

## a. MySQL

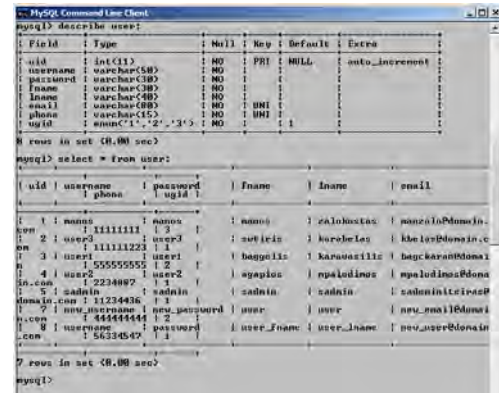
The fundamental element that is essential for the portal operation is the database.

The “webdesa” database consists of three primer tables that correspond to “user”, “product” and “usergroup” and a bridge entity “usergroup”.

### Table user

The “user” table stores 8 columns of data for each user that registers the webdesa portal. The table stores all identity data for users while registering.

uid (user id)  
username  
password  
fname (first name)  
lname (last name)  
email  
phone  
ugid (user-group id)



```
mysql> describe user;
```

Field	Type	Null	Key	Default	Extra
uid	int(11)	NO	PK	NONE	auto_increment
username	varchar(50)	NO			
password	varchar(30)	NO			
fname	varchar(30)	NO			
lname	varchar(30)	NO			
email	varchar(80)	NO			
phone	varchar(15)	NO			
ugid	enum('1','2','3')	NO			

```
8 rows in set (0.00 sec)

mysql> select * from user;
```

uid	username	password	fname	lname	email
1	monas	11111111	monas	zalokostas	monas@monas.in
2	user3	user3	user3	user3	user3@user3.in
3	user1	11111223	user1	baggell	baggell@user1.in
4	user2	55555555	user2	spagius	spagius@user2.in
5	admin	1234567	admin	admin	admin@admin.in
6	new_username	new_password	new_fname	new_lname	new_email@new.in
7	user4	44444444	user4	user4	user4@user4.in
8	user5	55555555	user5	user5	user5@user5.in

```
7 rows in set (0.00 sec)

mysql>
```

**Uid** is the primary key of each user and will generate incremental number for each new entry in the system.

**Ugid** is a enum type entry that simulates 3 distinct group numbers for the users. The enum type was preferred in order to escape mishandled inputs, with a default of 1 that matches a zero (0%) discount to user. The attribute is a foreign key for the “user” entity and a primary key in the “usergroup” entity, and maintains a crucial part while the total cost of a purchase is calculated by the system.

**All other attributes** store data for the identification of users with email and phone constrained as each to be a unique data for all users.

## Table product

The table is the description of the products that are maintained in the webdesa database.

Pid (product id)  
category  
label (type)  
imagepath (image name & extersion)  
description (descriptive text product)  
price  
prodname (product name)

**Pid** is the primary key of the table and is set to auto increment for each new product entry.

**All other attributes** are settled to provide information about the each product.

A thing that is considerably critical to point out for this entity is the fact that the combination of 'label', 'category' and 'imagepath' further simulates the path to the images stored in the file system and placed in the appropriate order will generate paths for the storefront later to generate images of products, in use of PHP scripting.

```
mysql> use webdesa;
Database changed
mysql> show tables;
+-----+
| Tables_in_webdesa |
+-----+
| product            |
+-----+

mysql> describe product;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| pid   | int(11) | NO | PRI | NULL | auto_increment |
| category | varchar(30) | NO | | | |
| label | varchar(50) | NO | | | |
| imagepath | varchar(100) | YES | NULL | | |
| description | text | YES | NULL | | |
| price | double | NO | | | |
| prodname | varchar(50) | NO | | | |
+-----+-----+-----+-----+-----+-----+

mysql> select * from product;
+-----+-----+-----+-----+-----+-----+
| pid | category | label | imagepath | description | price |
+-----+-----+-----+-----+-----+-----+
| 1 | 1 | plakat | plakatporcelain.jpg | economy plaka | 120.35 |
| 2 | 3 | rock | rock.jpg | rock | 224.36 |
| 4 | 1 | granite | granite.jpg | great granite | 401.22 |
| 6 | 1 | plakat | plakatporcelain.jpg | economy plaka | 120.35 |
| 7 | 1 | marble | marble.jpg | good quality | 98.24 |
| 8 | 1 | granite | granite.jpg | great quality | 320.45 |
+-----+-----+-----+-----+-----+-----+
```

