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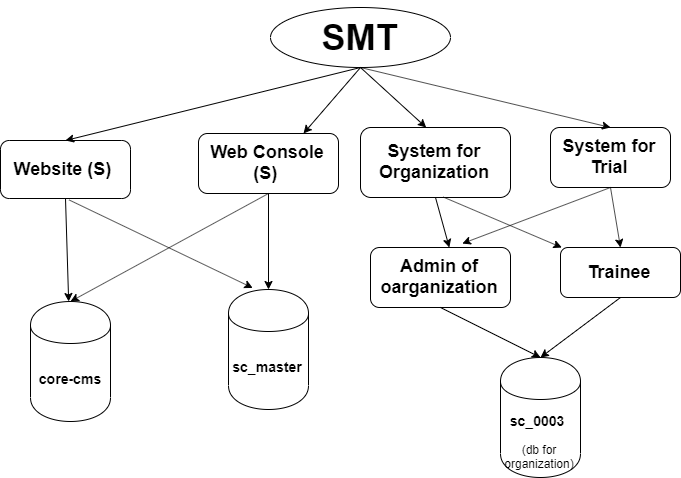
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**RECORD OF CHANGE**

**\*A – Added; M – Modified; D – Deleted:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Changed Items** | **A\* M, D** | **Change Description** | **New Version** |
| 10/01/2013 | All | A | Create New | V1.0 |
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# 1. Overview



**Smart Trainer LMS (Smart Trainer LMS) have 4 System:**

- Website.

- Web console

- System for Organization

- System Trial

Requirement Common;

|  |  |  |  |
| --- | --- | --- | --- |
| Overview | | | |
|  | Requirement | Current | Note and solution |
| Technology | | | |
| OS | Os: Linux | CentOs EC2 (AWS) | ec2 (AWS) |
| Webserver | Apache or Nginx | apache (ec2) | nginx or apache |
| Database | MySQL | MySQL | RDS (AWS) |
| PHP | PHP 7.1 | php 7.1 | NA |
| Cache | Cache storage || Redis (Nullable) | cache storage | Cache Stogare and Elastic cache |
| File | use | local server | S3 (AWS) |
| Send mail | use | http send mail on local server | SNS (AWS) |
|  |  |  |  |
| Laguages | PHP  Laravel 5.3 CI AngularJs(1.5.\*) | PHP  Laravel 5.3 CI AngularJs(1.5.\*) |  |
|  |  |  |  |
| Libraries, third party | PayPal | PayPal |  |
| Route Domain | Manual | Manual | Auto : use Route53 (AWS) |
|  |  |  |  |
| Balance | NULLABLE | No | AWS |
|  |  |  |  |
|  |  |  |  |
| Structure project | | | |
| Website frontend | webroot/website | webroot/website | **NOTE** use : Laravel + Blade db : core-cms, sc\_master |
| web console | webroot/website | webroot/website | use : Laravel + Blade db : core-cms, sc\_master |
| web admin | webroot | webroot | use : Laravel + CI Controller, and Angularjs  db : db sc\_organization + sc\_master |
| web trainee | webroot | webroot | use : Laravel + CI Controller, and Angularjs  db : db sc\_organization + sc\_master |
| trial - admin | webroot/trial | webroot/trial | use : Laravel + CI Controller, and Angulars  db : db sc\_trial + sc\_master |
| trial- trainee | webroot/trial | webroot/trial | use : Laravel + CI Controller, and Angularjs  db : db trial + sc\_master |

# 2. Technical Document.

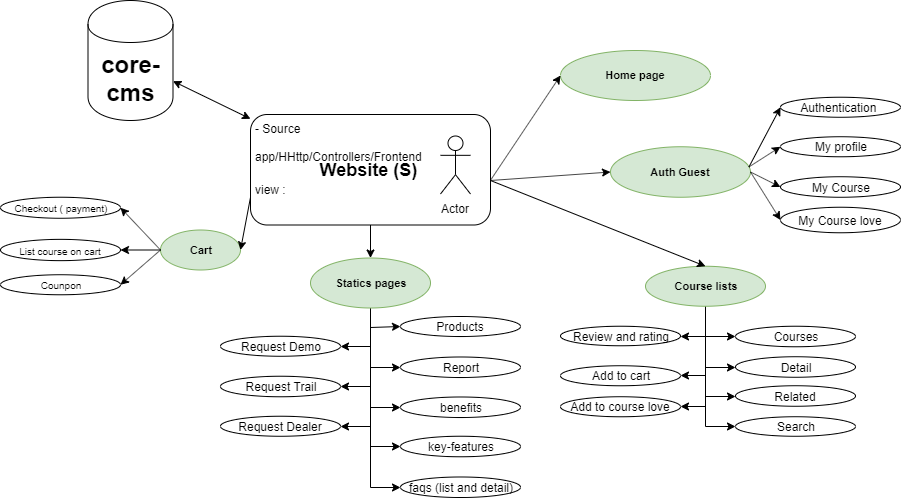
|  |  |
| --- | --- |
| Overview | |
|  | smarttrainerlms is elearning system :  - website - Console system - Admin for Organization  - And Trainee for organization |
| How to install. | |
| Condition | Os CentOs6 ( use EC2) - Webservice: Apache 2.4 - MySQL 5.5 or hieght+ - PHP 7.1 - Git (2.x) - Composer (1.9.1 or hieght+) - NodeJs (8x) |
| Doccument | Doccument install on server **- Install Apache 2.4 for CentOs:**  https://www.digitalocean.com/community/tutorials/how-to-install-the-apache-web-server-on-centos-7 **- Install MySQL for CentOs** https://www.digitalocean.com/community/tutorials/how-to-install-mysql-on-centos-7 https://www.digitalocean.com/community/tutorials/how-to-install-linux-apache-mysql-php-lamp-stack-ubuntu-18-**04 - Install Git for CentOs:** https://www.digitalocean.com/community/tutorials/how-to-install-git-on-centos-7 **- Install Composer** https://www.vultr.com/docs/install-composer-on-centos-7 **- Install NodeJs And npm or yarn** https://www.digitalocean.com/community/tutorials/how-to-set-up-a-node-js-application-for-production-on-centos-7 |
| Checking | - Check and start Apache systemctl status httpd.service systemctl start httpd.service - MySQL systemctl status mysqld.service systemctl status mysqld.service - PHP php -v - Git git --version - Composer composer -v - Node node -v npm -v yarn -v |
| Common | |
| Clone Source | 1. you can clone source project from git on server  and checkout code to branch **"develop"** |
| Database Common | use sc\_master if database not found , must you create database name is **"sc\_master"** and import file sc\_master.sql on MySQL ( use command line on terminal ) |
|  |  |
| Website and Console System | |
| How to config and install | **1. Go to directory is working** - Go to path : cd /path/to/webroot/website- Config .env , if file not found then copy .env.example and rename **.env 2. Next, must you config avariable fllow:** APP\_ENV : is development or production APP\_DEBUG : is true or false **\*, Setting Connection Database MySQL :** - Requirement : a, install MySQL and **mysqld service** is running b, use database name : **core-cms** if database name "core-cms" not found then must you create one database is "core-cms" and after, you can checking database on terminal - Config avariable on file **.env** DB\_CONNECTION=mysql DB\_HOST=127.0.0.1 DB\_PORT=3306 DB\_DATABASE=core-cms DB\_USERNAME=root DB\_PASSWORD=12345678 **\* Cache settings** CACHE\_DRIVER=file SESSION\_DRIVER=file QUEUE\_DRIVER=sync **\* Mail Setting** MAIL\_DRIVER= MAIL\_HOST= MAIL\_PORT= MAIL\_USERNAME= MAIL\_PASSWORD= MAIL\_FROM\_ADDRESS=from@example.com MAIL\_FROM\_NAME=Example |
|  | Run install project PHP ( Laravel 5.3 Framework)  - The first, Run vendor in /path/to/webroot/website,  Run command , composer install  After success, run command : php artisan key:generate ( create key on file .env of project/website |
| Set permission | chmod 755 for /path/to/webroot/website/storage directory |
| Setting vhost | Must you point domain to server and map vhost local us domain **Must you : point vhost to /path/to/webroot/website/public** (Doccument : https://www.digitalocean.com/community/tutorials/how-to-set-up-apache-virtual-hosts-on-ubuntu-16-04) |
| Completed | You can access website http://www.smarttrainerlms.com/ The end |
|  |  |
|  |  |
|  |  |
| Admin and Trainee System | |
| Condition | Go to directory working /path/to/webroot/ |
| Config .env | if .env file not found then you must copy .env.example to .env  **Config Database : - Requirement :** a, install MySQL and mysqld service is running b, use database name : **sc\_master** if database name "**sc\_master**" not found then must you create one database is "**sc\_master**" and after, you can checking dabtabse on terminal **- Config avariable on file .env** DB\_CONNECTION=master DB\_HOST=127.0.0.1 DB\_PORT=3306 DB\_USERNAME=root DB\_PASSWORD=12345678 DB\_DATABASE=sc\_master **Config cache :** CACHE\_DRIVER=file SESSION\_DRIVER=file QUEUE\_DRIVER=sync **Config send mail** MAIL\_DRIVER=smtp MAIL\_HOST=mailtrap.io MAIL\_PORT=2525 MAIL\_USERNAME=null MAIL\_PASSWORD=null MAIL\_ENCRYPTION=null |
| Run project | **How to generate key :** php artisan key:generate **How to generate secret key jwt** php artisan jwt:secret Run vendor composer install |
| Run JS Packages | How to install node\_modules dependency and libariy angularJs npm install (or yarn install ) bower install |
| Permission Directory | sudo chmod -R 0775 storage/framework rm -rf storage/framework/cache/\* |
| Setup vhost | Must you point domain to server and map vhost local us domain **Must you : point vhost to /path/to/webroot/public** (Document : https://www.digitalocean.com/community/tutorials/how-to-set-up-apache-virtual-hosts-on-ubuntu-16-04) |
| Completed | You can access website http://www.demo.smarttrainerlms.com/admin Admin : http://www.demo.smarttrainerlms.com/admin Trainee : http://www.demo.smarttrainerlms.com/trainee The end |

