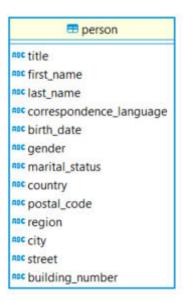1. Загружаем файл в таблицу, чтобы было удобнее работать дальше:

```
otusdb> Script-1 ×    *<otusdb> Script-2

CREATE table person (
    title text,
    first_name text,
    last_name text,
    correspondence_language text,
    birth_date text,
    gender text,
    marital_status text,
    country text,
    postal_code text,
    region text,
    city text,
    street text,
    building_number text
    );

load data infile 'some_customers.csv'
into table person
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
lines terminated by '\n'
IGNORE 1 ROWS;
```

2. Делаем выборку, проверяем, что все успешно загружено:

```
select * from person;
```

| | title | first_name | last_name | correspondence_language | birth_date | gender | marital_status | country | postal_code | region | city | street |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Dr. | Danilo | Ambrosini | IT | 1900-01-01 | Unknown | | IT | 21100 | | Varese | Via dolomiti |
| 2 | Mrs | Deborah | Thomas | | | Female | | GB | RH16 3TQ | | Haywards heath | Cobbetts mead |
| 3 | Herr | Markus | Hönninge | DE | 1900-01-01 | Male | | DE | 69493 | | Hirschberg an der bergstraße | Breitgasse 5a |
| 4 | Mrs | Sheila | Spiller | EN | | Unknown | | GB | TN6 1ST | East sussex | Crowborough | Ghyll road |
| 5 | Mrs | Rosemary | Bailey | EN | | Unknown | | GB | NR34 7SH | | Beccles | Pepys avenue |
| 6 | Mr | G | Russell | EN | 1900-01-01 | Male | | GB | FK6 6BW | | Denny | Leslie park |
| 7 | Mr | Mark | Robins | EN | | Male | | GB | BS7 0EY | | Horfield | Flat 6 |
| 8 | Mrs | Elaine | Thomson | EN | 1900-01-01 | Female | | GB | NG24 3LL | | Newark | 38 main street |
| 9 | | Mario | Bartolucci | IT | 1900-01-01 | Male | | IT | 60018 | Ancona | Montemarciano | Via dei larici |
| 10 | Herr | Marvin | Brockob | DE | 1900-01-01 | Male | | DE | 40233 | | Düsseldorf | Langerstr 51 |
| 11 | Mrs | Kathleen | Renshaw | EN | | Female | | GB | YO31 7YG | | York | East parade |
| 12 | Frau | Katharina | Meyer | DE | 1900-01-01 | Female | | DE | 01309 | | Dresden | Geisingstr 29 |
| 13 | Pan | Krzysztof | Gres | PL | 1900-01-01 | Male | | PL | 70-812 | | Szczecin | Ul pomorska 105/1 |
| 14 | Frau | Ivonne | Sommer | DE | 1900-01-01 | Female | | DE | 24106 | | Kiel | Charles-roß-ring 20 |
| 15 | Mr | P | Page | EN | 1900-01-01 | Male | | GB | TN37 7QF | | St leonards-on-sea | 85 seven acre close |
| 16 | Miss | D | France | EN | | Female | | GB | BL5 3WA | | Bolton | Madison park |
| 17 | Mrs | Jean | Blonfield | EN | | Female | | GB | TR1 2DZ | Cornwall | Truro | Carclew street |
| 18 | Monsieur | Frederic | Locquet | FR | 1900-01-01 | Male | | BE | 7191 | | Ecaussinnes-lalaing | Rue de l'hayette /ca correspond a la rue du poi |
| 19 | Frau | | A0230326 | DE | 1900-01-01 | Female | | DE | 03460 | | | 6230320a |
| 20 | Frau | Susann | Wiffler | DE | 1900-01-01 | Female | | DE | 65201 | | Wiesbaden | Rheingaustr 16 |
| 21 | | | Haugen pål | NO | 1900-01-01 | Unknown | | NO | 4280 | | Skudeneshavn | Alterfjellet 18b |
| 22 | Miss | Hayley | Walden | EN | 1900-01-01 | Female | | GB | RH4 3QR | Surrey | Dorking | Bailey road |
| 23 | Frau | Linda | Sabi | DE | 1900-01-01 | Female | | DE | 22419 | | Hamburg | Dortmunder str 52 |
| 24 | Mr | Kyle | Richardson | | | Unknown | | GB | PR5 6EL | | Preston | Station road |
| 25 | Mr | Simon | Pritchard | EN | | Male | | GB | WV6 8LF | | Wolverhampton | Sandy hollow |
| 26 | Mrs | Nazia | Ilyas | EN | | Female | | GB | PR1 5NP | | Preston | Wilbraham street |
| 27 | Pan | Zbigniew | Kaczmarek | PL | 1900-01-01 | Male | | PL | 77-330 | | Czarne | Kościuszki |
| 28 | Mr | Philip | Wales | EN | 1900-01-01 | Unknown | | IE | | Offaly | Birr | Eden cottages |
| 29 | Monsieur | Fabien | Legrand | FR | 1900-01-01 | Male | | FR | 60190 | | Moyvillers | 175 rue du pre st martin |
| 30 | Mrs | E | Shuttleworth | EN | 1900-01-01 | Female | | GB | BB6 7TH | | Great harwood | 17 worston lane |
| 31 | | Live | New | FR | 1900-01-01 | Unknown | | BE | 4081 | | Esch/alzette | Dicks |
| 32 | Herr | Florian | Streb | DE | 1900-01-01 | Male | | DE | 65550 | | Limburg | Habichtstr 3 |
| 33 | | | Spronk | NL | 1900-01-01 | Unknown | | NL | 3641 BA | Utrecht | Mijdrecht | Bucho van montzimastraat |
| 34 | Paní | Iveta | Piskackova | CS | 1900-01-01 | Female | | CZ | 267 62 | | Osek | Osek 2 |
| 35 | | | | | | | | IT | 29027 | Piacenza | Podenzano | Via papa giovanni xxiii |
| 36 | Frau | Gabriele | Guidi | DE | 1900-01-01 | Female | | DE | 65439 | | Flörsheim am main | Hauptstr 38 |
| 37 | Mevr. | | Klein | NL | 1900-01-01 | Female | | NL | 2625 RL | | Delft | Beethovenlaan |
| 38 | Monsieur | Yann | Malavaud | FR | 1900-01-01 | Male | | FR | 69600 | | Oullins | 13 rue salvador allende |
| 39 | Mrs | M | Aylesbury | EN | | Female | | IE | R93 E3H7 | | Carlow | Crossneen manor leighlin road |

