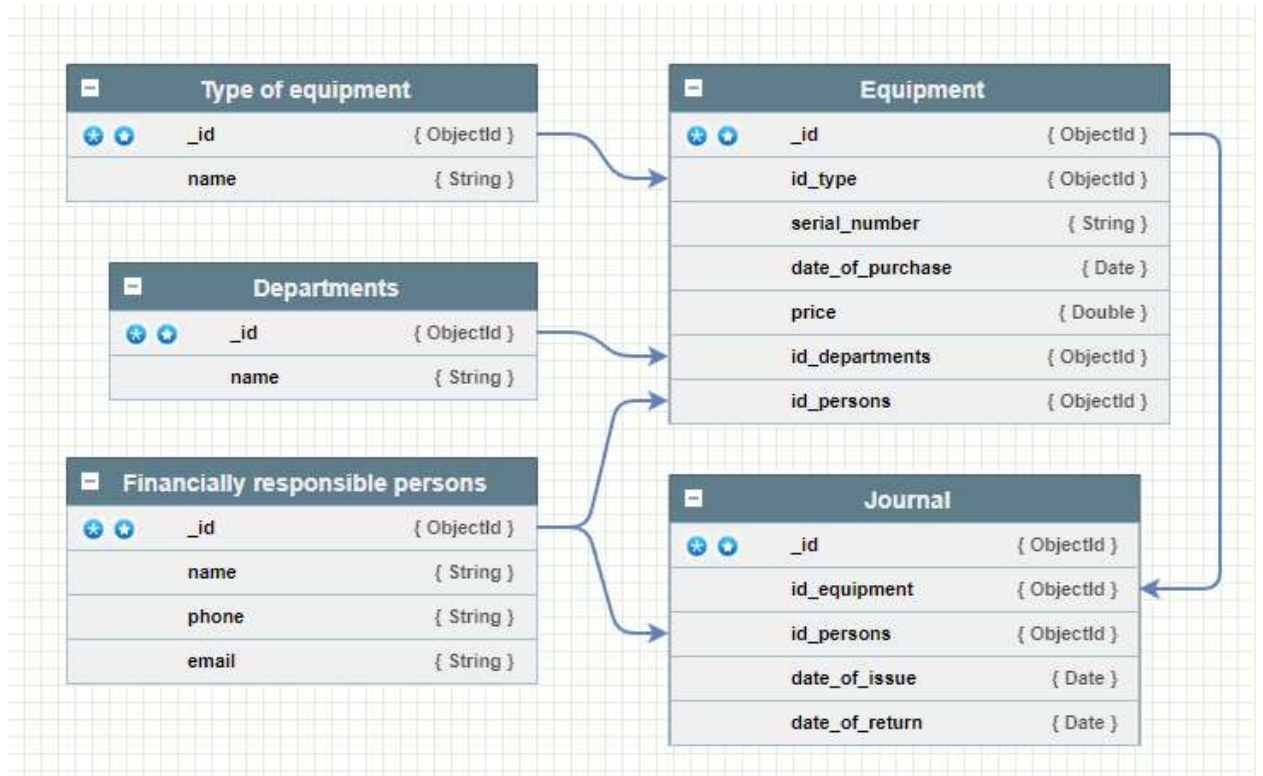## Модель данных

Создание бд

```
postgres=# create database equipment;
CREATE DATABASE
postgres=# \c equipment;
You are now connected to database "equipment" as user "postgres".
equipment=#
```

Создание таблиц

```
equipment=# create table Type (
id SERIAL PRIMARY KEY,
name VARCHAR(255)
);
CREATE TABLE
equipment=#
```

```
equipment=# create table Departments (
equipment(# id SERIAL PRIMARY KEY,
equipment(# name VARCHAR(255)
equipment(# );
CREATE TABLE
```

```
equipment=# create table Persons (
equipment(# id SERIAL PRIMARY KEY,
equipment(# name VARCHAR(255),
equipment(# phone VARCHAR(255),
equipment(# email VARCHAR(255)
equipment(# );
CREATE TABLE
```

```
equipment=# create table Equipment (
equipment(# id SERIAL PRIMARY KEY,
equipment(# serial_number VARCHAR(255),
equipment(# date_of_purchase date,
equipment(# price real,
equipment(# id_type INTEGER REFERENCES Type(id),
equipment(# id_department INTEGER REFERENCES Departments(id),
equipment(# id_person INTEGER REFERENCES Persons(id)
equipment(# );
CREATE TABLE
```

```
equipment=# create table Journal(
equipment(# id SERIAL PRIMARY KEY,
equipment(# date_of_issue date,
equipment(# date_of_return date,
equipment(# id_equipment INTEGER REFERENCES Equipment(id),
equipment(# id_person INTEGER REFERENCES Persons(id)
equipment(# );
CREATE TABLE
```