# 3. Work Follow

## 3.1. Module Website

### 3.1.1. Overview.

Work follow of website frontend.

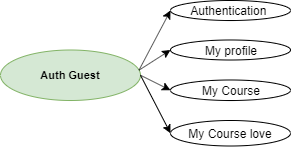


### 3.1.2. Home page.

|  |  |  |  |
| --- | --- | --- | --- |
| Homepage (Modules For Website Frontend) | | | |
| Function Name | Source | Table | Condition and Logic |
| Homepage | Frontend/HomepageController.php | courses industry  posts | Get course on homepage All industry |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | define constant | |
| save file to current save | | use s3 (AWS) | |
|  | |  | |
|  | |  | |

### 3.1.2. Authentication

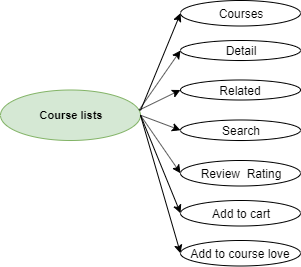
a. Work follow.



|  |  |  |  |
| --- | --- | --- | --- |
| Auth (Modules For Website Frontend) | | | |
| Function Name | Source | Table | Condition and Logic |
| Login | Frontend/RegisterController.php | users | check user and login website |
| Register | Frontend/RegisterController.php | users | - check and save data into users table - send mail |
| Reset pwd | Frontend/RegisterController.php | users | reset pwd send mail |
| My profile | Frontend/RegisterController.php | users | - check and save data into users table |
| Logout | Frontend/RegisterController.php |  | Logout to website |
|  |  |  |  |
| My courses-purchased | Frontend/CoursesPurchasedController,php | users course  transaction course\_review course\_like | Get data from mutiple tables |
| My courses-love | Frontend/CoursesLoveController,php | users course  transaction course\_review course\_like | Get data from mutiple tables |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | define constant | |
| Save file to current save | | Use s3 (AWS) | |
| Coding convention | | Sub function child | |
| Warring performance : queries in for loop (My courses-purchased ) | | Height performance function | |
|  | |  | |
|  | |  | |

### 3.1.3. Courses

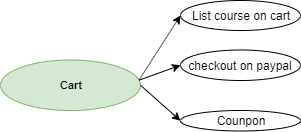
a. Work follow.



|  |  |  |  |
| --- | --- | --- | --- |
| Courses (Modules For Website Frontend) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list | Frontend/CoursesController.php | courses course\_categories | Get data by index page |
| Search | Frontend/CoursesController.php | courses course\_categories | search and filter |
| Detail |  | courses course\_review course\_like transaction users |  |
| Add to love list |  | courses course\_like |  |
| Add to cart |  |  |  |
| Review |  | courses course\_review |  |
| Related |  | courses |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | define constant | |
| Save file to current save | | Use s3 (AWS) | |
| duplicate code : get search and list page | | Common functions | |
| Warning performance queries | | Sub and height performance queries | |
|  | |  | |

### 3.1.4. Cart

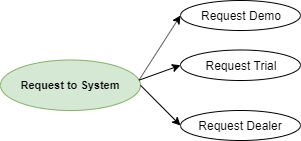
*a. Workfollow*



|  |  |  |  |
| --- | --- | --- | --- |
| Cart (Modules For Website Frontend) | | | |
| Function Name | Source | Table | Condition and Logic |
| My cart | Frontend/CartController.php | dealers |  |
| update | Frontend/CartController.php | use local storage |  |
| remove | Frontend/CartController.php | use local storage |  |
| Checkout to paypal | Frontend/CheckoutController.php | dealers users courses transaction | Get data and save transaction |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Warning coding convention | | Sub child function | |
| Don’t use transaction | | Use | |
|  | |  | |
|  | |  | |

### 3.1.5. Request to System.

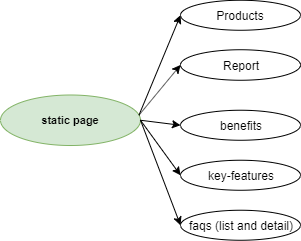
*a. Workfollow.*



|  |  |  |  |
| --- | --- | --- | --- |
| Request\* (Modules For Website Frontend) | | | |
| Function Name | Source | Table | Condition and Logic |
| Request Demo | Frontend/RequestDemosController.php | faq request\_demo | Get faqs Save into request demo |
| Request Trial | Frontend/BecomeDealerController.php | pricing faq dealers sc\_countries users commission industry customers | Get faqs Save into customer |
| Request Dealer | Frontend/BecomeDealerController.php | faq sc\_countries users commission dealers | Get and save data into database |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | Define constant | |
| Warning coding convention | | Sub child function | |
| Duplicate code **faqs** of request demo, trial, dealers | | Common function | |
|  | |  | |
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|  | |  | |

