3. DESIGN SPECIFICATION

3.1 MODULAR DESIGN

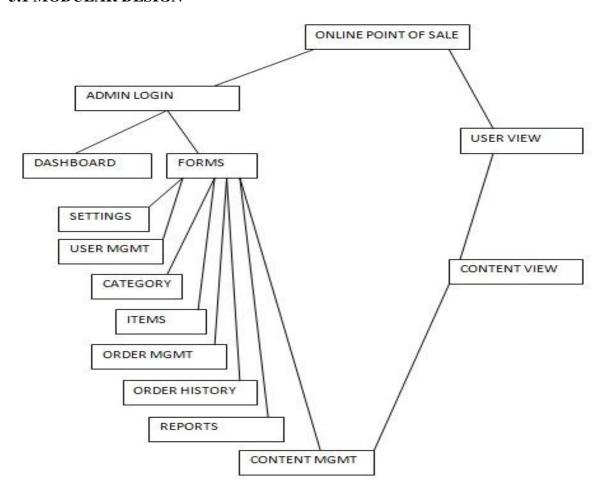


Figure 3.1 Modular diagram of the online point of sale

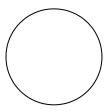
3.2 SYSTEM DESIGN

3.2.1. DATA FLOW DIAGRAM

The data flow diagrams are pictorial or graphical representation of the outline of the system study. The data flow diagram covers all the processes and data storage area which takes place during any transaction in the system. The data flow diagrams are functionally divided into context level, Zero level and First level data flow diagrams.

Symbols used in DFDs

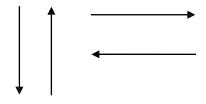
1. **Process:** Here flow of data is transformed. e.g. Purchase of currencies, update inventory file, etc.



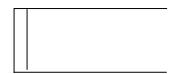
2. **External Entity:** A source or destination of data which is external to the system. E.g.: Public, Dealer etc.



3. A Data Flow: It is packet of data. It may be in the form of document, letter etc.



4. Data store: Any store data but with no reference to the physical method of storing



Constructing a DFD

Exploded into lower level details, they Several rules of thumb are used in drawing DFD:

- 1. Process should be named and numbered for an easy reference. Each name should be representative of the process.
- 2. The direction of flow is from top to bottom and from left to right. Data traditionally flow from source to the destination although they may flow back to the source. One way to indicate this is to draw long flow line back to a source. An alternative way is to repeat the source symbol as a destination. Since it is used more than once in the DFD it is marked with a short diagonal.
- 3. When a process is are numbered.
- 4. The names of data stores and destinations are written in capital letters. Process and dataflow names have the first letter of each work capitalized

A DFD typically shows the minimum contents of data store. Each data store should contain all the data elements that flow in and out.

Questionnaires should contain all the data elements that flow in and out. Missing interfaces redundancies and like is then accounted for often through interviews.

Salient Features of DFD's

- 1. The DFD shows flow of data, not of control loops and decision are controlled considerations do not appear on a DFD.
- 2. The DFD does not indicate the time factor involved in any process whether the dataflow take place daily, weekly, monthly or yearly.
- 3. The sequence of events is not brought out on the DFD.

Types of Data Flow Diagram's

- 1. Current Physical
- 2. Current Logical
- 3. New Logical
- 4. New Physical

CURRENT PHYSICAL:

In Current Physical DFD process label include the name of people or their positions or the names of computer systems that might provide some of the overall system-processing label

includes an identification of the technology used to process the data. Similarly data flows and data stores are often labels with the names of the actual physical media on which data are stored such as file folders, computer files, business forms or computer tapes.

CURRENT LOGICAL:

The physical aspects at the system are removed as much as possible so that the current system is reduced to its essence to the data and the processors that transform them regardless of actual physical form.

NEW LOGICAL:

This is exactly like a current logical model if the user were completely happy with he user were completely happy with the functionality of the current system but had problems with how it was implemented typically through the new logical model will differ from current logical model while having additional functions, absolute function removal and inefficient flows recognized.

