```
-- countries
CREATE SEQUENCE countries seq;
CREATE TABLE countries (
      co id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('countries seq'),
      co flag CHAR(1) NOT NULL,
      co code CHAR(2) NOT NULL,
      co name VARCHAR (100)
);
--languages
CREATE SEQUENCE languages seq;
CREATE TABLE languages (
      lg id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('languages seq'),
      lg code CHAR(2) NOT NULL UNIQUE,
      lg enabled BOOLEAN NOT NULL DEFAULT FALSE,
      lg ordering INTEGER NOT NULL DEFAULT 0,
      lg name VARCHAR (20) UNIQUE
);
CREATE SEQUENCE labels seq;
CREATE TABLE labels (
      lb id integer NOT NULL PRIMARY KEY DEFAULT NEXTVAL ('labels seq'),
      lb label VARCHAR(100) UNIQUE
);
-- texts
CREATE SEQUENCE texts seq;
CREATE TABLE texts (
      tx id integer NOT NULL PRIMARY KEY DEFAULT NEXTVAL ('texts seq'),
      tx language id INTEGER NOT NULL,
      tx label id INTEGER NOT NULL,
      tx text TEXT,
CONSTRAINT fk language FOREIGN KEY(tx language id) REFERENCES languages(lg id),
CONSTRAINT fk label FOREIGN KEY(tx label id) REFERENCES labels(lb id),
UNIQUE (tx language id, tx label id)
-- roles
CREATE SEQUENCE roles seq;
CREATE TABLE roles (
     ro id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('roles seq'),
      ro name VARCHAR(20) NOT NULL UNIQUE,
      ro description VARCHAR(60) NOT NULL,
      ro ordering INTEGER NOT NULL DEFAULT 0
);
-- users
CREATE SEQUENCE users seq;
CREATE TABLE users (
     us id integer NOT NULL PRIMARY KEY DEFAULT NEXTVAL('users seq'),
      us email VARCHAR(60) NOT NULL UNIQUE,
      us password VARCHAR(60) NOT NULL,
      us salt VARCHAR(60) NOT NULL,
      us username VARCHAR(20) NOT NULL,
      us firstname VARCHAR(20) NOT NULL,
      us middlename VARCHAR(20) NULL,
      us lastname VARCHAR(20) NOT NULL,
      us enabled BOOLEAN DEFAULT FALSE
);
```

```
CREATE SEQUENCE user roles seq;
CREATE TABLE user roles (
      ur id INTEGER PRIMARY KEY DEFAULT NEXTVAL('user roles seq'),
      ur user id INTEGER NOT NULL,
      ur role id INTEGER NOT NULL,
CONSTRAINT fk_user FOREIGN KEY(ur_user_id) REFERENCES users(us_id),
CONSTRAINT fk role FOREIGN KEY(ur role id) REFERENCES roles(ro id),
UNIQUE (ur user id, ur role id)
);
-- products
CREATE SEQUENCE products_seq;
CREATE TABLE products (
      it id INTEGER PRIMARY KEY DEFAULT NEXTVAL('products seq'),
      it category id INTEGER NOT NULL,
      it parent INTEGER NULL,
      it abstract BOOLEAN NOT NULL DEFAULT FALSE,
      it customisation BOOLEAN NOT NULL DEFAULT FALSE,
      it title VARCHAR(20) NOT NULL,
      it blurb VARCHAR (100) NULL,
      it description VARCHAR(4000) NULL,
      it price NUMERIC(8, 2) NOT NULL DEFAULT 0,
      it weight FLOAT NOT NULL DEFAULT 0,
      it in stock INTEGER NOT NULL DEFAULT 0,
      it on backorder INTEGER NOT NULL DEFAULT 0,
      it can backorder BOOLEAN NOT NULL DEFAULT FALSE,
CONSTRAINT fk category FOREIGN KEY(it category id) REFERENCES categories(ca id),
);
-- images
CREATE TYPE MIMETYPE AS ENUM ('jpg', 'png', 'gif', 'mp4');
CREATE SEQUENCE images seq;
CREATE TABLE images (
      im id INTEGER NOT NULL PRIMARY KEY DEFAULT nextval('images seq'),
      im_url VARCHAR(60) NOT NULL,