### 3.1.6. Static page

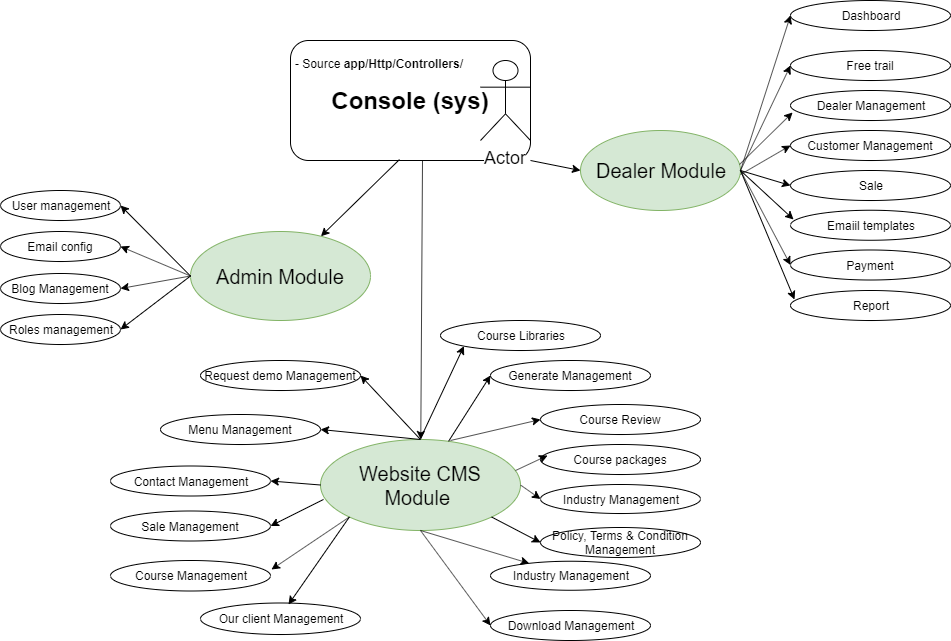
*a. Workfollow.*



|  |  |  |  |
| --- | --- | --- | --- |
| Static pages (Modules For Website Frontend) | | | |
| Function Name | Source | Table | Condition and Logic |
| product page | Frontend/ProductController.php | NA | Static view |
| Report page | Frontend/ReportController.php | NA | Static view |
| Benefits page | Frontend/BenefitController.php | NA | Static view |
| Feature page | Frontend/KeyFeaturesController.php | NA | Static view (key, admin, trainee) |
| Faqs - List | Frontend/FaqsController.php | faqs | Get data paginate and search by keyword |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Duplicate code - Faqs feature - Static pages | | Use common function | |
|  | |  | |

## 3.2. Module Web Console.

### 3.2.1. Overvieww.



This is system manager website and user of LMS

### 3.2.2. Role For Admin.

|  |  |  |  |
| --- | --- | --- | --- |
| Roles (Modules For Admin) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | RolesController.php | roles | Get data |
| Add |  | roles | Get data and insert data |
| Edit |  | roles | Get data and insert data |
| Remove |  | roles | Get and remove item by Id |
|  |  |  |  |
| issue | | solution | |
| Don’t use send mail common functions | | Use common functions | |
| Hard code | | Define constants | |
|  | |  | |

### 3.2.3. User For Admin

|  |  |  |  |
| --- | --- | --- | --- |
| Users (Modules For Admin) | | | |
| FunctionName | Souce | Table | Condition and Logic |
| Get list and filters | Use module : contentManager RolesController.php | roles | Get data |
| Add |  | roles | Get data and insert data |
| Edit |  | roles | Get data and insert data |
| Remove |  | roles | Get and remove item by Id |
|  |  |  |  |
| issue | | solution | |
| Don’t use send mail common functions | | Use common functions | |
| hard code | | Define constants | |

### 3.2.4. Email Configs (Modules For Admin)

|  |  |  |  |
| --- | --- | --- | --- |
| Email config (Modules For Admin) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | EmailConfigController.php | email\_configs | Get data |
| Add |  | email\_configs | Get data and insert data |
| Edit |  | email\_configs | Get data and insert data |
| Remove |  | email\_configs | Get and remove item by Id |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
|  | |  | |
|  | |  | |

### 3.2.5. Blog Manager

|  |  |  |  |
| --- | --- | --- | --- |
| Blogs (Modules For Admin) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | use: contentManager BlogController.php | posts | Get data |
| Add |  | posts | Get data and insert data |
| Edit |  | posts | Get data and insert data |
| Remove |  | posts | Get and remove item by Id |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
|  | |  | |
|  | |  | |

### 3.2.6. Request Demo For Website CMS

|  |  |  |  |
| --- | --- | --- | --- |
| Request Demo (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | RequestDemoController | request\_demo | Get data |
| Add |  | request\_demo | Get data and insert data |
| Edit |  | request\_demo | Get data and insert data  and send mail |
| Remove |  | request\_demo | Get and remove item by Id |
|  |  |  |  |
| issue | | solution | |
| Don’t use common function send mail | | Use | |
| Hard code | | Define constants | |
|  | |  | |

### 3.2.7. Courses Manager (For Website CMS )

|  |  |  |  |
| --- | --- | --- | --- |
| Courses (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | CourseController | courses | Get data |
| add |  | courses | Get data and insert data |
| edit |  | courses | Get data and insert data  and send mail |
| remove |  | courses | Get and remove item by Id |
|  |  |  |  |
| Import Courses |  | courses generate\_course  generate\_modules generate\_quizs | Get content xml file insert data database mutple table |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Coding convention | | Sub child function | |
| Hard code | | Define constants | |
| Duplicate code | |  | |

### 3.2.8. Contact Management ( For Website CMS )

|  |  |  |  |
| --- | --- | --- | --- |
| Contact (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | ContacsController.php | contacts | Get data |
| Add |  | contacts | Get data and insert data |
| Edit |  | request\_demo | Get data and insert data  and send mail |
| Remove |  | contacts | Get and remove item by Id |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Don’t use common function send mail | | Use | |
| Hard code | | Define constants | |
|  | |  | |

### 3.2.9. Pricing Management (For Website CMS)

|  |  |  |  |
| --- | --- | --- | --- |
| Pricing (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | PricingController.php | contacts | Get data |
| Edit |  | contacts | Get data and insert data  and send mail |
|  |  |  |  |
| issue | | solution | |
| Don’t use common function send mail | | use | |
| Hard code | | Define constants | |
|  | |  | |

### 3.2.10. Menu management (For Website CMS)

|  |  |  |  |
| --- | --- | --- | --- |
| Menu (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | use : contentManager modules MenuController | post  post\_meta | Get data |
| Add | use : contentManager modules MenuController | post  post\_meta | Insert data |
| Edit | use : contentManager modules MenuController | post  post\_meta | Get data and insert data |
| Sort | use : contentManager modules MenuController | post  post\_meta |  |
| Remove | use : contentManager modules MenuController | post  post\_meta |  |
|  |  |  |  |
| issue | | solution | |
|  | |  | |

### 3.2.11. Email subcribe ( For website CMS )

|  |  |  |  |
| --- | --- | --- | --- |
| Email Subcribe (Modules For Website CMS) | | | |
| FunctionName | Source | Table | Condition and Logic |
| Get list and filters | use : contentManager modules MenuController | subcribes | Get data and filter by keyword |
| Add |  | subcribes | Insert data |
| Edit |  | subcribes | Get data and insert data |
| Remove |  | subcribes | Remove by Id |
|  |  |  |  |
| issue | | solution | |
|  | |  | |
|  | |  | |

