_controle PRIMARY KEY (id_etudiant, id_matiere, dateControle),
        CONSTRAINT FOREIGN KEY (id_etudiant) REFERENCES etudiant (id_etudiant),
   CONSTRAINT FOREIGN KEY (id_matiere) REFERENCES matiere (id_matiere))
```

énoncé 4

```
create table livre (
   isbn varchar(25) not null,
   titre varchar(50) not null,
   CONSTRAINT pk_livre PRIMARY KEY (isbn))


create table exemplaire (
   num_exempl integer not null,
   etat CHARACTER(5) not null DEFAULT 'D' CHECK (etat IN ('D', 'E', 'P')),
   isbn varchar(25) not null,
   CONSTRAINT pk_exemplaire PRIMARY KEY (num_exempl, isbn),
        CONSTRAINT FOREIGN KEY (isbn) REFERENCES livre (isbn))
```

énoncé 5

```
create table rayonBis (
   codeR varchar(25) not null,
   CONSTRAINT pk_rayon PRIMARY KEY (codeR))

create table articleBis (
   codeA varchar(25) not null,
   CONSTRAINT pk_article PRIMARY KEY (codeA))

ALTER TABLE article ADD
CONSTRAINT CK_article CHECK (codeA in ('P', 'L', 'D'))

create table magasin (
   codeM varchar(25) not null,
   CONSTRAINT pk_magasin PRIMARY KEY (codeM))


create table ventes (
   num_vente integer not null,
   quantites integer not null,
   nomR varchar(25) not null,
   codeA varchar(25) not null,
   codeM varchar(25) not null,
   CONSTRAINT pk_vente PRIMARY KEY (num_vente),
         CONSTRAINT fk_vente_nomR FOREIGN KEY (nomR) REFERENCES rayonBis
(nomR),
   CONSTRAINT fk_vente_codeA FOREIGN KEY (codeA) REFERENCES articleBis (codeA),
 CONSTRAINT fk_vente_codeM FOREIGN KEY (codeM) REFERENCES magasin(codeM))
```

énoncé 6

```
create table fournisseur (
   codeF varchar(25),
   adresse varchar(50),
   nomF varchar(25),
   CONSTRAINT pk_article PRIMARY KEY (codeF))

create table article (
   codeA varchar(25),
   nomA varchar(25),
   type varchar(25),
   CONSTRAINT pk_article PRIMARY KEY (codeA))


create table livraison (
   codeA varchar(25),
   codeF varchar(25),
   quantite integer,
   CONSTRAINT pk_livraison PRIMARY KEY (codeA, codeF),
         CONSTRAINT FOREIGN KEY (codeF) REFERENCES fournisseur (codeF),
   CONSTRAINT FOREIGN KEY (codeA) REFERENCES article(codeA))



create table rayon (
   nomRayon varchar(25),
   etage varchar(25),
   codeA varchar(25),
   CONSTRAINT pk_rayon PRIMARY KEY (nomRayon),
         CONSTRAINT FOREIGN KEY (codeA) REFERENCES article(codeA))


create table employe (
   codeE varchar(25),
   nom varchar(25),
   salaire NUMERIC (10,2),
   nomRayon varchar(25),
   code_chef varchar(25),
   CONSTRAINT pk_employe PRIMARY KEY (codeE),
         CONSTRAINT FOREIGN KEY (nomRayon) REFERENCES rayon (nomRayon),
         CONSTRAINT FOREIGN KEY (code_chef) REFERENCES employe(codeE))


CREATE INDEX idx_Employe
ON employe (nom)


CREATE INDEX idx_Article
ON article (type)
```

énoncé 7

```
create table buveur (
   num_buv integer not null,
   nom_buv varchar(25) not null,
   prenom_buv varchar(25) not null,
        ville_buv varchar(50) not null,
   CONSTRAINT pk_buveur PRIMARY KEY (num_buv))


create table commande (
   num_com integer not null,
   date_comm date not null,
   num_buv integer not null,
   CONSTRAINT pk_commande PRIMARY KEY (num_com),
        CONSTRAINT fk_commande FOREIGN KEY (num_buv) REFERENCES buveur
(num_buv))


create table vigneron (
   num_vign integer not null,
   nom_vign varchar(25) not null,
   prenom_vign varchar(25) not null,
   ville_vign varchar(50) not null,
   CONSTRAINT pk_vign PRIMARY KEY (num_vign),
        CONSTRAINT u_vign UNIQUE (nom_vign, prenom_vign))


create table vin (
   num_vin integer not null,
   cru varchar(25) not null,
   millesime varchar(25) not null,
   num_vign integer not null,
   CONSTRAINT pk_vin PRIMARY KEY (num_vin),
        CONSTRAINT fk_vin FOREIGN KEY (num_vign) REFERENCES vigneron (num_vign))




create table appreciations_vignerons (
   num_vign integer not null,
   num_vign2 integer not null,
   note integer not null,
   CONSTRAINT pk_app_vign PRIMARY KEY (num_vign, num_vign2),
   CONSTRAINT fk_app_vign FOREIGN KEY (num_vign) REFERENCES vigneron (num_vign),
        CONSTRAINT fk_app_vign2 FOREIGN KEY (num_vign2) REFERENCES vigneron
(num_vign))
```

```
create table ligne_commande (
    num_com integer not null,
    num_vin integer not null,
    quantite integer not null,
    CONSTRAINT pk_ligne_cmde PRIMARY KEY (num_com, num_vin),
    CONSTRAINT fk_ligne_cmde1 FOREIGN KEY (num_com) REFERENCES commande
(num_com),
     CONSTRAINT fk_ligne_cmde2 FOREIGN KEY (num_vin) REFERENCES vin(num_vin))
```