3. Структура пока что из одной таблицы, все вместе:



4. Анализируем, добавляем необходимые таблицы. Создала также таблицы contact и company, но на данном этапе в них записывать нечего:

```sql
create table customer (
customer_id int primary key not null auto_increment,
title varchar(32),
first_name varchar(32),
last_name varchar(64),
correspondence_language varchar(16),
birth_date date default '1000-01-01',
gender enum('male','female', 'Unknown') default 'Unknown',
marital_status varchar(10),
check(gender in (0, 1, 2, 9)),
company_id int,
foreign key (company_id) references company (company_id),
address_id int,
foreign key (address_id) references address (address_id),
contact_id int,
foreign key (contact_id) references contact (contact_id)
);

create table address (
address_id int primary key not null auto_increment,
country varchar(32),
postal_code varchar(12),
region varchar(64),
city varchar(64),
street text,
building_number varchar(10)
);

create table contact (
contact_id int primary key not null auto_increment,
phone varchar(16),
email varchar(32)
);

create table company (
company_id int primary key not null auto_increment,
name varchar(32),
address varchar(64),
phone varchar(16)
);
```

5. Начинаем запись отдельно в каждую таблицу:

```sql
LOAD DATA INFILE 'some_customers.csv'
INTO TABLE `address`
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS
(@a, @b, @c, @d, @e, @f, @g, country, postal_code, region, city, street, building_number); -- @a, @b, @c и тд просто отбросим здесь


LOAD DATA INFILE 'some_customers.csv'
INTO TABLE customer
FIELDS TERMINATED BY ','
ENCLOSED BY '"'
LINES TERMINATED BY '\n'
IGNORE 1 ROWS
(title, first_name, last_name, correspondence_language, @birth_date, @gender, marital_status, @a, @b, @c, @d, @e, @f)
set birth_date = case @birth_date
                when '' then '1000-01-01'
                else @birth_date
                end,
    gender = case @gender
                when '' then 'Unknown'
                else @gender
                end
;
```

6. Создаем процедуру для заполнения адресов клиентов:

```sql
DELIMITER $$

CREATE PROCEDURE insert_address (IN count_address int)
BEGIN
    DECLARE i int;
    set i = 1;
    WHILE i <= count_address DO
        UPDATE customer SET customer.address_id = i WHERE customer.customer_id = i;
        SET i = i + 1;
    END WHILE;
END$$

DELIMITER ;
```

