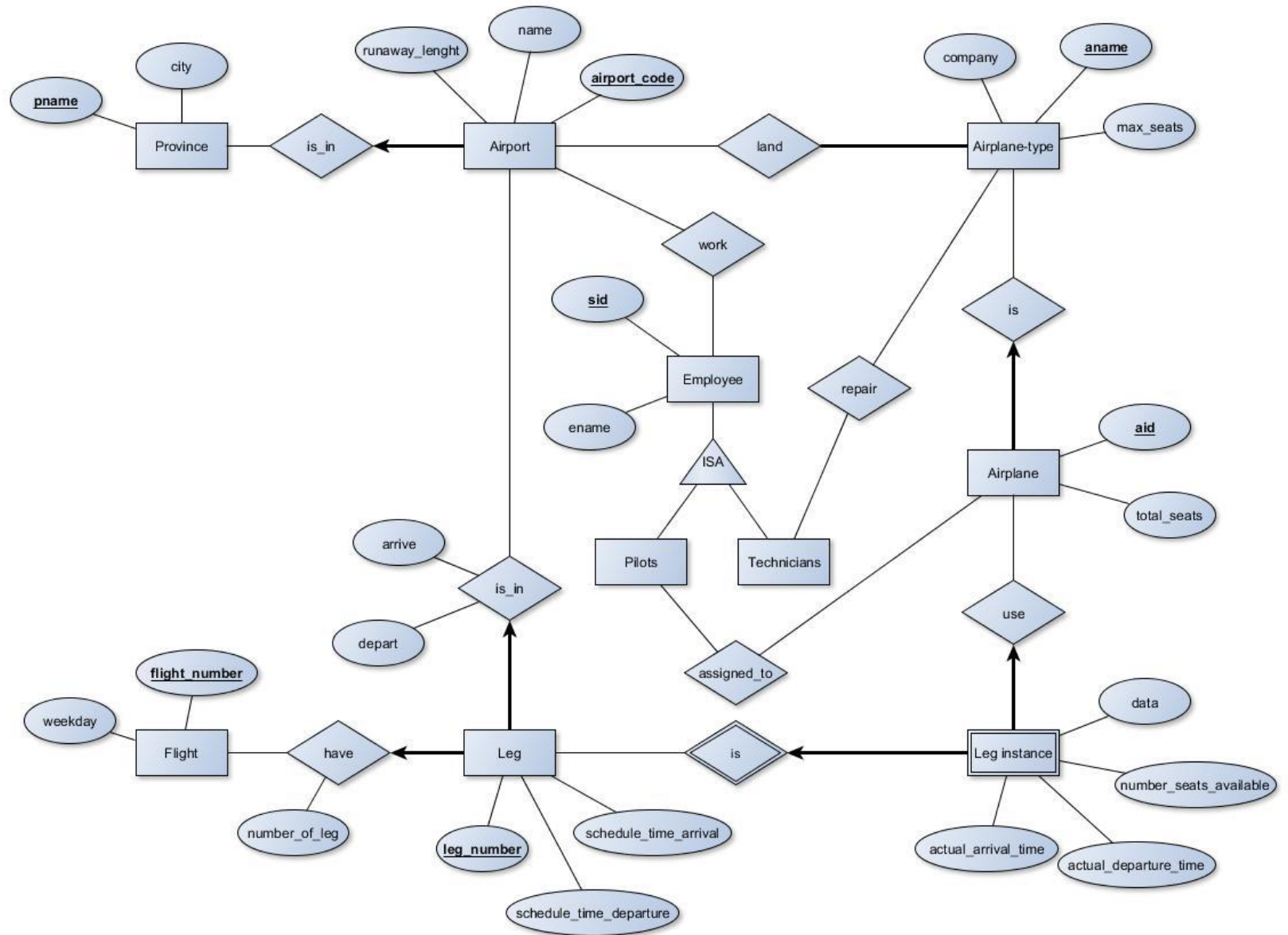


PART A: ALITALIA



Airport (airport_code, name: unique, runa way_lenght, pname: not NULL)
pname is a Foreign Key to table Province