NEW PHYSICAL:

The new physical represents only the physical implementation of the new system.

Rules governing the DFD's

PROCESS

- 1) No process can have only outputs.
- 2) No process can have only inputs. If an object has only inputs than it must be a sink.
- 3) A process has a verb phrase label.

DATASTORE

- 1) Data cannot move directly from one data store to another data store, a process must move data.
- 2) Data cannot move directly from an outside source to a data store, a process, which receives, must move data from the source and place the data into data store.
- 3) A data store has a noun phrase label.

SOURCE OR SINK

The origin and/or destination of data.

- 1) Data cannot move direly from a source to sink it must be moved by a process.
- 2) A source and/or sink has a noun phrase land.

DATA FLOW

- 1) A Data Flow has only one direction of flow between symbols. It may flow in both directions between a process and a data store to show a read before an update. The later is usually indicated however by two separate arrows since these happen at different type.
- 2) A join in DFD means that exactly the same data comes from any of two or more different processes data store or sink to a common location.
- 3) A data flow cannot go directly back to the same process it leads. There must be at least one other process that handles the data flow produce some other data flow returns the original data into the beginning process.
- 4) A Data flow to a data store means update (delete or change).
- 5) A data Flow from a data store means retrieve or use.

A data flow has a noun phrase label more than one data flow noun phrase can appear on a single arrow as long as all of the flows on the same arrow move together as one package.

DFD:

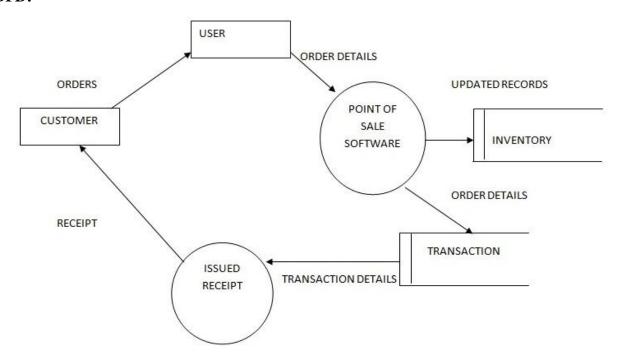


Figure 3.3 Data Flow Diagram Level – 0

3.2.2. E-R DIAGRAM

- A graphical representation of the entities and the relationships between them.
- ➤ Entity relationship diagrams are a useful medium to achieve a common understanding of data among users and application developers.
- In data modeling, an **entity-relationship model** (**ERM**) is a representation of structured data; entity-relationship modeling is the process of generating these models. The end-product of the modeling process is an entity-relationship diagram (ERD), a type of **Conceptual Data Model** or **Semantic Data Model**.

Database Design

Goal of design is to generate a formal specification of the database schema Methodology:

- 1. Use E-R model to get a high-level graphical view of essential components of enterprise and how they are related
- 2. Then convert E-R diagram to SQL DDL, or whatever database model you are using

E-R Model is not SQL based. It's not limited to any particular DBMS. It is a conceptual and semantic model – captures meanings rather than an actual implementation

The E-R Model: The enterprise is viewed as set of

- Entities
- Relationships among entities

Symbols used in E-R Diagram

- Entity rectangle
- Attribute oval
- Relationship diamond
- Link line

Entities and Attributes

Entity: an object that is involved in the enterprise and that be distinguished from other

objects. (Not shown in the ER diagram--is an instance)

Can be person, place, event, object, concept in the real world

Can be physical object or abstraction

Ex: "John", "CSE305"

Entity Type: set of similar objects or a category of entities; they are well defined

A rectangle represents an entity set

Ex: students, courses

We often just say "entity" and mean "entity type"

Attribute: describes one aspect of an entity type; usually [and best when] single valued and indivisible (atomic)

Represented by oval on E-R diagram

Ex: name, maximum enrollment

• May be **multi-valued** – use double oval on E-R diagram

• May be composite – attribute has further structure; also use oval for

composite attribute, with ovals for components connected to it by lines

• May be **derived** – a virtual attribute, one that is computable from existing data

in the database, use dashed oval. This helps reduce redundancy.