Создание последовательностей

```
equipment=# create sequence seq_type_id start with 1 increment by 1 no maxvalue no cycle;
CREATE SEQUENCE
equipment=# create sequence seq_departments_id start with 1 increment by 1 no maxvalue no cycle;
CREATE SEQUENCE
equipment=# create sequence seq_persons_id start with 1 increment by 1 no maxvalue no cycle;
CREATE SEQUENCE
equipment=# create sequence seq_equipment_id start with 1 increment by 1 no maxvalue no cycle;
CREATE SEQUENCE
equipment=# create sequence seq_journal_id start with 1 increment by 1 no maxvalue no cycle;
CREATE SEQUENCE
```

Вывод таблиц и последовательностей

```
equipment=# \d
                List of relations
 Schema |       Name         |   Type   |  Owner
--------+--------------------+----------+----------
 public | departments        | table    | postgres
 public | departments_id_seq | sequence | postgres
 public | equipment          | table    | postgres
 public | equipment_id_seq   | sequence | postgres
 public | journal            | table    | postgres
 public | journal_id_seq     | sequence | postgres
 public | persons            | table    | postgres
 public | persons_id_seq     | sequence | postgres
 public | seq_departments_id | sequence | postgres
 public | seq_equipment_id   | sequence | postgres
 public | seq_journal_id     | sequence | postgres
 public | seq_persons_id     | sequence | postgres
 public | seq_type_id        | sequence | postgres
 public | type               | table    | postgres
 public | type_id_seq        | sequence | postgres
(15 rows)
```

Заполнение таблиц и вывод данных из них

```
equipment=# insert into Type (name) values
('laptop'),
('monitor'),
('keyboard'),
('mouse');
INSERT 0 4
equipment=# select * from Type;
 id |   name
----+----------
  1 | laptop
  2 | monitor
  3 | keyboard
  4 | mouse
(4 rows)
```

```
equipment=# insert into Departments (name) values
equipment-# ('IT'),
equipment-# ('HR'),
equipment-# ('Accounting');
INSERT 0 3
equipment=# select * from Departments;
 id |    name
----+------------
  1 | IT
  2 | HR
  3 | Accounting
(3 rows)
```

```
equipment=# insert into Persons (name, phone, email) values
equipment-# ('Ivanov Ivan', '89005004031', 'ivanovivan@google.com'),
equipment-# ('Petrov Petr', '89005004032', 'petrovpetr@mail.ru'),
equipment-# ('Andreev Andrey', '89005004033', 'andrey012@yandex.ru');
INSERT 0 3
equipment=# select * from Persons;
 id |     name       |    phone    |        email
----+----------------+-------------+-----------------------
  1 | Ivanov Ivan    | 89005004031 | ivanovivan@google.com
  2 | Petrov Petr    | 89005004032 | petrovpetr@mail.ru
  3 | Andreev Andrey | 89005004033 | andrey012@yandex.ru
(3 rows)
```

```
equipment=# insert into Equipment (serial_number, date_of_purchase, price, id_type, id_department, id_person) values
equipment-# ('SN101', '2023-01-10', 2500.00, 1, 1, 1),
equipment-# ('SN201', '2020-05-07', 1000.00, 2, 2, 3),
equipment-# ('SN301', '2021-04-04', 1999.99, 3, 3, 2);
INSERT 0 3
equipment=# select * from Equipment
equipment-# ;
 id | serial_number | date_of_purchase |  price  | id_type | id_department | id_person
----+---------------+------------------+---------+---------+---------------+-----------
  1 | SN101         | 2023-01-10       |    2500 |       1 |             1 |         1
  2 | SN201         | 2020-05-07       |    1000 |       2 |             2 |         3
  3 | SN301         | 2021-04-04       | 1999.99 |       3 |             3 |         2
(3 rows)
```

```
equipment=# insert into Journal (date_of_issue, date_of_return, id_equipment, id_person) values
equipment-# ('2020-07-07', '2022-01-01', 2, 3),
equipment-# ('2023-03-03', NULL, 1, 1);
INSERT 0 2
equipment=# select * from Journal;
 id | date_of_issue | date_of_return | id_equipment | id_person
----+---------------+----------------+--------------+-----------
  1 | 2020-07-07    | 2022-01-01     |            2 |         3
  2 | 2023-03-03    |                |            1 |         1
(2 rows)
```

Заполнение таблиц и вывод дан