Province (pname, city)

Airplane_type (aname, company, max_seats)

Employee (sid, ename)

Pilots (sid)
sid is a Foreign Key to table Employee

Tecnichans (sid)
sid is a Foreign Key to table Employee

Airplane (aid, total_seats, aname: not NULL)
aname is a Foreign Key to table Airplane_type

Flight (flight_number, weekday)

Leg (leg_number, schedule_time_arrival, schedule_time_departure,
number_of_leg, flight_number: not NULL, arrive, depart, airport_code: not
NULL)
flight_number is a Foreign Key to table Flight
airport_code is a Foreign Key to table Airport

Leg_instance (leg_number, data, number_seats_available,
actual_departure_time, actual_arrival_time, aid: not NULL)
leg_number is a Foreign Key to table Leg
aid is a Foreign Key to table Airplane

land (aname, airport_code)

aname is a Foreign Key to table Airplane_type
airport_code si a Foreign Key to table Airport

work (airport_code, sid)

airport_code is a Foreign Key to table Airport
sid is a Foreign Key to table Employee

assigned_to (sid, aid)

sid is a Foreign Key to table Employee
aid is a Foreign Key to table Airplane

repair (sid, aname)

sid is a Foreign Key to table Employee
aname is a Foreign Key to table Airplane_type

```
CREATE TABLE Airport (  
    airport_code CHAR (20),  
    name VARCHAR (30),  
    runway_lenght REAL,  
    pname VARCHAR (30) NOT NULL,  
    UNIQUE (name, pname),  
    PRIMARY KEY (airport_code),  
    FOREIGN KEY (pname) REFERENCES Province,  
        ON DELETE NO ACTION)
```

```
CREATE TABLE Province (  
    pname VARCHAR (30),  
    city VARCHAR (30),  
    PRIMARY KEY (pname) )
```

```
CREATE TABLE Airplane_type (  
    aname VARCHAR (30),  
    company VARCHAR (30),  
    max_seats INTEGER,  
    PRIMARY KEY (aname))
```

```
CREATE TABLE Employee (  
    sid CHAR (10),  
    ename VARCHAR (30),  
    PRIMARY KEY (sid))
```

```
CREATE TABLE Pilots (  
    sid CHAR (10),  
    PRIMARY KEY (sid),  
    FOREIGN KEY (sid) REFERENCES Employee,  
        ON DELETE CASCADE)
```

```
CREATE TABLE Technicians (  
    sid CHAR (10),  
    PRIMARY KEY (sid),  
    FOREIGN KEY (sid) REFERENCES Employee,  
        ON DELETE CASCADE)
```

```
CREATE TABLE Airplane (  
    aid CHAR (10),  
    total_seats INTEGER,  
    aname VARCHAR (30) NOT NULL,  
    PRIMARY KEY (aid),  
    FOREIGN KEY (aname) REFERENCES Airplane_type,  
        ON DELETE NO ACTION)
```

```
CREATE TABLE Flight (  
    flight_number CHAR (10),  
    weekday VARCHAR (20),  
    PRIMARY KEY (flight_number))
```

```
CREATE TABLE Leg (  
    leg_number CHAR (10),  
    schedule_time_arrival INTEGER,  
    schedule_time_departure INTEGER,  
    number_of_leg INTEGER,  
    flight_number CHAR (10) NOT NULL,  
    arrive CHAR (30),  
    depart CHAR (30),  
    airport_code CHAR (20) NOT NULL,  
    PRIMARY KEY (leg_number),  
    FOREIGN KEY (flight_number) REFERENCES Flight,  
        ON DELETE SET NULL,
```

```
FOREIGN KEY (airport_code) REFERENCES Airport,  
ON DELETE CASCADE)
```

```
CREATE TABLE Leg instance (  
    leg_number CHAR (10),  
    data DATE,  
    number_seats_available INTEGER,  
    actual_departure_time INTEGER,  
    actual_arrival_time INTEGER,  
    aid CHAR (10) NOT NULL,  
    PRIMARY KEY (leg_number),  
    FOREIGN KEY (leg_number) REFERENCES Leg,  
        ON DELETE CASCADE,  
    FOREIGN KEY (aid) REFERENCES Airplane,  
        ON DELETE CASCADE)
```