### 3.2.12. Faqs Management ( for website CMS)

|  |  |  |  |
| --- | --- | --- | --- |
| Faqs Manager (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | use : contentManager modules MenuController | faqs | Get data and filter by keyword |
| Add |  | faqs | insert data |
| Edit |  | faqs | get data and insert data |
| Remove |  | faqs | remove by Id |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
|  | |  | |
|  | |  | |

### 3.2.13Industry Manager (Modules For Website CMS)

|  |  |  |  |
| --- | --- | --- | --- |
| Industry Manager (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters |  | industry | Get data and filter by keyword |
| Add |  | industry | Insert data |
| Edit |  | industry | Get data and insert data |
| Remove |  | industry | Remove by Id |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Save file to current save | | use s3 (AWS) | |
|  | |  | |

### 3.2.14. Policy

|  |  |  |  |
| --- | --- | --- | --- |
| Policy, Terms & Conditions Manager (Modules For Website CMS) | | | |
| FunctionName | Source | Table | Condition and Logic |
| Get list and filters | PolicyControlloer.php | policy | Get data and filter by keyword |
| Edit | PolicyControlloer.php | policy | Get data and insert data |
|  |  |  |  |
| issue | | solution | |
|  | |  | |
|  | |  | |

### 3.2.15.Download (Modules For Website CMS)

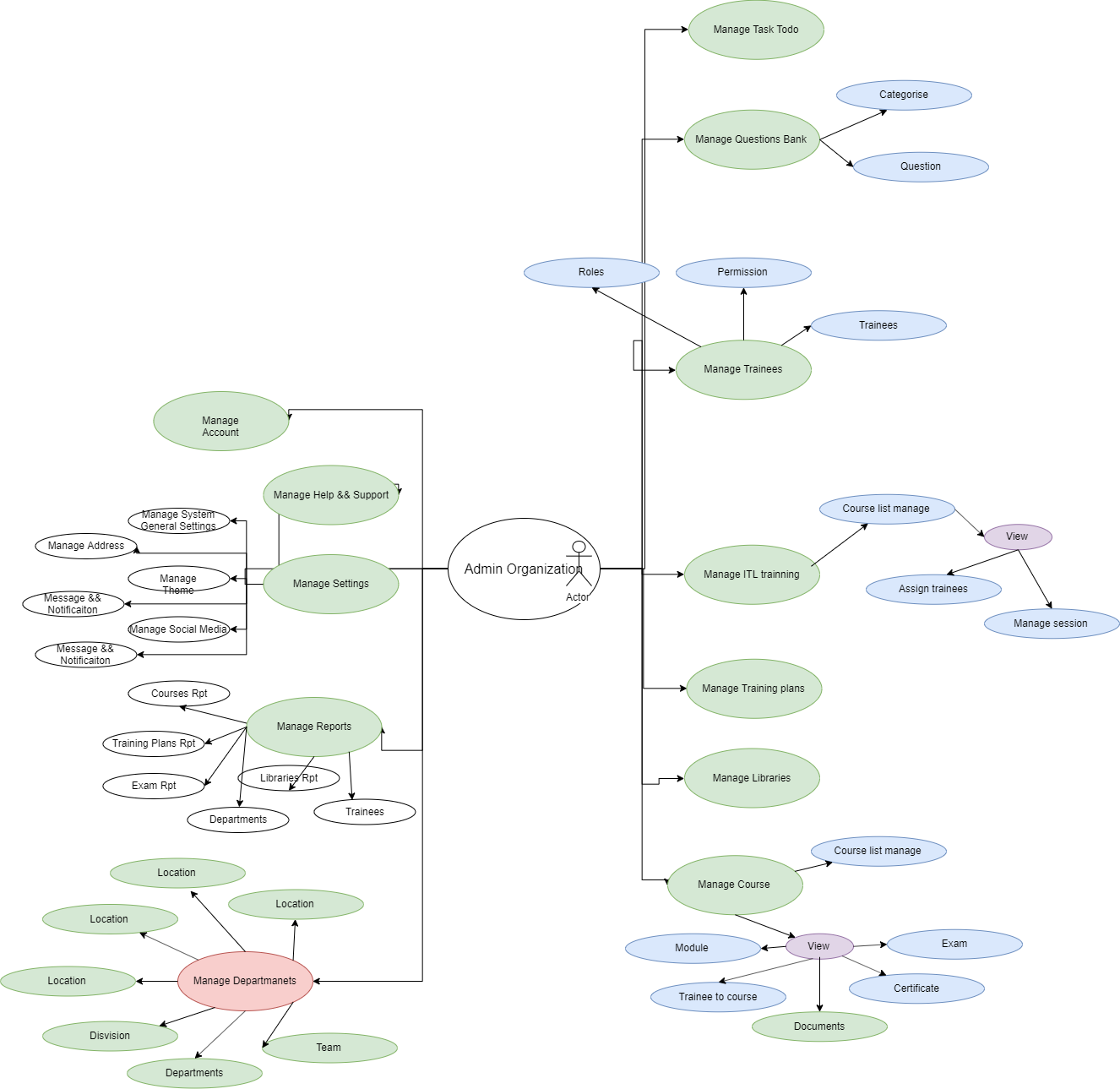
|  |  |  |  |
| --- | --- | --- | --- |
| Download Manager (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | DownloadController.php | download | Get data and filter by keyword |
| add | DownloadController.php | download | insert data |
| edit | DownloadController.php | download | get data and insert data |
| remove | DownloadController.php | download | remove by Id |
| issue | | solution | |
| Hard code | | Define constant | |
| Save file to current save | | use s3 (AWS) | |
|  | |  | |
|  | |  | |

### 3.2.16. Our Clients & Testimonials Manager (Modules For Website CMS)

|  |  |  |  |
| --- | --- | --- | --- |
| Our Clients & Testimonials Manager (Modules For Website CMS) | | | |
| Function Name | Source | Table | Condition and Logic |
| Get list and filters | IndustryController.php | industry | Get data and filter by keyword |
| add | IndustryController.php | industry | Insert data |
| edit | IndustryController.php | industry | Get data and insert data |
| remove | IndustryController.php | industry | Remove by Id |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Save file to current save | | use s3 (AWS) | |
|  | |  | |