## Table usergroup

The table usergroup stores the 3 distinct groups of customer users through which the system can evaluate and calculate their discount on purchase of products.

Ugid (user-group id)  
Ugroupname (user-group name)  
Ugroupdiscount (user-group discount)

**ugid** is the primary key and provides a join for the user table to address the customer discount on purchase.

**ugroupname** labels the name of the group

**ugroupdiscount** provides the actual discount value that is 0% for 'normal' users, 10% for 'premium' and 25% for 'gold' group customers.

```
mysql> describe usergroup;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| ugid  | int(11) | NO | PRI | NULL | auto_increment |
| ugroupname | varchar(30) | NO | | | |
| ugroupdiscount | int(11) | NO | | | |
+-----+-----+-----+-----+-----+-----+

mysql> select * from usergroup;
+-----+-----+-----+
| ugid | ugroupname | ugroupdiscount |
+-----+-----+-----+
| 1 | normal | 0 |
| 2 | premium | 10 |
| 3 | premium | 25 |
+-----+-----+-----+

mysql> describe usercart;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| id     | int(11) | NO | PRI | NULL | auto_increment |
| pid   | int(11) | NO | | | |
| username | varchar(50) | NO | | | |
+-----+-----+-----+-----+-----+-----+

mysql> select * from usercart;
+-----+-----+-----+
| id | pid | username |
+-----+-----+-----+
| 2 | 3 | user2 |
| 3 | 1 | user1 |
| 5 | 4 | user1 |
| 6 | 4 | user1 |
| 2 | 3 | user1 |
| 8 | 3 | user1 |
| 9 | 1 | user1 |
| 11 | 8 | user1 |
| 12 | 9 | user1 |
+-----+-----+-----+
```

## Table usercart

The table is a bridge entity that maintains records for the products that users have added to their basket. Therefore the table stores the product's id, the user's name and generates an id number for each match.

Id (record id)  
Pid (product id)  
Username

**Id** is the primary key of the record. It maintains no special part in the interoperability of the database.

**pid** is the product id

**username** is the name of the user.

In a real life scenario the system should maintain a more robust indicator of the user's uniqueness such as a combination of username and password, or the user's id, while for this case the username is stored since it covers the demonstration for the portal's function.

```
mysql> describe usergroup;
+----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+----+-----+-----+-----+-----+-----+
| ugid | int(11) | NO | PRI |  |  |
| ugroupname | varchar(30) | NO |  |  |  |
| ugroupdiscount | int(11) | NO |  |  |  |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from usergroup;
+----+-----+-----+
| ugid | ugroupname | ugroupdiscount |
+----+-----+-----+
| 1 | normal | 0 |
| 2 | premium | 10 |
| 3 | premium | 25 |
+----+-----+-----+
3 rows in set (0.00 sec)

mysql> describe usercart;
+----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+----+-----+-----+-----+-----+-----+
| id | int(11) | NO | PRI | NULL | auto_increment |
| pid | int(11) | NO |  |  |  |
| username | varchar(50) | NO |  |  |  |
+----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> select * from usercart;
+----+-----+-----+
| id | pid | username |
+----+-----+-----+
| 2 | 3 | user2 |
| 3 | 1 | user1 |
| 5 | 4 | user1 |
| 6 | 4 | user1 |
| 7 | 3 | user1 |
| 8 | 3 | new_username |
| 9 | 1 | new_username |
| 11 | 8 | new_username |
| 12 | 9 | new_username |
+----+-----+-----+
9 rows in set (0.00 sec)

mysql>
```