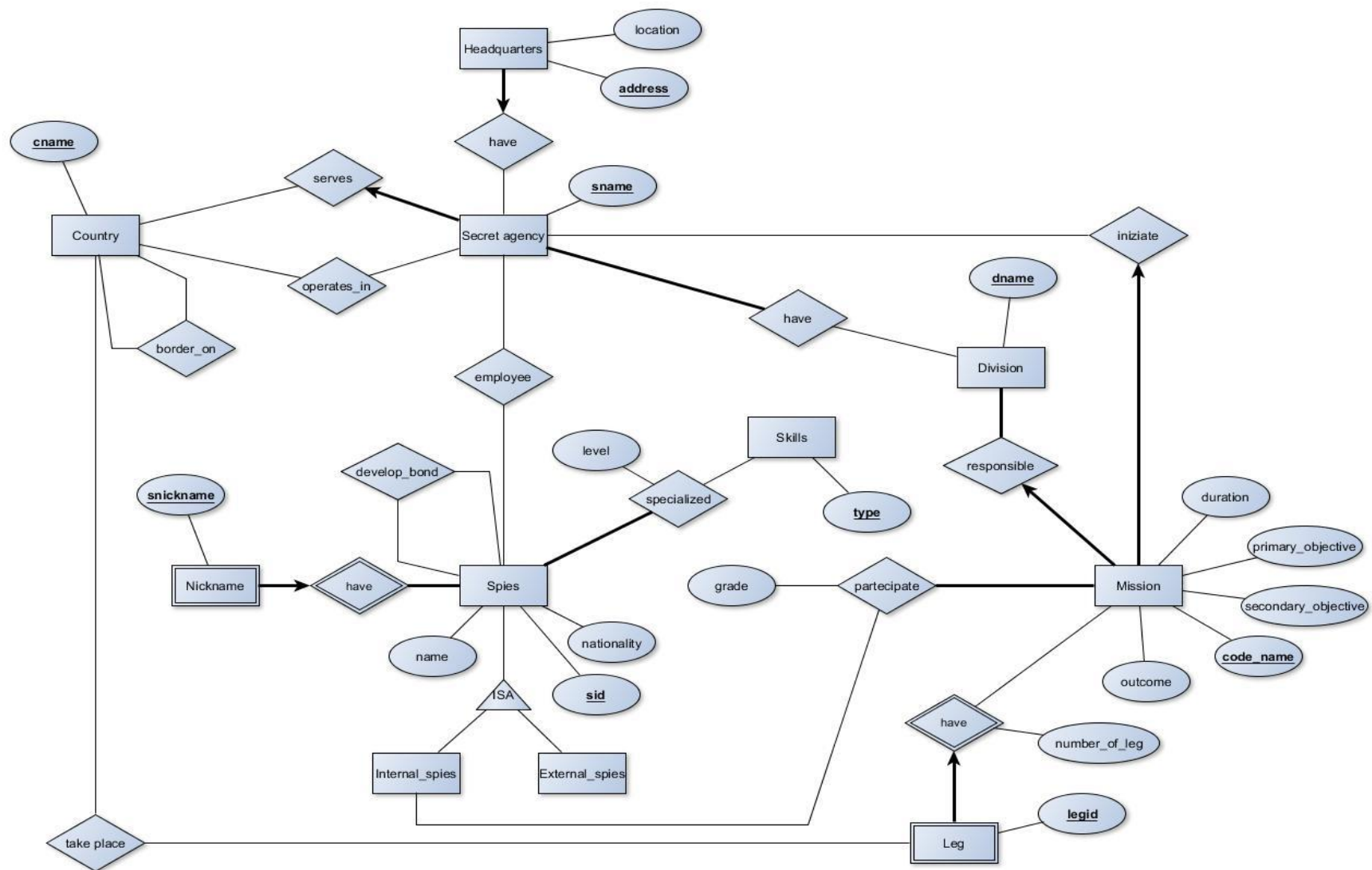
```
CREATE TABLE land (  
    airport_code CHAR (20),  
    aname VARCHAR (30),  
    PRIMARY KEY (airport_code, aname),  
    FOREIGN KEY (aname) REFERENCES Airplane_type,  
    FOREIGN KEY (airport_code) REFERENCES Airport)
```

```
CREATE TABLE work (  
    airport_code CHAR (20),  
    sid CHAR (10),  
    PRIMARY KEY (airport_code, sid),  
    FOREIGN KEY (airport_code) REFERENCES Airport,  
    FOREIGN KEY (sid) REFERENCES Employee)
```

```
CREATE TABLE assigned_to (  
    sid CHAR (10),  
    aid CHAR (10),  
    PRIMARY KEY (sid, aid),  
    FOREIGN KEY (sid) REFERENCES Employee,  
    FOREIGN KEY (aid) REFERENCES Airplane)
```

```
CREATE TABLE repair (  
    sid CHAR (10),  
    aname VARCHAR (30),  
    PRIMARY KEY (sid, aname),  
    FOREIGN KEY (sid) REFERENCES Employee,  
    FOREIGN KEY (aname) REFERENCES Airplane_type)
```