## 3.3. System Admin For Organization.

### 3.3.0. Overview

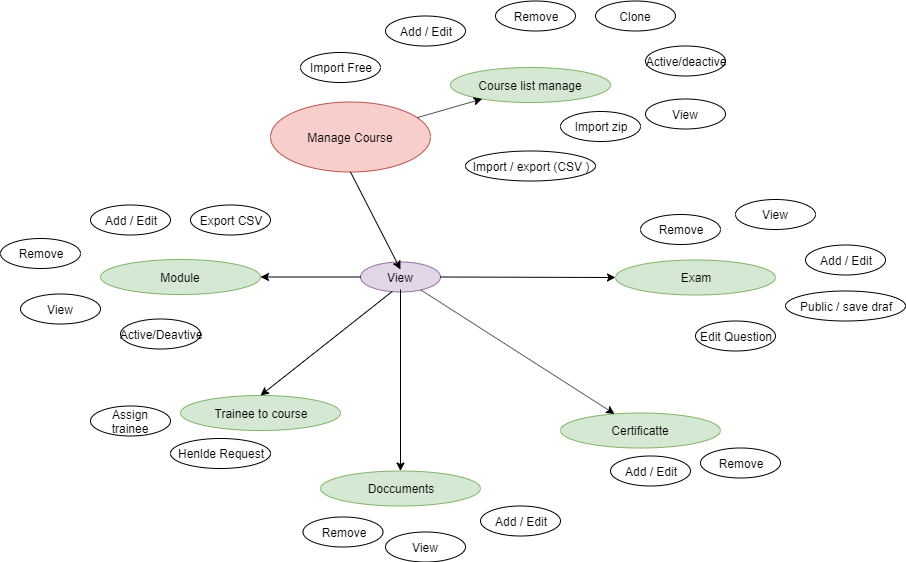


### 3.3.1. Dashboard Manage (Admin System)

|  |  |  |  |
| --- | --- | --- | --- |
| Dashboard Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| List | CI/Admin/Dashboard.php | sc\_courses sc\_users sc\_training\_achs users course\_session custom\_training\_plans sc\_custom\_courses sc\_request\_courses trainee\_reminders assignment reminder request exam sc\_custom\_user\_exam sc\_custom\_courses sc\_custom\_training\_plans | Get data from database returing frontend |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Query in loop | | Hight performance | |
| Duplicate code function, … | | Overwrite common function | |

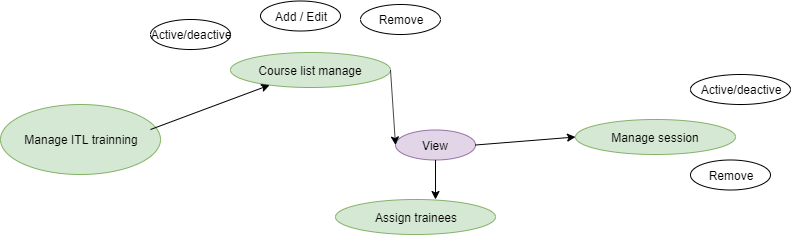
### 3.3.2.. Course Manage (Admin System)

Overview :



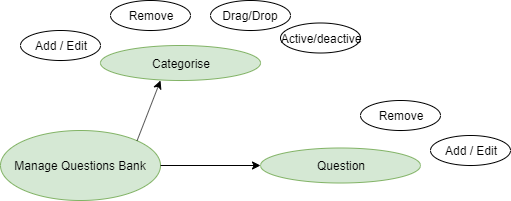
|  |  |  |  |
| --- | --- | --- | --- |
| Course Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| List | CI/Admin/course.php | sc\_courses sc\_users sc\_modules sc\_quiz sc\_department sc\_location module\_training\_plan\_complete sc\_division sc\_state sc\_countries sc\_request\_courses | List and filter from sc\_courses |
| Add/Edit | CI/Admin/course.php | sc\_courses | Insert or update table sc\_courses |
| Active / Deactice | CI/Admin/course.php | sc\_courses |  |
| Request Assign | CI/Admin/course.php | sc\_courses sc\_department sc\_custom\_modules sc\_modules sc\_division sc\_location sc\_state sc\_countries sc\_request\_courses | Update flag delete of table sc\_courses by Id |
| Detail | CI/Admin/course.php | sc\_courses sc\_department sc\_custom\_modules sc\_modules sc\_division sc\_location sc\_state sc\_countries sc\_request\_courses | Get item from table sc\_courses by Id |
| Course modules | CI/Admin/modules.php | sc\_users sc\_modules |  |
| Course modules ADD/EDIT | CI/Admin/modules.php | sc\_users sc\_modules | insert or update table sc\_modules |
| Course modules REEMOVE | CI/Admin/modules.php | sc\_users sc\_modules | Update data into table sc\_modules |
|  |  |  |  |
| issue | | solution | |
| hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
| Duplicate function export data | | Overwrite function library export csv | |
|  | |  | |
|  | |  | |

### 3,3.3. Training plan Manage (Admin System)



|  |  |  |  |
| --- | --- | --- | --- |
| Training plan Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| List | CI/Admin/trainingplan.php | sc\_courses sc\_users sc\_modules sc\_quiz sc\_department sc\_location sc\_division sc\_state sc\_countries sc\_request\_courses | List and filter from sc\_courses |
| Add/Edit | CI/Admin/trainingplan.php | sc\_courses | Insert or update table sc\_courses |
| Active / Deactice | CI/Admin/trainingplan.php | sc\_courses |  |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | define constant | |
| Condting convertion | | overwrite and use small function | |
| Duplicate code | | common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
| Duplicate function export data | | Overwrite function libary export csv | |
| Query in loop | | Hight performance query | |

### 3.3.4. Question Bank Manage (Admin System)



|  |  |  |  |
| --- | --- | --- | --- |
| Question Bank Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| Category Manage | CI/Admin/questionCategory.php | sc\_courses sc\_users sc\_customer\_question\_categories | List and filter from sc\_courses |
| Category Manage Add/Edit | CI/Admin/questionCategory.php | sc\_customer\_question\_categories sc\_custom\_exam\_question\_answer | Insert or update table sc\_courses |
| Category Manage  Active / Deactice | CI/Admin/questionCategory.php | sc\_customer\_question\_categories sc\_custom\_exam\_question\_answer |  |
|  |  |  |  |
| Manage | CI/Admin/question.php | ss\_questions sc\_module sc\_answers | Import data from table question module and answer |
| ADD/EDIT | CI/Admin/question.php | ss\_questions sc\_module sc\_answers | Update questions |
| Remove | CI/Admin/question.php | ss\_questions  sc\_answers | Update questions |
| Imports |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Condting convertion | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
| Duplicate function export data | | Overwrite function library export csv | |
|  | |  | |

### 3.3.5. Users Manage (Admin System)

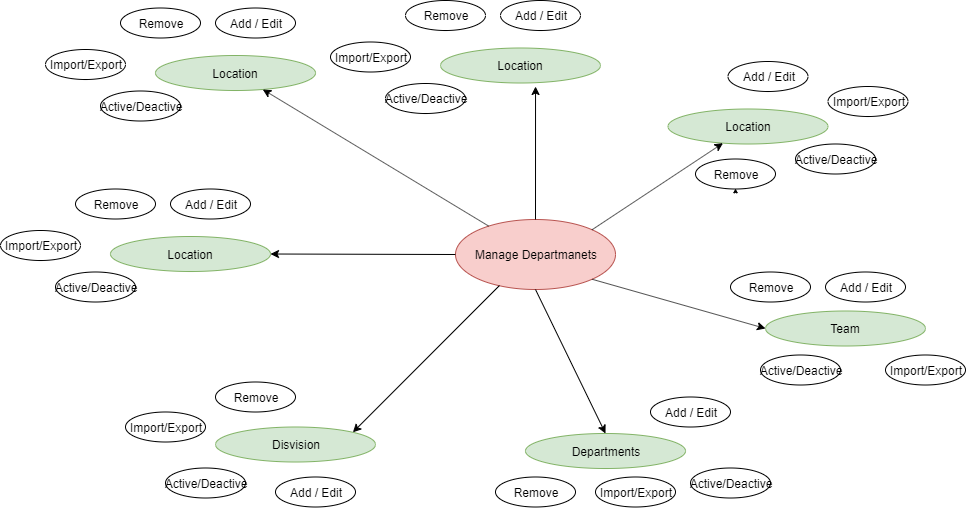
|  |  |  |  |
| --- | --- | --- | --- |
| Users Manage (Admin System) | | | |
| FunctionName | Souce | Table | Condition and Logic |
| User Manage | CI/Admin/users.php | sc\_department sc\_location sc\_roles sc\_countries sc\_state sc\_division sc\_user\_roles sc\_users | Get data from mutiple databases |
| User Manage Add / Edit | CI/Admin/users.php | sc\_department sc\_location sc\_roles sc\_countries sc\_state sc\_division sc\_user\_roles sc\_users | Insert or update table sc\_users and get data from mutiple table |
| User manage Remove | CI/Admin/users.php | sc\_users | Update sc\_users |
| Imports |  |  |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
|  | |  | |

### 3.3.6. Role Manage (Admin System)

|  |  |  |  |
| --- | --- | --- | --- |
| Role Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| Role list | CI/Admin/role.php | sc\_roles\_permissions sc\_user\_roles sc\_users sc\_roles | Get data from multiple databases |
| Add edit | CI/Admin/role.php | sc\_roles\_permissions sc\_user\_roles sc\_users sc\_roles | Insert or update table sc\_roles and get data from mutiple table |
| Remove | CI/Admin/role.php | sc\_roles | Update sc\_roles |
|  |  |  |  |
|  |  |  |  |
| Sync Permission | CI/Admin/permission.php | sc\_role\_permission | Update table |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
|  | |  | |
|  | |  | |

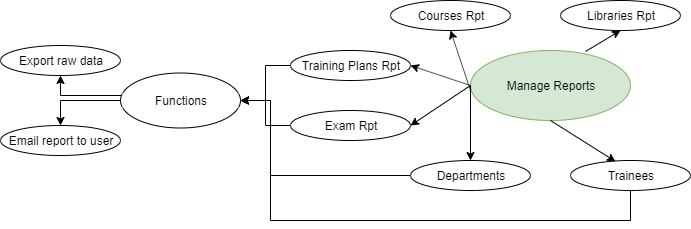
### 3.3.7.Department Manage (Admin System)

Overview work follow



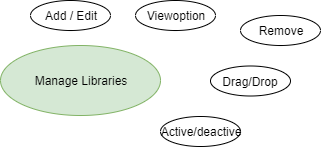
|  |  |  |  |
| --- | --- | --- | --- |
| Department Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| List | CI/Admin/department.php | sc\_department sc\_division sc\_state sc\_countries sc\_location | Get data from multiple databases |
| Add edit | CI/Admin/department.php | sc\_department sc\_division sc\_state sc\_countries sc\_location | Insert or update table sc\_department and get data from mutiple table |
| Remove | CI/Admin/department.php | sc\_department | Update sc\_department |
|  |  |  |  |
|  |  |  |  |
| Sync Permission | CI/Admin/permission.php | sc\_role\_permission | update table |
|  |  |  |  |
| issue | | solution | |
| hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
| Export function duplicate | | Common functions | |
|  | |  | |

### 3.3.8. Report Manage (Admin System)



|  |  |  |  |
| --- | --- | --- | --- |
| Report Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| Library | CI/Admin/library.php | sc\_libraries sc\_departments |  |
| Course | CI/Admin/course.php | sc\_libraries sc\_courses |  |
| Training | CI/Admin/training.php | sc\_courses sc\_users sc\_modules sc\_quiz sc\_department sc\_location sc\_division sc\_state sc\_countries sc\_request\_courses |  |
| Exam && cert | CI/Admin/exam.php | sc\_document sc\_user sc\_certificates sc\_custom\_user\_certificates |  |
| Department | CI/Admin/department.php | sc\_department sc\_location sc\_division sc\_state sc\_countries |  |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
| Warning coding convention validate function | | Overwrite function validate from server | |
| Export function duplicate | | Common functions | |
|  | |  | |
|  | |  | |

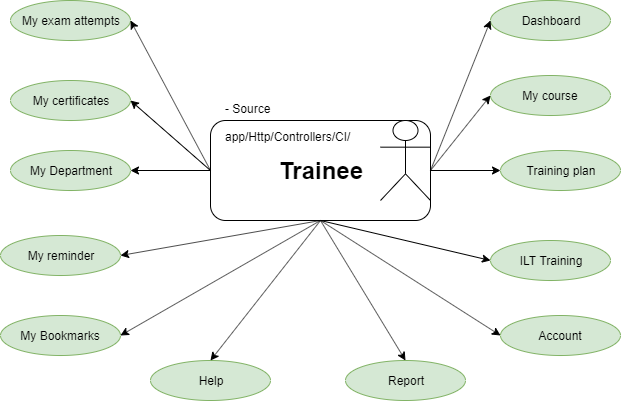
### 3.3.9. Libraries Manager(Admin System)



|  |  |  |  |
| --- | --- | --- | --- |
| Libraries Manage (Admin System) | | | |
| Function Name | Source | Table | Condition and Logic |
| List | CI/Admin/Library.php | sc\_libraries | List and filter from libraries |
| Add/Edit | CI/Admin/Library.php | sc\_libraries | Insert or update table libraries |
| Active / Deactice | CI/Admin/Library.php | sc\_libraries |  |
| Delete | CI/Admin/Library.php | sc\_libraries sc\_departments | Update flag delete of table libraries by Id |
| Detail lib | CI/Admin/Library.php | sc\_libraries | Get item from table libraries by Id |
| Add Library Course | CI/Admin/Library.php | sc\_libraries | insert into table sc\_libraries |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code | | Common functions | |
|  | |  | |

## 3.4. System Trainees For Organization.

### 3.4.1. Overview



### 3.4.2. Trainee - My Course

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My Course | | | |
| FunctionName | Source | Table | Condition and Logic |
| Training course and Filter | CI/Trainee/smartcode.php | sc\_libraries sc\_custom\_courses sc\_request\_courses | Get data from multiple tables |
| Course Requested and Filter | CI/Admin/course.php | sc\_libraries sc\_custom\_courses sc\_request\_courses | Get data from multiple tables |
| All Course and Filter | CI/Admin/training.php | sc\_libraries sc\_custom\_courses sc\_request\_courses | Get data from multiple tables |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code ( function filter, paginate, all\_course, course\_requested, ... | | Common functions; | |
| Warning coding convention validate function | | Overwrite function validate from server | |
|  | |  | |
|  | |  | |

### 3.4.3. Trainee - Training plan

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - Training plan | | | |
| FunctionName | Source | Table | Condition and Logic |
| Remain training plans and Filter | CI/Trainee/trainingplan.php | sc\_libraries sc\_custom\_courses sc\_request\_courses sc\_custom\_training\_plans | Get data from multiple tables |
| Completed training plans and Filter | CI/Trainee/trainingplan.php | sc\_libraries sc\_custom\_courses sc\_request\_courses sc\_custom\_training\_plans | Get data from multiple tables |
| Expried training plans and Filter | CI/Trainee/trainingplan.php | sc\_libraries sc\_custom\_courses sc\_request\_courses sc\_custom\_training\_plans | Get data from multiple tables |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code ( function filter, paginate, all\_course, course\_requested, ... | | Common functions; | |
| Warning coding convention validate function | | Overwrite function validate from server | |
|  | |  | |