Kevs

Super key: an attribute or set of attributes that uniquely identifies an entity--there can be many

of these.

Composite key: a key requiring more than one attribute.

Candidate key: a super key such that no proper subset of its attributes is also a super key

(minimal super key – has no unnecessary attributes)

Primary key: the candidate key chosen to be used for identifying entities and accessing records.

Unless otherwise noted "key" means "primary key"

18

Alternate key: a candidate key not used for primary key

Secondary key: attribute or set of attributes commonly used for accessing records, but not necessarily unique

Foreign key: term used in relational databases (**but not in the E-R model**) for an attribute that is the primary key of another table and is used to establish a relationship with that table where it appears as an attribute also.

So a foreign key value occurs in the table and again in the other table. This conflicts with the idea that a **value** is stored only once; the idea that a **fact** is stored once is not undermined.

ER-DIAGRAM OF ONLINE POINT OF SALE

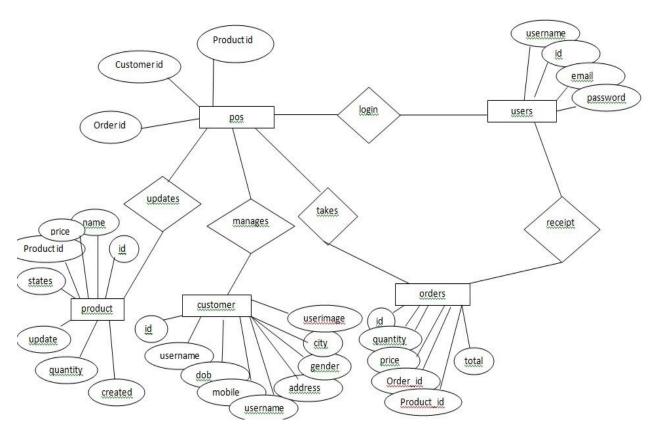


Fig No. 3.2.2.1 ER-Diagram for ONLINE POINT OF SALE

3.2.3 DATA DICTIONARY

Table	Rows	Type	Collation	Size	Overhead
default_banner	2	InnoDB	utf8_general_ci	16 KiB	j i
default_category	11	InnoDB	utf8mb4_unicode_ci	16 KiB	
default_cities	47,577	InnoDB	latin1_swedish_ci	2.5 MiB	
default_countries	246	InnoDB	utf8_general_ci	16 KiB	-
default_files	31	InnoDB	utf8_general_ci	16 KiB	-
default_files_folders	7	InnoDB	utf8_general_ci	16 KiB	-
default_groups	5	InnoDB	utf8_general_ci	16 KiB	-
default_groups_type	3	InnoDB	utf8_general_ci	16 KiB	9 - 2
default_modules	41	InnoDB	utf8_general_ci	16 KiB	i e
default_modules_function_list	19	InnoDB	utf8_general_ci	16 KiB	
default_navigation_groups	1	InnoDB	utf8_general_ci	16 KiB	-
default_navigation_links	5	InnoDB	utf8_general_ci	32 KiB	9
default_order	21	InnoDB	utf8_general_ci	16 KiB	i i
default_order_list	27	InnoDB	utf8_general_ci	16 KiB	
default_pages	1	InnoDB	utf8_general_ci	16 KiB	-
default_permissions	90	InnoDB	utf8_general_ci	16 KiB	9 - 9
default_products	41	InnoDB	utf8mb4_unicode_ci	16 KiB	i e
default_products_categories	43	InnoDB	utf8mb4_unicode_ci	16 KiB	
default_products_images	4	InnoDB	utf8mb4_unicode_ci	16 KiB	-
default_settings	11	InnoDB	utf8_general_ci	16 KiB	
default_states	4,119	InnoDB	latin1_swedish_ci	192 KiB	1
default_testimonial	1	InnoDB	utf8_general_ci	16 KiB	
default_unregister_customer	2	InnoDB	utf8_general_ci	16 KiB	-
default_users	11	InnoDB	utf8_general_ci	16 KiB	j ŝ
default_users_profile	13	InnoDB	utf8_general_ci	48 KiB	Ü
25 tables	52,332	InnoDB	utf8_general_ci	3.1 MiB	0 B

4250017 Print view - phpMyAdmin 46

default_banner

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No	8 10	- 3		
image	int(11)	Yes	NULL	(4)		
sub_image	int(11)	No		**		
url	text	Yes	NULL	¥2		
primary_tag	varchar(100)	No	9 18	9		Ŋ.
secondary_tag	varchar(100)	Yes	NULL			
status	enum('0', '1')	Yes	NULL	***		
page_slug	varchar(100)	No	8 18	- 3		l l
created on	int(11)	Yes	NULL			

Indexe

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	2	A	No	

default_category

Column	Type	Null	Default	Links to	Comments	МІМЕ
id (Primary)	int(11)	No				
meta_title	varchar(200)	No				
meta_keyword	test	No	1 3			
meta_description	text	No				
category_name	varchar(100)	No				
category_slug	varchar(100)	No	3			
type	int(11)	No	1 8			
canonical_url	text	No				
description	test	No				
category_banner_image	int(11)	No	1			
custom_javascript	text	No				
custom_css	test	No				
ordering	int(11)	No				
active	enum('0', '1')	No				
parent_id	int(11)	No				
created_on	int(11)	No				
category_id	int(11)	No	2 3			
category_parent_id	int(11)	No	1			
subcategory id	int(11)	No				

29/2017			Print view - phpMyAdmin 4652			
subcategory_parent_id	int(11)	No		ľ	ľ	Ľ
subsubcategory_id	int(11)	No				1
subsubcategory_parent_id	int(11)	No				1

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	11	A	No	

default_cities

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
паше	varchar(30)	No		66		
state id	int(11)	No	- 8	- 3		

Indexes

name	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
MARY	BTREE	Ves	No	id	48041	A	No	

default_countries

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No			,	
sortname	varchar(3)	No				
name	varchar(150)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
DRIMARY	RTREE	Ves	No	id	246	Δ	No	

default_files

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No	0.00			
folder_id	int(11)	No				
user_id	int(11)	No				
type	varchar(100)	No				
name	varchar(100)	No			9	
filename	varchar(255)	No				
path	text	No				

29/2017			Print view - phpMyAd	min 4652	
description	text	No	18		T-
caption	text	No			
extension	varchar(10)	No			
width	int(11)	No	10-	72	
height	int(11)	No		8	10
filesize	int(11)	No			
alt_attribute	varchar(255)	No	1	7	
date_added	int(11)	No		8	
sort	int(11)	No			

Indexes

			Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	30	A	No	

default_files_folders

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
parent_id	int(11)	No				1
slug	varchar(100)	No		3		
name	varchar(100)	No				1.
class	varchar(100)	No				
location	varchar(100)	No		V2		1
created_on	int(11)	No	3	- 9		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	7	A	No	

default_groups

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
name	varchar(60)	No		Ť		1
description	text	No		7		
type	int(11)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	5	A	No .	

http://127.0.0.1(phpmyedmin/db_deted.ct.php?db=pos8token=481e/89fs465ceefs6529edf860865728gdto=db_structure.ph

default_navigation_groups

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
title	varchar(50)	No	8 3			
abbrev	varchar(50)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	0	A	No	

default_navigation_links

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
title	varchar(100)	No	4		ÿ.	1
parent	int(11)	No	8 3			
link_type	varchar(20)	No				
page_id	int(11)	No				
module	varchar(50)	No	8 3			
url	varchar(255)	No				
uri	varchar(255)	No				
navigation_group_id	int(11)	No				
position	int(11)	No	3			
target	varchar(10)	No				
class	varchar(255)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	5	A	No	
navigation_group_id	BTREE	No	No	navigation_group_id	2	A	No	

default_order

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No		8 3		0 -0
bill_no	varchar(20)	No				
customer_type	enum('1', '2', '3')	No			1 = Registered; 2 = Unregistered; 3 = Non	
customer_id	int(11)	No				

default_groups_type

ale Links Commants MIM

Column	Туре	Null	Default	Links	Comments	MIME
id (Primary)	int(11)	No				
name	varchar(60)	No			Core User, Vendor, Customer (Buyer), Customer (Receiver)	V3 - 3
description	text	No			45	72

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	3	A	No	

default_modules

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No		- 1		3
name	varchar(100)	No				
slug	varchar(100)	No		1		
description	text	No				8
groups	varchar(100)	No				700
version	varchar(20)	No				
parent_id	int(11)	No				
enabled	enum('0', '1')	No		ĝ		3
fucntions	test	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	41	A	No	

${\bf default_modules_function_list}$

Column	Туре	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
function	varchar(50)	No				100

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	19	A	No	50

http://127.0.0.1b/hpmysdminidb_deted.ct.php?db~posStoken=481e089b4b5ceefb6929ad9899b5725gato=db_structure.p

92017			Print view - phpMyAdmin 46.5.2	
tax_amount	varchar(50)	No	31 18	
service_charge	varchar(50)	No		
discount_amount	varchar(50)	No		
delivery_charge	varchar(50)	No		8
grand_total	varchar(50)	No	1 1	
payment_type	enum('CASH', 'CARD', 'PAYTM')	No		
payment_type_ref	varchar(100)	No		
date		No		
time	varchar(20)	No		
created by	int(11)	No		

Indexes

1	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	id	21	A	No	

default_order_list

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No	,,			
order_id	int(11)	No				
product_id	int(11)	No				
price	varchar(50)	No				
qty	int(11)	No				
total	varchar(50)	No				

Indexe

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY				id	25		No	

default_pages

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No		- 2		
title	varchar(255)	No		2		
slug	varchar(255)	No				
class	varchar(255)	No		- 60		
image_id	int(11)	No		- 8		
url	varchar(255)	No				
parent id	int(11)	No				1

90017			Print view - phpMyAdr	nin4652		
content	text	No				
CSS	text	No			- 7	
js	text	No	- 8	S.	- 1	- 8
meta_title	text	No				
meta_keywords	text	No				
meta_description	text	No	-03			
status	enum('0', '1')	No		- E	- 4	- 3
created_on	int(11)	No				
updated_on	int(11)	No				
is home	enum('0', '1')	No	3		A	3

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	0	A	No	

default_permissions

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				de la companya della companya della companya de la companya della
group_id	int(11)	No				
module	varchar(100)	No				
roles	text	No				Į.

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	90	A	No	

default_products

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
name	varchar(255)	No				
sku	varchar(255)	No			-	1
weight	varchar(50)	No				
active	emm('0', '1')	No				
url	varchar(255)	No				
description	text	No			1	
short_description	text	No				
delivery_information	emm('0', '1')	No				
attributes set	int(11)	No	1 1			

DINAU 17		min view - prowy Admin 40:32					
DRIMARY RIPER Van	No	id	4	Δ	No		

default_settings

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No	- 3			Ř.
title	varchar(100)	No				
slug	varchar(100)	No				
description	tent	No		*		
type	set('text', 'password', 'upload', 'textarea', 'dropdown', 'multiselect', 'checkbox', 'radio', 'datetime')	No				
value	text	No				
options	text	No				
is_required	enum('0', '1')	No	1			li .
module	varchar(50)	No				
order	int(11)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	11	A	No	

default_states

Column	Туре	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
name	varchar(30)	No				ž.
country_id	int(11)	No	1			

Indexes

	3 3						2	
Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	4119	A	No	

default_testimonial

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No		191010313122		

9/2017			Print view - phpMyA	dmin4652		
label	int(11)	No	0.0000000000000000000000000000000000000			
vendor_id	int(11)	No				
price	float	No	- 4	9	8	
cost	float	No				_
meta_title	varchar(255)	No			2	
meta_keyword	text	No		10	43.	
meta_description	text	No	- 4			
canonical_url	text	No				_
qty	int(11)	No				
created	int(11)	No				
updated	int(11)	No				_
created_at	int(11)	No				
updated_at	int(11)	No		10	43.	
old_product_id	int(11)	No		- 6	9 -	

Indexes

		2.7					200	177
Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	41	A	No	

default_products_categories

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
product_id	int(11)	No		Ī		
category_id	int(11)	No				

Indexe

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	43	A	No	

default_products_images

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No	- X			
product_id	int(11)	No				
image_id	int(11)	No				
status	int(11)	No	- 1			

status	int(11)	No		18		- 18			3	
Indexes										
Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment		
			720-3 WW.	en=481e0830	SCHOOL STATE	CHANGE OF	1000	THE VIEW OF THE PARTY OF THE PA		

IMAGE IV			Filis view - pripary Auto	mass.	
name	varchar(50)	No	i i	Š.	
image	int(11)	No			
message	tenst	No			
posted_on	int(11)	No			
status	enum('0', '1')	No		27	*

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	0	A	No	

default_unregister_customer

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No				
name	varchar(100)	No				
contact	varchar(20)	No				

Indexes

Ī	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
	PRIMARY	BTREE	Yes	No	id	0	A	No	- 8

default users

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No	. 8			8
group_id	int(11)	No			Į.	99
email	varchar(60)	No				
password	varchar(100)	No	7			
salt	varchar(6)	No	. 8			8
ip_address	varchar(45)	No	500			
active	enum('1', '0')	No	0			
activation_code	text	No	÷27.			100
created_on	int(11)	No				3
last_login	int(11)	No				
usemame	varchar(20)	No				
forgot_password_code	varchar(40)	No	. 8			8
remember_code	varchar(20)	No			Į.	99
is_google	enum('0', '1')	No	0			
is facebook	enum('0', '1')	No	0			

 $160 \times 127 \times 0.016 pp \\ rywdriniolo_ddiad ct.php?d=postoker=481 a089545 cawbch53 ad990365728 gdo=dc_structure.php$

429/2017			Print view - phpMyAdmin 46.5.2	
old_user_id	int(11)	No		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	11	A	No	9

default_users_profile

Column	Type	Null	Default	Links to	Comments	MIME
id (Primary)	int(11)	No		i i		
created	int(11)	No				
updated	int(11)	No				
created_by	int(11)	No	-	22		10
user_id	int(11)	No	8	8		
first_name	varchar(50)	No				
middle_name	varchar(50)	No				
last_name	varchar(50)	No		- 8		
user_image	int(64)	No				
bio	text	No				
dob	date	No				
gender	set('m', 'f', '0')	No				
phone	varchar(20)	No	1	8		
mobile	varchar(20)	No				
country	int(11)	No				
states	int(11)	No	- 6	- 8		
city	int(11)	No			7	
address_line	varchar(255)	No				
postcode	varchar(255)	No				
updated by	int(11)	No	- 6	3		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	13	A	No	
default_users_profile_ibfk_l	BTREE	No	No	user_id	13	A	No	
first_name	FULLTEXT	No	No	first_name	13		No	3
middle_name	FULLTEXT	No	No	middle_name	13	. 8	No	o.
last_name	FULLTEXT	No	No	last_name	13		No	