PART B: IMF



We suppose that if outcome is NULL means that mission is not complete and the grade does not exist.

Secret Agency (sname, cname: not NULL)
cname is a Foreign Key to table Country

Country (cname)

Spies (sid, name: unique, nationality)

Internal_spies (sid)
sid is a Foreign Key to table Spies

External_spies (sid)
sid is a Foreign Key to table Spies

Skills (type)

Mission (code_name, duration, primary_objective: not NULL,
secondary_objective, outcome, dname: not NULL, sname: not NULL)
dname is a Foreign Key to table Division
sname is a Foreign Key to table Secret Agency

Division (dname)

Leg (legid, code_name, number_of_leg,)
code_name is a Foreign Key to table Mission

Nickname (snickname, sid)
sid is a Foreign Key to table Spies

Headquarter (address, location, sname: not NULL)
sname is a Foreign Key to table Secret Agency

operates_in (sname, cname)
sname is a Foreign Key to table Secret Agency
cname is a Foreign Key to table Country

border_on (cname)
cname is a Foreign Key to table Country

employee (sname, sid)
sname is a Foreign Key to table Secret Agency
sid is a Foreign Key to table Spies

develop_bond (sid)
sid is a Foreign Key to table Spies

specialized (sid, type, level)
sid is a Foreign Key to table Spies
type is a Foreign Key to table Skills

participate (code_name, sid, grade)
code_name is a Foreign Key to table Mission
sid is a Foreign Key to table Internal_spies

have (sname, dname)
sname is a Foreign Key to table Secret Agency
dname is a Foreign Key to table Division