### 3.4.4. Trainee - My Exam Attemps

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My ILT Training | | | |
| FunctionName | Souce | Table | Condition and Logic |
| Remain training plans and Filter | CI/Trainee/smartcode.php | sc\_custom\_courses sc\_custom\_user\_exam sc\_custom\_training\_plans | Get data from multiple tables |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
| Duplicate code ( function filter, paginate, all\_course, course\_requested, ... | | Common functions; | |
| Query in loop | | Hight performance | |
|  | |  | |
|  | |  | |

### 3.4.5. Trainee - My Certificate

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My Certificate | | | |
| FunctionName | Souce | Table | Condition and Logic |
| Exam | CI/Trainee/exam.php | sc\_custom\_user\_certificates sc\_request\_courses | Get data from multiple tables |
| Add/Edit | CI/Trainee/exam.php | sc\_custom\_user\_certificates | Insert or Update |
| Remove | CI/Trainee/exam.php | sc\_custom\_user\_certificates | Remove |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
|  | |  | |

### 3.4.6. Trainee - My Department

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My Department | | | |
| FunctionName | Source | Table | Condition and Logic |
| Exam | CI/Trainee/department.php | sc\_department sc\_users sc\_division sc\_location sc\_state sc\_countries | Get data from multiple tables |
| Add/Edit | CI/Trainee/exam.php | sc\_custom\_user\_certificates | Insert or Update |
| Remove | CI/Trainee/exam.php | sc\_custom\_user\_certificates | Remove |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Overwrite and use small function | |
|  | |  | |

### 3.4.7. Trainee - My Reminders

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My Reminders | | | |
| FunctionName | Source | Table | Condition and Logic |
| Get list | CI/Trainee/smartcode.php | sc\_trainee\_reminders sc\_custom\_courses, sc\_request\_courses  sc\_custom\_training\_plans, sc\_request\_courses sc\_custom\_modules | Get data from multiple tables |
| Add/Edit | CI/Trainee/smartcode.php | sc\_trainee\_reminders | Insert or Update |
| Remove | CI/Trainee/smartcode.php | sc\_trainee\_reminders | Remove |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Coding convention | |
| Duplicate function | | Overwrite and use common function | |
|  | |  | |

### 3.4.8. Trainee - My Bookmarks

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My Bookmarks | | | |
| FunctionName | Source | Table | Condition and Logic |
| Get list | CI/Trainee/bookmark.php | sc\_bookmarks sc\_users | Get data from multiple tables |
| Add/Edit | CI/Trainee/bookmark.php | sc\_bookmarks sc\_users | Insert or Update |
| Remove | CI/Trainee/bookmark.php | sc\_bookmarks sc\_users | Remove |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Coding convention | |
| Duplicate function | | Overwrite and use common function | |
|  | |  | |
|  | |  | |

### 3.4.9. Trainee - My Reports

|  |  |  |  |
| --- | --- | --- | --- |
| Trainee - My Reports | | | |
| FunctionName | Source | Table | Condition and Logic |
| My Own Report | CI/Trainee/dashboard.php | sc\_bookmarks sc\_users sc\_request\_courses sc\_custom\_courses sc\_custom\_modules sc\_custom\_user\_exam sc\_certificates | Get data from multiple tables |
| My Department Report | CI/Trainee/dashboard.php | sc\_bookmarks sc\_users sc\_request\_courses sc\_custom\_courses sc\_custom\_modules sc\_custom\_user\_exam sc\_certificates | Get data from multiple tables |
|  |  |  |  |
|  |  |  |  |
| issue | | solution | |
| Hard code | | Define constant | |
| Coding convention | | Coding convention | |
| Duplicate function | | Overwrite and use common function | |
|  | |  | |
|  | |  | |

# 4. DATABASE

## 4.1. Overview

|  |  |  |
| --- | --- | --- |
| **core-cms** | | |
| **No** | **TableName** | **Note** |
| 1 | comments |  |
| 2 | commission |  |
| 3 | contact\_custom |  |
| 4 | contacts |  |
| 5 | course\_categories |  |
| 6 | course\_likes |  |
| 7 | course\_packages |  |
| 8 | course\_reviews |  |
| 9 | courses |  |
| 10 | customers |  |
| 11 | dealers |  |
| 12 | download |  |
| 13 | email\_configs |  |
| 14 | email\_settings |  |
| 15 | email\_short\_codes |  |
| 16 | faq |  |
| 17 | galleries |  |
| 18 | gallery\_images |  |
| 19 | generate\_courses |  |
| 20 | generate\_exam\_answers |  |
| 21 | generate\_exam\_questions |  |
| 22 | generate\_exams |  |
| 23 | generate\_modules |  |
| 24 | generate\_question\_types |  |
| 25 | generate\_quizs |  |
| 26 | get\_touch |  |
| 27 | industry |  |
| 28 | membership\_type |  |
| 29 | migrations |  |
| 30 | options |  |
| 31 | our\_clients |  |
| 32 | password\_resets |  |
| 33 | payments |  |
| 34 | payments\_history |  |
| 35 | post\_meta |  |
| 36 | posts |  |
| 37 | pricing |  |
| 38 | pricing\_register |  |
| 39 | privacy |  |
| 40 | request\_demo |  |
| 41 | roles |  |
| 42 | sc\_countries |  |
| 43 | send\_emails |  |
| 44 | subscribe |  |
| 45 | term\_relationships |  |
| 46 | terms |  |
| 47 | theme\_meta |  |
| 48 | themes |  |
| 49 | transaction |  |
| 50 | type\_customer |  |
| 51 | user\_meta |  |
| 52 | users |  |
| 53 | widget\_groups |  |
| 54 | widgets |  |

