



|  |  |
| --- | --- |
| Version Number | 1.0 |
| Status | Final |
| Document Date | 5/28/2017 |
| Owner | NetCracker |

*Version History*

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Description of Change |
| 0.1 | 4/17/2017 | All team | Initial Draft |
| 0.2 | 4/24/2017 | Pavlo Rospopa | Corrected mistakes |
| 1.0 | 5/7/2017 | Pavlo Rospopa | Final |

Contents

[**1. Introduction**](#_30j0zll) **6**

[Document Purpose](#_2et92p0) 6

[**2. Document Scope**](#_hsjsmyjgct71) **7**

[2.1 ER Diagram](#_lwfvlektsksi) 7

[**3. DB Tables Description**](#_3dy6vkm) **8**

[user](#_8jzauidwd0ss) 8

[role](#_rzx53l7gv2s5) 8

[user\_role](#_3673pib63z7n) 9

[domain](#_y024za7mrbhi) 9

[user\_domain](#_tu62b6v6jrtz) 9

[address](#_wu83bxod7dhl) 10

[location](#_lon1mes6v59p) 10

[region](#_vattxjqmi4kd) 11

[product\_region\_price](#_pr3di9nayxxt) 11

[discount](#_iaell2ns2om0) 11

[discount\_price](#_m1dsuie8zekz) 12

[product\_type](#_kw4bkwcijp82) 12

[product\_characteristic](#_qm46npwrkkd) 13

[product](#_no4reaws7ezf) 13

[product\_characteristic\_value](#_do0grtg3v6r8) 13

[product\_instance](#_8kaaya6p7tuv) 14

[complaint](#_2quikgi80qxj) 14

[product\_order](#_a9ou8zhr9pai) 15

[category](#_l8i1eldg0k8q) 15

[category\_type](#_kys6nhxvrr2g) 15

[report](#_5kxw46vjis6) 16

*Document Reference*

|  |  |  |
| --- | --- | --- |
| # | Document Name | Description |
|  | Functional requirements | Detailed description about functional requirements |

*Glossary of Terms*

|  |  |  |
| --- | --- | --- |
| # | Acronym | Interpretation |
|  | PK | Primary key |
|  | FK | Foreign key |

# 1. Introduction

This Entity Relationship Diagram Document (ERD) for Recruiting System provides a comprehensive representation of entities in a database and relationships between tables within that database.

## Document Purpose

The general concept of this Entity Relationship Diagram document is to represent entities and their relationships between each other, that used in computing in regard to the organization of data within database.