      im name VARCHAR(20) NOT NULL,
      im ordering INTEGER NOT NULL DEFAULT 0,
      im mimetype MIMETYPE NOT NULL
);
-- parts
CREATE SEQUENCE parts seq;
CREATE TABLE parts (
      pa id INTEGER PRIMARY KEY DEFAULT NEXTVAL ('parts seq'),
      pa title VARCHAR(20) NOT NULL,
      pa blurb VARCHAR(100) NULL,
      pa description VARCHAR(4000) NULL,
      pa_price NUMERIC(8, 2) NOT NULL DEFAULT 0,
      pa weight FLOAT NOT NULL DEFAULT 0,
      pa_in_stock INTEGER NOT NULL DEFAULT 0
);
```

```
-- batches
CREATE SEQUENCE batches seq;
CREATE TABLE batches (
      ba id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('batches seq'),
      ba user id INTEGER NOT NULL,
      ba_product_id INTEGER NOT NULL,
      ba initial size INTEGER NOT NULL DEFAULT 0,
      ba finished products INTEGER NOT NULL DEFAULT 0,
      ba rejected products INTEGER NOT NULL DEFAULT 0,
      ba created TIMESTAMP NOT NULL DEFAULT CURRENT TIMESTAMP,
CONSTRAINT fk user FOREIGN KEY(ba user id) REFERENCES users(us id),
CONSTRAINT fk product FOREIGN KEY (ba product id) REFERENCES products (it id),
UNIQUE (ba user id, ba product id)
);
-- categories
CREATE TYPE CATEGORY STATUS AS ENUM ('good', 'bad');
CREATE SEQUENCE categories seq;
CREATE TABLE categories (
      ca id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL ('categories seq'),
      ca parent id INTEGER NULL,
      ca ordering INTEGER NOT NULL DEFAULT 0,
      ca title VARCHAR(20) NOT NULL,
      ca blurb VARCHAR(20) NULL,
      ca description VARCHAR (4000) NULL,
      ca user id INTEGER NOT NULL,
      ca status CATEGORY STATUS NOT NULL,
      ca created on TIMESTAMP NOT NULL DEFAULT CURRENT TIMESTAMP,
CONSTRAINT fk user FOREIGN KEY(ca user id) REFERENCES users(us id)
);
-- category images
CREATE SEQUENCE category images seq;
CREATE TABLE category images (
      ci id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL ('category images seq'),
      ci_category_id INTEGER NOT NULL,
      ci image id INTEGER NOT NULL,
      ci ordering INTEGER NOT NULL DEFAULT 0,
CONSTRAINT fk category FOREIGN KEY(ci category id) REFERENCES categories(ca id),
CONSTRAINT fk image FOREIGN KEY(ci image id) REFERENCES images(im id),
UNIQUE (ci category id, ci image id)
-- product images
CREATE SEQUENCE product images seq;
CREATE TABLE product_images (
      ii id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('product images seq'),
      ii_product_id INTEGER NOT NULL,
      ii image id INTEGER NOT NULL,
      ii ordering INTEGER NOT NULL DEFAULT 0,
CONSTRAINT fk product FOREIGN KEY(ii product id) REFERENCES products(it id),
CONSTRAINT fk image FOREIGN KEY(ii image id) REFERENCES images(im id),
UNIQUE (ii product id, ii image id)
);
```

```
-- product parts
CREATE SEQUENCE product parts seq;
CREATE TABLE product parts (
      ip id INTEGER \overline{\text{NOT}} NULL PRIMARY KEY DEFAULT NEXTVAL('product parts seq'),
      ip product id INTEGER NOT NULL,
      ip part id INTEGER NOT NULL,
      ip_quantity INTEGER NOT NULL DEFAULT 0,
      ip ordering INTEGER NOT NULL DEFAULT 0,
CONSTRAINT fk product FOREIGN KEY(ip product id) REFERENCES products(it id),
CONSTRAINT fk_part FOREIGN KEY(ip_part_id) REFERENCES parts(pa id),
UNIQUE (ip product id, ip part id)
);
-- part images
CREATE SEQUENCE part images seq;
CREATE TABLE part images (
      pi id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('part images seq'),
      pi part id INTEGER NOT NULL,
      pi image id INTEGER NOT NULL,
      pi ordering INTEGER NOT NULL DEFAULT 0,
CONSTRAINT fk part FOREIGN KEY(pi part id) REFERENCES parts(pa id),
CONSTRAINT fk_image FOREIGN KEY(pi_image_id) REFERENCES images(im_id),
UNIQUE (pi part id, pi image id)
-- customers
CREATE TYPE CUSTOMER STATUS AS ENUM ('good', 'bad');
CREATE SEQUENCE customers seq;
CREATE TABLE customers (
      cu id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('customers seq'),
      cu email VARCHAR(60) NOT NULL,
      cu password VARCHAR(60) NOT NULL,
      cu salt VARCHAR(60) NOT NULL,
      cu firstname VARCHAR(20) NOT NULL,
      cu middlename VARCHAR(20) NULL,
      cu lastname VARCHAR(20) NOT NULL,
      cu created TIMESTAMP NOT NULL DEFAULT CURRENT TIMESTAMP,
      cu modified TIMESTAMP NOT NULL DEFAULT CURRENT TIMESTAMP,
      cu status CUSTOMER STATUS NOT NULL DEFAULT 'good'
);
-- addresses
CREATE SEQUENCE addresses seq;
CREATE TABLE addresses (
      ad id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('addresses seq'),
      ad customer INTEGER NOT NULL,
      ad_country_id INTEGER NOT NULL,
      ad_current BOOLEAN NOT NULL DEFAULT FALSE,
      ad billing BOOLEAN NOT NULL DEFAULT FALSE,
      ad shipping BOOLEAN NOT NULL DEFAULT FALSE,
      ad_address1 VARCHAR(60) NOT NULL,
      ad address2 VARCHAR(60) NULL,
      ad city VARCHAR(20) NOT NULL,
      ad state VARCHAR(20) NOT NULL,
      ad zip VARCHAR(20) NOT NULL,
      ad ordering INTEGER NOT NULL DEFAULT 0,
CONSTRAINT fk customer FOREIGN KEY(ad customer) REFERENCES customers(cu id),
CONSTRAINT fk country FOREIGN KEY(ad country id) REFERENCES countries(co id)
);
```

```
-- orders
CREATE TYPE ORDER STATUS AS ENUM('good', 'bad');
CREATE SEQUENCE orders_seq;
CREATE TABLE orders (
      or id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('orders seq'),
      or customer id INTEGER NOT NULL,
      or shipping address INTEGER NOT NULL,
      or_billing_address INTEGER NOT NULL,
      or created TIMESTAMP NOT NULL DEFAULT CURRENT TIMESTAMP,
      or status ORDER STATUS NOT NULL DEFAULT 'good',
CONSTRAINT fk customer FOREIGN KEY(or customer id) REFERENCES customers(cu id),
CONSTRAINT fk shipping FOREIGN KEY(or shipping address)
      REFERENCES addresses (ad id),
CONSTRAINT fk billing FOREIGN KEY(or billing address)
      REFERENCES addresses (ad id)
);
-- order products
CREATE TYPE ORDER PRODUCT STATUS AS ENUM('good', 'bad');
CREATE SEQUENCE order products seq;
CREATE TABLE order products (
      oi id INTEGER NOT NULL PRIMARY KEY DEFAULT NEXTVAL('order products seq'),
      oi order id INTEGER NOT NULL,
      oi product id INTEGER NOT NULL,
      oi quantity INTEGER NOT NULL DEFAULT 0,
      oi ordering INTEGER NOT NULL DEFAULT 0,
      oi status ORDER PRODUCT STATUS NOT NULL DEFAULT 'good',
CONSTRAINT fk order FOREIGN KEY(oi order id) REFERENCES orders(or id),
CONSTRAINT fk product FOREIGN KEY (oi product id) REFERENCES products (it id),
UNIQUE (oi order id, oi product id)
);
```