|  |  |  |
| --- | --- | --- |
| **sc\_0003 ( sc\_organization)** | | |
| **No** | **TableName** | **Note** |
| 1 | sc\_actions |  |
| 2 | sc\_answers |  |
| 3 | sc\_article |  |
| 4 | sc\_bookmarks |  |
| 5 | sc\_bunit |  |
| 6 | sc\_category |  |
| 7 | sc\_certificates |  |
| 8 | sc\_company\_types |  |
| 9 | sc\_content\_comments |  |
| 10 | sc\_contents |  |
| 11 | sc\_countries |  |
| 12 | sc\_course\_session |  |
| 13 | sc\_courses |  |
| 14 | sc\_custom\_courses |  |
| 15 | sc\_custom\_document |  |
| 16 | sc\_custom\_exam |  |
| 17 | sc\_custom\_exam\_question |  |
| 18 | sc\_custom\_exam\_question\_answer |  |
| 19 | sc\_custom\_modules |  |
| 20 | sc\_custom\_training\_plans |  |
| 21 | sc\_custom\_user\_certificates |  |
| 22 | sc\_custom\_user\_exam |  |
| 23 | sc\_custom\_user\_exam\_question |  |
| 24 | sc\_custom\_user\_exam\_question\_answer |  |
| 25 | sc\_customer\_question\_categories |  |
| 26 | sc\_department |  |
| 27 | sc\_division |  |
| 28 | sc\_email\_template |  |
| 29 | sc\_entities |  |
| 30 | sc\_exam\_attempts |  |
| 31 | sc\_exam\_details |  |
| 32 | sc\_group\_chat |  |
| 33 | sc\_language |  |
| 34 | sc\_language\_nation |  |
| 35 | sc\_last\_seen |  |
| 36 | sc\_libraries |  |
| 37 | sc\_libraries\_custom |  |
| 38 | sc\_location |  |
| 39 | sc\_location\_type |  |
| 40 | sc\_menus |  |
| 41 | sc\_messages |  |
| 42 | sc\_messages\_group |  |
| 43 | sc\_module\_completed |  |
| 44 | sc\_module\_training |  |
| 45 | sc\_module\_training\_plan\_complete |  |
| 46 | sc\_modules |  |
| 47 | sc\_notifications |  |
| 48 | sc\_permissions |  |
| 49 | sc\_plans |  |
| 50 | sc\_question\_type |  |
| 51 | sc\_questions |  |
| 52 | sc\_quiz\_attempts |  |
| 53 | sc\_quizs |  |
| 54 | sc\_recent\_view\_course |  |
| 55 | sc\_recently |  |
| 56 | sc\_region |  |
| 57 | sc\_request\_courses |  |
| 58 | sc\_request\_session |  |
| 59 | sc\_roles |  |
| 60 | sc\_roles\_permissions |  |
| 61 | sc\_send\_email |  |
| 62 | sc\_session |  |
| 63 | sc\_settings |  |
| 64 | sc\_settings\_custom |  |
| 65 | sc\_staff\_activity\_log |  |
| 66 | sc\_staff\_password\_resets |  |
| 67 | sc\_staff\_permissions |  |
| 68 | sc\_staff\_policies |  |
| 69 | sc\_staff\_relations |  |
| 70 | sc\_staff\_roles |  |
| 71 | sc\_staff\_users |  |
| 72 | sc\_state |  |
| 73 | sc\_tags |  |
| 74 | sc\_team |  |
| 75 | sc\_terminology |  |
| 76 | sc\_time\_zones |  |
| 77 | sc\_trainee\_contact |  |
| 78 | sc\_trainee\_notes |  |
| 79 | sc\_trainee\_reminders |  |
| 80 | sc\_training\_achs |  |
| 81 | sc\_training\_contents |  |
| 82 | sc\_training\_courses |  |
| 83 | sc\_training\_exams |  |
| 84 | sc\_training\_lessons |  |
| 85 | sc\_training\_libraries |  |
| 86 | sc\_training\_plans |  |
| 87 | sc\_training\_question\_answers |  |
| 88 | sc\_training\_question\_types |  |
| 89 | sc\_training\_questions |  |
| 90 | sc\_training\_relations |  |
| 91 | sc\_training\_requests |  |
| 92 | sc\_training\_sch\_progress |  |
| 93 | sc\_training\_schedules |  |
| 94 | sc\_user\_activity\_log |  |
| 95 | sc\_user\_roles |  |
| 96 | sc\_users |  |

|  |  |  |
| --- | --- | --- |
| **sc\_master** | | |
| **No** | **TableName** | **Note** |
| 1 | sc\_actions |  |
| 2 | sc\_answers |  |
| 3 | sc\_bookmarks |  |
| 4 | sc\_bunit |  |
| 5 | sc\_certificates |  |
| 6 | sc\_company\_types |  |
| 7 | sc\_content\_comments |  |
| 8 | sc\_contents |  |
| 9 | sc\_countries |  |
| 10 | sc\_course\_session |  |
| 11 | sc\_courses |  |
| 12 | sc\_custom\_courses |  |
| 13 | sc\_custom\_modules |  |
| 14 | sc\_division |  |
| 15 | sc\_domains |  |
| 16 | sc\_email\_template |  |
| 17 | sc\_entities |  |
| 18 | sc\_exam\_attempts |  |
| 19 | sc\_exam\_details |  |
| 20 | sc\_group\_chat |  |
| 21 | sc\_language |  |
| 22 | sc\_last\_seen |  |
| 23 | sc\_libraries |  |
| 24 | sc\_location |  |
| 25 | sc\_menus |  |
| 26 | sc\_messages |  |
| 27 | sc\_migrations |  |
| 28 | sc\_module\_completed |  |
| 29 | sc\_modules |  |
| 30 | sc\_notifications |  |
| 31 | sc\_plans |  |
| 32 | sc\_question\_type |  |
| 33 | sc\_questions |  |
| 34 | sc\_quiz\_attempts |  |
| 35 | sc\_quizs |  |
| 36 | sc\_sample\_users |  |
| 37 | sc\_seeds |  |
| 38 | sc\_settings |  |
| 39 | sc\_staff\_activity\_log |  |
| 40 | sc\_staff\_password\_resets |  |
| 41 | sc\_staff\_permissions |  |
| 42 | sc\_staff\_policies |  |
| 43 | sc\_staff\_relations |  |
| 44 | sc\_staff\_roles |  |
| 45 | sc\_staff\_users |  |
| 46 | sc\_state |  |
| 47 | sc\_time\_zones |  |
| 48 | sc\_trainee\_notes |  |
| 49 | sc\_trainee\_reminders |  |
| 50 | sc\_training\_achs |  |
| 51 | sc\_training\_contents |  |
| 52 | sc\_training\_courses |  |
| 53 | sc\_training\_exams |  |
| 54 | sc\_training\_lessons |  |
| 55 | sc\_training\_libraries |  |
| 56 | sc\_training\_plans |  |
| 57 | sc\_training\_question\_answers |  |
| 58 | sc\_training\_question\_types |  |
| 59 | sc\_training\_questions |  |
| 60 | sc\_training\_relations |  |
| 61 | sc\_training\_requests |  |
| 62 | sc\_training\_sch\_progress |  |
| 63 | sc\_training\_schedules |  |
| 64 | sc\_user\_activity\_log |  |
| 65 | sc\_user\_roles |  |
| 66 | sc\_users |  |

### 4.2. Diagram

Attached files (SMT file )

Open with **draw.io**

# 5. Sercurity

|  |  |  |
| --- | --- | --- |
| Overview Sercurity | | |
|  |  |  |
| Tool scan code | | |
| Use sonarqube scan | Have :  Bug 5,  Vulnerabilities : 1 Code Smells : 1.8k Coverage : <30% Duplications : 20% |  |
|  |  |  |
| Source | | |
| Hard code | lots of files |  |
| Duplicate code | lots of files |  |
| Warning coding convention |  |  |
| Upload file | Function upload file don’t check extension | RegisterController.php Dealers Customers |
| Don’t check XSS |  | Page,feature have form input data. (validate data ) |
| Transaction | Don’t use transactions for multiple action | RequestDemoTrial.php RegisterController.php DealersController.php CustomersController.php ... |
|  |  |  |

# 6. Surmary.

|  |  |  |
| --- | --- | --- |
| Summary | | |
| Function Name | Current / Issue | Solution |
| Source Structure | Model View Controller | **CI:** Service : Logic and common function ValidateRequest |
| Coding convention | Warning | use PRS2  Document : https://www.php-fig.org/psr/psr-2/ |
| Hard Code | Error | define constants |
| Common function | Duplicate code function | Use Common function |
| Validate | Error | - Customize lib validate for CI and use common function validate |
| Customize Authority |  | Use Common function |
|  |  |  |
| Performance | Query in loop | Performance Query by SQL and PHP Insert multiple record, count , groupBy |
| Send mail | use Server send mail | use SES, SQS send mail ( AWS ) |
| Storage | use local server | use S3 ( AWS ) |
| Cache | Don’t use | Use cache Cache file ( extends : memcache , redis or elatiscache ...) |
|  |  |  |
|  |  |  |
| Export/Import | Don’t reuse | use Common Function |
|  |  |  |
| Upgrade database | NA | build function Upgrade version Update migrate multiple database |
|  |  |  |
| Database |  | Use RDS and |
|  |  |  |