7. Вызываем, и смотрим, что получилось:

```sql
CALL insert_address((select count(address_id) from address a));
select * from customer;
select * from address;
```

Customer:

| customer_id | title | first_name | last_name | correspondence_language | birth_date | gender | marital_status | company_id | address_id | contact_id |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Dr. | Danilo | Ambrosini | IT | 1900-01-01 | Unknown | | [NULL] | 1 | [NULL] |
| 2 | Mrs | Deborah | Thomas | | 1000-01-01 | female | | [NULL] | 2 | [NULL] |
| 3 | Herr | Markus | Hönninge | DE | 1900-01-01 | male | | [NULL] | 3 | [NULL] |
| 4 | Mrs | Sheila | Spiller | EN | 1000-01-01 | Unknown | | [NULL] | 4 | [NULL] |
| 5 | Mrs | Rosemary | Bailey | EN | 1000-01-01 | Unknown | | [NULL] | 5 | [NULL] |
| 6 | Mr | G | Russell | EN | 1900-01-01 | male | | [NULL] | 6 | [NULL] |
| 7 | Mr | Mark | Robins | EN | 1000-01-01 | male | | [NULL] | 7 | [NULL] |
| 8 | Mrs | Elaine | Thomson | EN | 1900-01-01 | female | | [NULL] | 8 | [NULL] |
| 9 | | Mario | Bartolucci | IT | 1900-01-01 | male | | [NULL] | 9 | [NULL] |
| 10 | Herr | Marvin | Brockob | DE | 1900-01-01 | male | | [NULL] | 10 | [NULL] |
| 11 | Mrs | Kathleen | Renshaw | EN | 1000-01-01 | female | | [NULL] | 11 | [NULL] |
| 12 | Frau | Katharina | Meyer | DE | 1900-01-01 | female | | [NULL] | 12 | [NULL] |
| 13 | Pan | Krzysztof | Gres | PL | 1900-01-01 | male | | [NULL] | 13 | [NULL] |
| 14 | Frau | Ivonne | Sommer | DE | 1900-01-01 | female | | [NULL] | 14 | [NULL] |
| 15 | Mr | P | Page | EN | 1900-01-01 | male | | [NULL] | 15 | [NULL] |
| 16 | Miss | D | France | EN | 1000-01-01 | female | | [NULL] | 16 | [NULL] |
| 17 | Mrs | Jean | Blonfield | EN | 1000-01-01 | female | | [NULL] | 17 | [NULL] |
| 18 | Monsieur | Frederic | Locquet | FR | 1900-01-01 | male | | [NULL] | 18 | [NULL] |
| 19 | Frau | | A0230326 | DE | 1900-01-01 | female | | [NULL] | 19 | [NULL] |
| 20 | Frau | Susann | Wiffler | DE | 1900-01-01 | female | | [NULL] | 20 | [NULL] |
| 21 | | | Haugen pål | NO | 1900-01-01 | Unknown | | [NULL] | 21 | [NULL] |
| 22 | Miss | Hayley | Walden | EN | 1900-01-01 | female | | [NULL] | 22 | [NULL] |
| 23 | Frau | Linda | Sabi | DE | 1900-01-01 | female | | [NULL] | 23 | [NULL] |
| 24 | Mr | Kyle | Richardson | | 1000-01-01 | Unknown | | [NULL] | 24 | [NULL] |
| 25 | Mr | Simon | Pritchard | EN | 1000-01-01 | male | | [NULL] | 25 | [NULL] |
| 26 | Mrs | Nazia | Ilyas | EN | 1000-01-01 | female | | [NULL] | 26 | [NULL] |
| 27 | Pan | Zbigniew | Kaczmarek | PL | 1900-01-01 | male | | [NULL] | 27 | [NULL] |
| 28 | Mr | Philip | Wales | EN | 1900-01-01 | Unknown | | [NULL] | 28 | [NULL] |
| 29 | Monsieur | Fabien | Legrand | FR | 1900-01-01 | male | | [NULL] | 29 | [NULL] |
| 30 | Mrs | E | Shuttleworth | EN | 1900-01-01 | female | | [NULL] | 30 | [NULL] |
| 31 | | Live | New | FR | 1900-01-01 | Unknown | | [NULL] | 31 | [NULL] |
| 32 | Herr | Florian | Streb | DE | 1900-01-01 | male | | [NULL] | 32 | [NULL] |
| 33 | | | Spronk | NL | 1900-01-01 | Unknown | | [NULL] | 33 | [NULL] |
| 34 | Paní | Iveta | Piskackova | CS | 1900-01-01 | female | | [NULL] | 34 | [NULL] |
| 35 | | | | | 1000-01-01 | Unknown | | [NULL] | 35 | [NULL] |
| 36 | Frau | Gabriele | Guidi | DE | 1900-01-01 | female | | [NULL] | 36 | [NULL] |
| 37 | Mevr. | | Klejn | NL | 1900-01-01 | female | | [NULL] | 37 | [NULL] |
| 38 | Monsieur | Yann | Malavaud | FR | 1900-01-01 | male | | [NULL] | 38 | [NULL] |
| 39 | Mrs | M | Aylesbury | EN | 1000-01-01 | female | | [NULL] | 39 | [NULL] |
| 40 | Mr | | Joynson | EN | 1000-01-01 | Unknown | | [NULL] | 40 | [NULL] |