# 2. Document Scope

## 2.1 ER Diagram

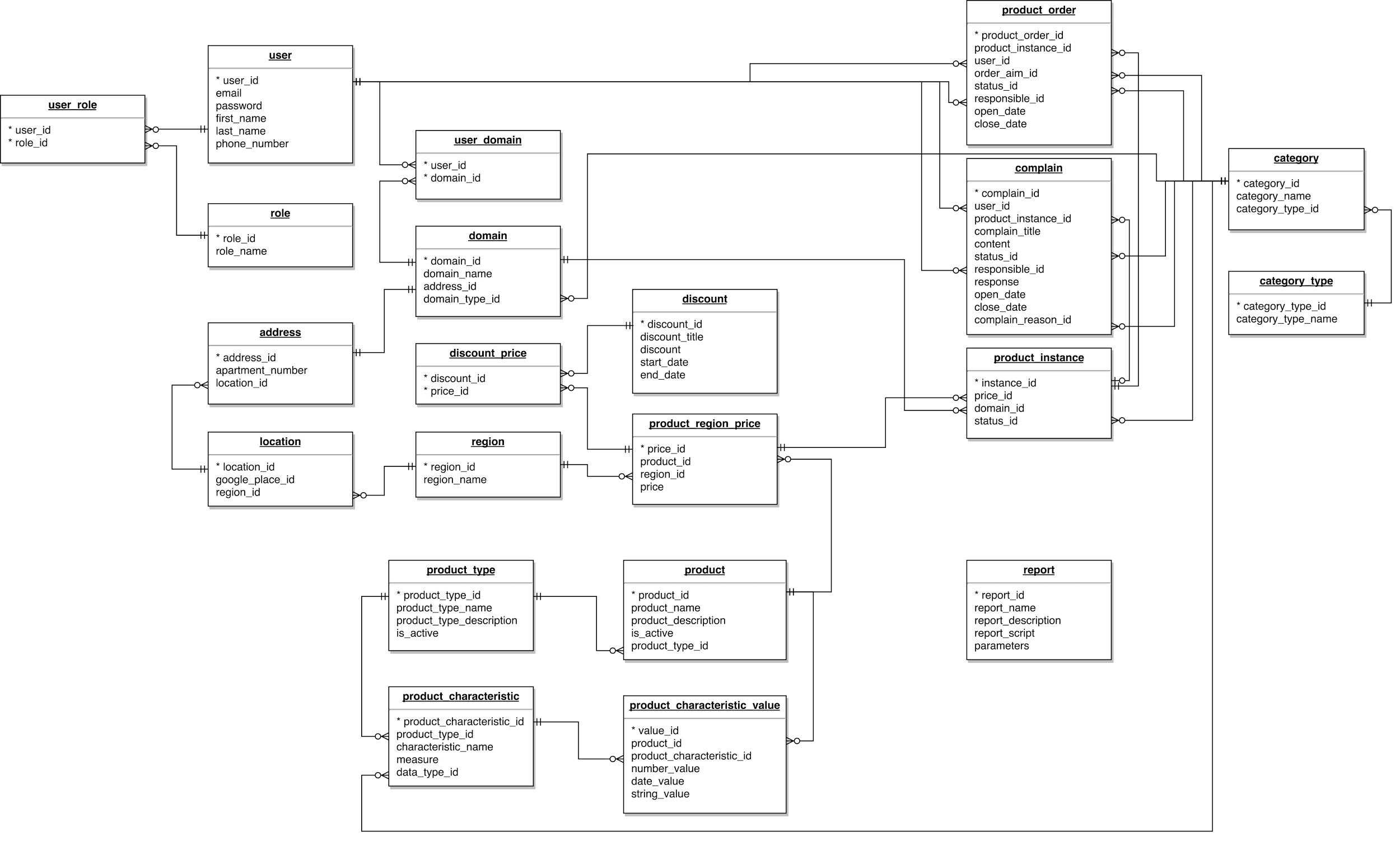


Figure 1. ER Diagram

# 3. DB Tables Description

Detailed description of tables is presented below.

## user

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | user | | |
| Purpose of table | This table holds data about all users registered in the sytem | | |
| Primary key | *User\_id* | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| user\_id | serial | PK | User’s unique identificator |
| email | varchar(120) | NOT NULL UNIQUE | User’s Email (login) |
| password | varchar(60) | NOT NULL | Users’ password. |
| first\_name | varchar(60) | NOT NULL | Users’ name. |
| last\_name | varchar(60) | NOT NULL | Users’ surname. |
| phone\_number | varchar(30) |  | Users’ phone number. |
| Additional constraints for table |  | |  |
|  | |  |

## role

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | role | | |
| Purpose of table | This table holds data about all roles to get access to the system. | | |
| Primary key | *role\_id* | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| role\_id | serial | PK | Role unique identificator |
| role\_name | varchar(60) | NOT NULL  UNIQUE | Name of role |
| Additional constraints for table |  | |  |

## user\_role

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | user\_role | | |
| Purpose of table | This table maps tables user and role | | |
| Primary key | user\_id, role\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| user\_id | int4 | PK  NOT NULL | User’s unique identificator |
| role\_id | int4 | PK  NOT NULL | Role unique identificator |
| Additional constraints for table | user\_id REFERENCES user(user\_id) | | Field “user\_id” can include only values that are defined in field “user\_id” of “user” table. |
| role\_id REFERENCES role(role\_id) | | Field “role\_id” can include only values that are defined in field “role\_id” of “role” table. |

## domain

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | domain | | |
| Purpose of table | This table holds information about all domains registered in the system | | |
| Primary key | domain\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| domain\_id | serial | PK,  NOT\_NULL | Domain’s unique identificator |
| domain\_name | VARCHAR(120) | NOT NULL  UNIQUE | Domain’s name |
| address\_id | INTEGER | NOT NULL | Address’s unique identificator |
| domain\_type\_id | INTEGER | NOT NULL | Category’s (with type “DOMAIN\_TYPE”) unique identificator |
| Additional constraints for table | address\_id REFERENCES address(address\_id) | | Field “address\_id” can include only values that are defined in field “address\_id” of “address” table. |
| domain\_type\_id REFERENCES category(category\_id) | | Field “domain\_type\_id” can include only values that are defined in field “category\_id” of “category” table. |

## user\_domain

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | user\_domain | | |
| Purpose of table | This table maps tables user and domain | | |
| Primary key | user\_id, domain\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| user\_id | INTEGER | PK NOT NULL | User’s unique identificator |
| domain\_id | INTEGER | PK  NOT NULL | Domain’s unique identificator |
| Additional constraints for table | user\_id REFERENCES user(user\_id) | | Field “user\_id” can include only values that are defined in field “user\_id” of “user” table. |
| domain\_id REFERENCES domain(domain\_id) | | Field “domain\_id” can include only values that are defined in field “domain\_id” of “domain” table. |

## address

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | address | | |
| Purpose of table | This table holds information about addresses of domains, registered in the system. | | |
| Primary key | address\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| address\_id | SERIAL | PK NOT NULL | Adress’s unique identificator |
| apartment\_number | VARCHAR(30) | NOT NULL | Apartment’s or cabinet’s designation |
| location\_id | INTEGER | NOT NULL | Location’s unique identificator |
| Additional constraints for table | location\_id REFERENCES location(location\_id) | | Field “location\_id” can include only values that are defined in field “location\_id” of “location” table. |

## location

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | location | | |
| Purpose of table | This table holds information about location of all addresses, registered in the system. | | |
| Primary key | location\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| location\_id | SERIAL | PK  NOT NULL | Location’s unique identificator |
| google\_place\_id | VARCHAR(60) | NOT NULL | Location’s google place id |
| region\_id | INTEGER | NOT NULL | Region’s unique identificator |
| Additional constraints for table | region\_id REFERENCES region(region\_id) | | Field “region\_id” can include only values that are defined in field “region\_id” of “region” table. |

## region

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | region | | |
| Purpose of table | This table holds list of all gerions, in which services are provided. | | |
| Primary key | region\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| region\_id | SERIAL | PK  NOT NULL | Region’s unique identificator |
| region\_name | VARCHAR(60) | NOT NULL  UNIQUE | Region’s name |
| Additional constraints for table |  | |  |

## product\_region\_price

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product\_region\_price | | |
| Purpose of table | This table connects products and their prices, depending on region | | |
| Primary key | price\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| price\_id | SERIAL | PK  NOT NULL | Price’s unique identificator |
| product\_id | INTEGER | NOT NULL | Product’s unique identificator |
| region\_id | INTEGER | NOT NULL | Region’s unique identificator |
| price | NUMERIC | NOT NULL | Price’s value |
| Additional constraints for table | product\_id REFERENCES product(product\_id) | | Field “product\_id” can include only values that are defined in field “product\_id” of “product” table. |
| region\_id REFERENCES region(region\_id) | | Field “region\_id” can include only values that are defined in field “region\_id” of “region” table. |

## discount

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | discount | | |
| Purpose of table | This table holds information about discounts provided for products at certain intervals of time | | |
| Primary key | discount\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| discount\_id | SERIAL | PK  NOT NULL | Discount’s unique identificator |
| discount\_title | VARCHAR(60) | NOT NULL | Discount’s title |
| discount | NUMERIC | NOT NULL | Discount’s value (in percentages) |
| start\_date | TIMESTAMP(0) WITH TIME ZONE | NOT NULL | Discount’s start date |
| end\_date | TIMESTAMP(0) WITH TIME ZONE | NOT NULL | Discount’s end date |
| Additional constraints for table |  | |  |

## 

## 

## discount\_price

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | discount\_price | | |
| Purpose of table | This table maps tables discount and price | | |
| Primary key | discount\_id, price\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| discount\_id | INTEGER | PK  NOT NULL | Discount’s unique identificator |
| price\_id | INTEGER | PK  NOT NULL | Price’s unique identificator |
| Additional constraints for table | discount\_id REFERENCES discount(discount\_id) | | Field “discount\_id” can include only values that are defined in field “discount\_id” of “discount” table. |
| price\_id REFERENCES product\_region\_price(price\_id) | | Field “price\_id” can include only values that are defined in field “price\_id” of “product\_region\_price” table. |

