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CREATE SEQUENCE seq_kommission;
CREATE SEQUENCE seq_firma INCREMENT BY 10 MINVALUE 10 NO CYCLE;
CREATE SEQUENCE seq_abteilung;
CREATE SEQUENCE seq_praktikum;

CREATE TABLE Student (
  svnr VARCHAR(40) PRIMARY KEY,
  anschrift VARCHAR(40) NOT NULL,
  name VARCHAR(20) NOT NULL,
  studienkennzahl VARCHAR(6) NOT NULL,
  matrnr VARCHAR(7) NOT NULL
);

CREATE TABLE ShortlistedStudent (
  svnr VARCHAR(40) PRIMARY KEY REFERENCES Student(svnr)
);

CREATE TABLE MatchedStudent (
  svnr VARCHAR(40) PRIMARY KEY REFERENCES ShortlistedStudent(svnr)
);

CREATE TABLE Bewerbungsunterlagen (
  svnr VARCHAR(40) PRIMARY KEY REFERENCES Student(svnr),
  dokument VARCHAR(200) NOT NULL
);

BEGIN;

CREATE TABLE Kommission (
  id INTEGER PRIMARY KEY DEFAULT nextval('seq_kommission'),
  standort VARCHAR(40) NOT NULL,
  name VARCHAR(20) NOT NULL,
  koordinator VARCHAR(40) NOT NULL,
  uebergeordnet INTEGER REFERENCES Kommission(id)
);

CREATE TABLE Mitarbeiter (
  svnr VARCHAR(40) PRIMARY KEY,
  name VARCHAR(20) NOT NULL,
  anschrift VARCHAR(40) NOT NULL,
  gehaltsklasse VARCHAR(2) NOT NULL CHECK (gehaltsklasse IN ('M1', 'M2', 'M3', 'C1', 'C2')),
  beschaeftigt_seit DATE NOT NULL,
  arbeitet INTEGER REFERENCES Kommission(id) DEFERRABLE INITIALLY DEFERRED
);

ALTER TABLE Kommission ADD CONSTRAINT fk_koordinator FOREIGN KEY (koordinator) REFERENCES Mitarbeiter
(svnr) DEFERRABLE INITIALLY DEFERRED;

COMMIT;

CREATE TABLE Austauschprogramm (
  land VARCHAR(20),
  jahr INTEGER,
  name VARCHAR(20),
  bewerbungsfrist DATE NOT NULL CHECK (bewerbungsfrist <= to_date('31-12-' || jahr, 'DD-MM-YYYY')),
  kommission INTEGER REFERENCES Kommission(id),

  PRIMARY KEY (land, jahr, name)
);

CREATE TABLE bewirbt_ap (
  svnr VARCHAR(40),
  land VARCHAR(20),
  jahr INTEGER,
  name VARCHAR(20),

  FOREIGN KEY (svnr) REFERENCES Student(svnr),
  FOREIGN KEY (land, jahr, name) REFERENCES Austauschprogramm(land, jahr, name),
  PRIMARY KEY (svnr, land, jahr, name)
);

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CREATE TABLE Betreuer (
  svnr VARCHAR(40) PRIMARY KEY REFERENCES Mitarbeiter(svnr),
  bonus NUMERIC(7,2) CHECK (bonus > 0)
);

CREATE TABLE Firma (
  fanr INTEGER PRIMARY KEY DEFAULT nextval('seq_firma'),
  standort VARCHAR(40) NOT NULL,
  name VARCHAR(20) NOT NULL
);

CREATE TABLE zustaendig (
  betreuer VARCHAR(40) REFERENCES Betreuer(svnr),
  firma INTEGER REFERENCES Firma(fanr),

  PRIMARY KEY (betreuer, firma)
);

CREATE TABLE Abteilung (
  abtnr INTEGER DEFAULT nextval('seq_abteilung'),
  fanr INTEGER REFERENCES Firma(fanr),
  abtname VARCHAR(20) NOT NULL,

  PRIMARY KEY (abtnr, fanr)
);

CREATE TABLE Praktikum (
  prnr INTEGER DEFAULT nextval('seq_praktikum'),
  abtnr INTEGER NOT NULL,
  fanr INTEGER NOT NULL,
  beschr VARCHAR(200),
  aufgbereich VARCHAR(20) NOT NULL,
  bis DATE NOT NULL,
  von DATE NOT NULL,

  FOREIGN KEY (abtnr, fanr) REFERENCES Abteilung(abtnr, fanr),
  PRIMARY KEY (prnr, abtnr, fanr),
  CHECK (von <= bis)
);

CREATE TABLE bewirbt_pa (
  shortlisted_student VARCHAR(40) REFERENCES ShortlistedStudent(svnr),
  fanr INTEGER NOT NULL,
  abtnr INTEGER NOT NULL,
  prnr INTEGER NOT NULL,
  praferenznr INTEGER NOT NULL CHECK (praferenznr IN (1, 2)),

  FOREIGN KEY (fanr, abtnr, prnr) REFERENCES Praktikum(fanr, abtnr, prnr),
  PRIMARY KEY (shortlisted_student, fanr, abtnr, prnr)
);

CREATE TABLE ausgeschrieben (
  land VARCHAR(20) NOT NULL,
  jahr INTEGER NOT NULL,
  name VARCHAR(20) NOT NULL,
  fanr INTEGER NOT NULL,
  abtnr INTEGER NOT NULL,
  prnr INTEGER NOT NULL,

  FOREIGN KEY (land, jahr, name) REFERENCES Austauschprogramm(land, jahr, name),
  FOREIGN KEY (fanr, abtnr, prnr) REFERENCES Praktikum(fanr, abtnr, prnr),
  PRIMARY KEY (land, jahr, name, fanr, abtnr, prnr)
);

CREATE TABLE betreut (
  betreuer VARCHAR(40) REFERENCES Betreuer(svnr),
  matched_student VARCHAR(40) REFERENCES MatchedStudent(svnr),
  fanr INTEGER NOT NULL,
  abtnr INTEGER NOT NULL,

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prnr INTEGER NOT NULL,  
FOREIGN KEY (fanr, abtnr, prnr) REFERENCES Praktikum(fanr, abtnr, prnr),  
PRIMARY KEY (betreuer, matched_student)  
);
```