take_place (cname, legid, code_name)
cname is a Foreign Key to table Country
(legid, code_name) is a Foreign Key to table Leg

```
CREATE TABLE Secret_Agency (  
    sname VARCHAR (30),  
    cname VARCHAR (30) NOT NULL,  
    PRIMARY KEY (sname),  
    FOREIGN KEY (cname) REFERENCES Country  
        ON DELETE NO ACTION)
```

```
CREATE TABLE Country (  
    cname VARCHAR (30),  
    PRIMARY KEY (cname))
```

```
CREATE TABLE Spies (  
    sid CHAR (10),  
    name VARCHAR (30),  
    nationality VARCHAR (20),  
    UNIQUE (name),  
    PRIMARY KEY (sid),  
        ON DELETE CASCADE)
```

```
CREATE TABLE Internal_spies(  
    sid CHAR (10),  
    PRIMARY KEY (sid),  
    FOREIGN KEY (sid) REFERENCES Spies  
        ON DELETE CASCADE)
```

```
CREATE TABLE External_spies (  
    sid CHAR (10),  
    PRIMARY KEY (sid),  
    FOREIGN KEY (sid) REFERENCES Spies  
        ON DELETE CASCADE)
```

```
CREATE TABLE Skills (  
    type VARCHAR (30),  
    PRIMARY KEY (type))
```

```
CREATE TABLE Mission (  
    code_name CHAR (20),  
    duration INTEGER,  
    primary_objective CHAR (40) NOT NULL,  
    secondary_objective CHAR (40),  
    outcome VARCHAR (40),  
    dname VARCHAR (20),  
    sname VARCHAR (30) NOT NULL,  
    UNIQUE (primary_objective),  
    PRIMARY KEY (code_name),  
    FOREIGN KEY (sname) REFERENCES Secret_Agency,  
        ON DELETE CASCADE  
    FOREIGN KEY (dname) REFERENCES Division  
        ON DELETE SET NULL)
```

```
CREATE TABLE Division (  
    dname VARCHAR (20),  
    PRIMARY KEY (dname))
```

```
CREATE TABLE Leg (  
    legid CHAR (4),  
    code_name CHAR(20),  
    number_of_leg INTEGER,  
    PRIMARY KEY (code_name, legid),  
    FOREIGN KEY (code_name) REFERENCES Mission,  
        ON DELETE CASCADE)
```

```
CREATE TABLE Nickname (  
    snickname VARCHAR (30),  
    sid CHAR (10),  
    PRIMARY KEY (snickname, sid),  
    FOREIGN KEY (sid) REFERENCES Spies  
        ON DELETE CASCADE)
```

```
CREATE TABLE Headquarters (  
    address VARCHAR (30),  
    location VARCHAR (30),  
    sname VARCHAR (30) NOT NULL ,  
    UNIQUE (location),  
    PRIMARY KEY (address),  
    FOREIGN KEY (sname) REFERENCES Secret Agency)
```

```
CREATE TABLE operates_in (  
    sname VARCHAR (30),  
    cname VARCHAR (30),  
    PRIMARY KEY (sname, cname),  
    FOREIGN KEY (sname) REFERENCES Secret Agency,  
    FOREIGN KEY (cname) REFERENCES Country)
```

```
CREATE TABLE border_on (  
    cname_1 VARCHAR (30),  
    cname_2 VARCHAR (30),  
    PRIMARY KEY (cname_1, cname_2),  
    FOREIGN KEY (cname_1) REFERENCES Country,  
    FOREIGN KEY (cname_2) REFERENCES Country)
```

```
CREATE TABLE employee (  
    sname VARCHAR (30),  
    sid CHAR (10),  
    PRIMARY KEY (sname, sid),  
    FOREIGN KEY (sname) REFERENCES Secret Agency,  
    FOREIGN KEY (sid) REFERENCES Spies)
```

```
CREATE TABLE develop_bond (  
    sid CHAR (10),  
    PRIMARY KEY (sid),  
    FOREIGN KEY (sid) REFERENCES Spies)
```

```
CREATE TABLE specialized (  
    type VARCHAR (30),  
    sid CHAR (10),  
    level INTEGER,  
    PRIMARY KEY (type, sid),  
    FOREIGN KEY (type) REFERENCES Skills,  
    FOREIGN KEY (sid) REFERENCES Spies)
```

```
CREATE TABLE participate (  
    code_name CHAR (20),  
    sid CHAR(10),  
    grade INTEGER,  
    PRIMARY KEY (code_name, sid),  
    FOREIGN KEY (code_name) REFERENCES Mission,  
    FOREIGN KEY (sid) REFERENCES Spies)
```

```
CREATE TABLE have (  
    dname VARCHAR (20),  
    sname VARCHAR (30),  
    PRIMARY KEY (dname, sname),  
    FOREIGN KEY (dname) REFERENCES Division,  
    FOREIGN KEY (sname) REFERENCES Secret Agency)
```

```
CREATE TABLE take_places (  
    code_name CHAR (20),  
    cname VARCHAR(30),  
    PRIMARY KEY (code_name, cname),  
    FOREIGN KEY (code_name) REFERENCES Mission,  
    FOREIGN KEY (cname) REFERENCES Country)
```