## product\_type

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product\_type | | |
| Purpose of table | This table holds information about types of products registered in the system | | |
| Primary key | product\_type\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| product\_type\_id | SERIAL | PK  NOT NULL | Type’s unique identificator |
| product\_type\_name | VARCHAR(60) | NOT NULL  UNIQUE | Type’s name |
| product\_type\_description | VARCHAR(240) |  | Type’s description |
| is\_active | BOOLEAN | NOT NULL | Specifies whether this type of product is available for ordering |
| Additional constraints for table |  | |  |

## 

## 

## product\_characteristic

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product\_characteristic | | |
| Purpose of table | This table holds data about the characteristics possessed by the products | | |
| Primary key | product\_characteristic\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| product\_characteristic\_id | SERIAL | PK  NOT NULL | Product characteristic’s unique identificator |
| product\_type\_id | INTEGER | NOT NULL | Product type’s unique identificator |
| characteristic\_name | VARCHAR(60) | NOT NULL | Characteristic’s name |
| measure | VARCHAR(30) | NOT NULL | Characteristic’s unit of measurement |
| data\_type\_id | INTEGER | NOT NULL | Categoty’s (DATA\_TYPE) unique identificator |
| Additional constraints for table | product\_type\_id REFERENCES product\_type( product\_type\_id) | | Field “product\_type\_id” can include only values that are defined in field “product\_type\_id” of “product\_type” table. |
| data\_type\_id REFERENCES category(category\_id) | | Field “data\_type\_id” can include only values that are defined in field “category\_id” of “category” table. |

## product

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product | | |
| Purpose of table | Еable holds information about all products registered in the system. | | |
| Primary key | product\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| product\_id | SERIAL | PK  NOT NULL | Product’s unique identificator |
| product\_name | VARCHAR(60) | NOT NULL  UNIQUE | Product’s name |
| product\_description | VARCHAR(240) |  | Product’s description |
| product\_type\_id | INTEGER | NOT NULL | Product type’s unique identificator |
| is\_active | BOOLEAN | NOT NULL | Determines whether this product is available for order |
| Additional constraints for table | product\_type\_id REFERENCES product\_type(product\_type\_id) | | Field “product\_type\_id” can include only values that are defined in field “product\_type\_id” of “product\_type” table. |

## product\_characteristic\_value

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product\_characteristic\_value | | |
| Purpose of table | This table maps the characteristics of the products and their values | | |
| Primary key | value\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| product\_id | INTEGER | NOT NULL | Product’s unique identificator |
| product\_characteristic\_id | INTEGER | NOT NULL | Product characteristic’s unique identificator |
| number\_value | NUMERIC |  | A numerical characteristic value (if any), or null |
| date\_value | TIMESTAMP |  | A date characteristic value (if any), or null |
| string\_value | VARCHAR |  | A string characteristic value (if any), or null |
| value\_id | SERIAL | PK  NOT NULL | Value’s unique identificato |
| Additional constraints for table | product\_id REFERENCES product(product\_id) | | Field “product\_id” can include only values that are defined in field “product\_id” of “product” table. |
| product\_characteristic\_id REFERENCES product\_characteristic(product\_characteristic\_id) | | Field “product\_characteristic\_id” can include only values that are defined in field “product\_characteristic\_id” of “product\_characteristic” table. |

## product\_instance

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product\_instance | | |
| Purpose of table | This table contains specific instances of products provided to customers. | | |
| Primary key | instance\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| instance\_id | SERIAL | PK NOT NULL | Product instance’s unique identificator |
| price\_id | INTEGER | NOT NULL | Price’s unique identificator |
| domain\_id | INTEGER | NOT NULL | Domain’s unique identificator |
| status\_id | INTEGER | NOT NULL | Category’s unique identificator  (PRODUCT\_INSTANCE\_STATUS) |
| Additional constraints for table | price\_id REFERENCES product\_region\_price(price\_id) | | Field “price\_id” can include only values that are defined in field “price\_id” of “product\_region\_price” table. |
| domain\_id REFERENCES domain(domain\_id) | | Field “domain\_id” can include only values that are defined in field “domain\_id” of “domain” table. |
| status\_id REFERENCES category(category\_id) | | Field “status\_id” can include only values that are defined in field “category\_id” of “category” table. |

## complaint

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | complain | | |
| Purpose of table | This table contains data about user’s complains | | |
| Primary key | complain\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| complain\_id | SERIAL | PK NOT NULL | Complain’s unique identifier |
| user\_id | INTEGER | NOT NULL | Identifier of user, who created complain |
| product\_instance\_id | INTEGER |  | Identifier of instance, where complain was created (optional) |
| complain\_title | VARCHAR(60) | NOT NULL | Title of complain |
| content | VARCHAR(240) |  | Main text of complain |
| status\_id | INTEGER | NOT NULL | Status of complain |
| responsible\_id | INTEGER |  | Identifier of responsible person |
| response | VARCHAR(240) |  | Text of reponse |
| open\_date | TIMESTAMP |  | Date complain was created |
| close\_date | TIMESTAMP |  | Date complain was answered |
| complain\_reason\_id | INTEGER | NOT NULL | Reason of complain |
| Additional constraints for table | user\_id REFERENCES user(user\_id) | | Field “user\_id” can include only values that are defined in field “user\_id” of “user” table. |
| responsible\_id REFERENCES user(user\_id) | | Field “responsible\_id” can include only values that are defined in field “user\_id” of “user” table. |
| product\_instance\_id REFERENCES product\_instance(instance\_id) | | Field “product\_instance\_id” can include only values that are defined in field “instance\_id” of “product\_instance” table. |
| status\_id REFERENCES category(category\_id) | | Field “status\_id” can include only values that are defined in field “category\_id” of “category” table. |
| complain\_reason\_id REFERENCES category(category\_id) | | Field “complain\_reason\_id” can include only values that are defined in field “category\_id” of “category” table. |

## product\_order

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | product\_order | | |
| Purpose of table | This table contains information about created orders | | |
| Primary key | product\_order\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| product\_order\_id | SERIAL | PK NOT NULL | Order’s unique identifier |
| product\_instance\_id | INTEGER | NOT NULL | Identifer of instance that is going to be changed |
| user\_id | INTEGER | NOT NULL | Identifier of user, who created this order |
| order\_aim\_id | INTEGER | NOT NULL | Aim of this order (operation that is going to be executed) |
| status\_id | INTEGER | NOT NULL | Status of this order |
| responsible\_id | INTEGER |  | Identifier of responsible person |
| open\_date | TIMESTAMP | NOT NULL | Date order was created |
| close\_date | TIMESTAMP |  | Date order was completed or closed |
| Additional constraints for table | user\_id REFERENCES "user"("user\_id") | | Field “user\_id” can include only values that are defined in field “user\_id” of “user” table. |
| responsible\_id REFERENCES user(user\_id) | | Field “responsible\_id” can include only values that are defined in field “user\_id” of “user” table. |
| product\_instance\_id REFERENCES product\_instance(instance\_id) | | Field “product\_instance\_id” can include only values that are defined in field “instance\_id” of “product\_instance” table. |
| order\_aim\_id REFERENCES category(category\_id) | | Field “order\_aim\_id” can include only values that are defined in field “category\_id” of “category” table. |
| status\_id REFERENCES category(category\_id) | | Field “status\_id” can include only values that are defined in field “category\_id” of “category” table. |

## category

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | category | | |
| Purpose of table | This table holds names of entities’ status | | |
| Primary key | category\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| category\_id | SERIAL | PK NOT NULL | Category unique identifier |
| category\_name | VARCHAR(60) | NOT NULL | Category name |
| category\_type\_id | INTEGER | NOT NULL | Type of this category |
| Additional constraints for table | category\_type\_id REFERENCES category\_type(category\_type\_id) | | Field “category\_type\_id ” can include only values that are defined in field “category\_type\_id” of “category\_type” table. |

## category\_type

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | category\_type | | |
| Purpose of table | This table holds data about what type of status category belong to | | |
| Primary key | category\_type\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| category\_type\_id | SERIAL | PK NOT NULL | Category type unique identifier |
| category\_type\_name | VARCHAR(30) | NOT NULL | Category type name |
| Additional constraints for table |  | |  |

## report

|  |  |  |  |
| --- | --- | --- | --- |
| Name of table | report | | |
| Purpose of table | This table contains information for creating reports | | |
| Primary key | report\_id | | |
| Name of field | **Data type and field length** | **Constraints** | **Full description of field** |
| report\_id | SERIAL | PK NOT NULL | Unique identifier of report |
| report\_name | VARCHAR(60) | NOT NULL UNIQUE | Name of the report (must be unique too) |
| report\_description | VARCHAR(240) |  | Report description |
| report\_script | VARCHAR(480) | NOT NULL | Script to create report |
| parameters | JSON |  | Description of report parameters |
| Additional constraints for table |  | |  |