Address:

| address_id | country | postal_code | region | city | street | building_number |
|---|---|---|---|---|---|---|
| 1 | IT | 21100 | | Varese | Via dolomiti | 13 |
| 2 | GB | RH16 3TQ | | Haywards heath | Cobbetts mead | 31 |
| 3 | DE | 69493 | | Hirschberg an der bergstraße | Breitgasse 5a | |
| 4 | GB | TN6 1ST | East sussex | Crowborough | Ghyll road | |
| 5 | GB | NR34 7SH | | Beccles | Pepys avenue | 24 |
| 6 | GB | FK6 6BW | | Denny | Leslie park | |
| 7 | GB | BS7 0EY | | Horfield | Flat 6 | |
| 8 | GB | NG24 3LL | | Newark | 38 main street | |
| 9 | IT | 60018 | Ancona | Montemarciano | Via dei larici | 23 |
| 10 | DE | 40233 | | Düsseldorf | Langerstr 51 | |
| 11 | GB | YO31 7YG | | York | East parade | 134 |
| 12 | DE | 01309 | | Dresden | Geisingstr 29 | |
| 13 | PL | 70-812 | | Szczecin | Ul pomorska 105/1 | |
| 14 | DE | 24106 | | Kiel | Charles-roß-ring 20 | |
| 15 | GB | TN37 7QF | | St leonards-on-sea | 85 seven acre close | |
| 16 | GB | BL5 3WA | | Bolton | Madison park | 11 |
| 17 | GB | TR1 2DZ | Cornwall | Truro | Carclew street | 39 |
| 18 | BE | 7191 | | Ecaussinnes-lalaing | Rue de l'hayette /ca correspond a la rue du poirier 35 gps/ | 8 |
| 19 | DE | 03460 | | | 6230320a | |
| 20 | DE | 65201 | | Wiesbaden | Rheingaustr 16 | |
| 21 | NO | 4280 | | Skudeneshavn | Alterfjellet 18b | |
| 22 | GB | RH4 3QR | Surrey | Dorking | Bailey road | 47 |
| 23 | DE | 22419 | | Hamburg | Dortmunder str 52 | |
| 24 | GB | PR5 6EL | | Preston | Station road | 380 |
| 25 | GB | WV6 8LF | | Wolverhampton | Sandy hollow | 31 |
| 26 | GB | PR1 5NP | | Preston | Wilbraham street | 102 |
| 27 | PL | 77-330 | | Czarne | Kościuszki | 42 |
| 28 | IE | | Offaly | Birr | Eden cottages | 4 |
| 29 | FR | 60190 | | Moyvillers | 175 rue du pre st martin | |
| 30 | GB | BB6 7TH | | Great harwood | 17 worston lane | |
| 31 | BE | 4081 | | Esch/alzette | Dicks | 13 |
| 32 | DE | 65550 | | Limburg | Habichtstr 3 | |
| 33 | NL | 3641 BA | Utrecht | Mijdrecht | Bucho van montzimastraat | 19 |
| 34 | CZ | 267 62 | | Osek | Osek 2 | |
| 35 | IT | 29027 | Piacenza | Podenzano | Via papa giovanni xxiii | 1 - 29 |
| 36 | DE | 65439 | | Flörsheim am main | Hauptstr 38 | |
| 37 | NL | 2625 RL | | Delft | Beethovenlaan | 155 |
| 38 | FR | 69600 | | Oullins | 13 rue salvador allende | |
| 39 | IE | R93 E3H7 | | Carlow | Crossneen manor leighlin road | 36 |
| 40 | GB | ST6 8AN | | Stoke-on-trent | Hesketh avenue | 1 |

8. Структура в результате: