1 Installation

SLiMS has several methods of installation. Installing from source code (with manual editing for the database name, username and password); Psenayan installation (portable senayan); and installation using the SLiMS Installer . Here's an explanation of each method of installation. Although the examples used are for the old version, the process is basically the same for subsequent versions of SLiMS.

1.1 Installation of SLiMS from *source*

> *Education is the passport to the future, for tomorrow belongs to those who prepare for it today (Malcolm X)*

Example: Senayan3-stable10 installation.

(Beginning from Stable15 (Matoa) after completion of a Senayan install, the database must be indexed first, in line with the index contained in the Module System)

Make sure your Web server (such as Apache web server), the MySQL database server, and PHP scripting engine are installed and running properly. It will be easier if PhpMyAdmin is also installed as it will greatly assist setting up the database via a web interface. If you are using Windows, it is recommended you use Portable Senayan for Windows (Psenayan), which has proven to be stable and easy for both SLiMS installation and backup (just copy the folder). Installing SLiMS from source is recommended for platforms other than Windows, such as GNU / Linux and Unix platforms, because the conditions are relatively more diverse.

In Unix/Linux, the installation of a Web server (eg Apache), MySQL and PHP can done through the default distro binary packages respectively. Alternatively, the installation of source code will offer flexibility. SLiMS was developed on the platform GNU / Linux (Zenwalk and Ubuntu) and has been tested in production scale across multiple servers based on Centos Linux, Open-SUSE Linux, FreeBSD and Windows.

Basically there is no problem whichever Operating System is used. The important thing is that PHP and MySQL are already both running on the Operating System. If Senayan is used on the internet (public), you are advised to increase security by adding a firewall on the TCP/IP (layer 3 and 4 of the OSI layer) side, on the application side (eg ModSecurity), and in the database (eg GreenSQL:). An implementation tutorial can be found at: `http://hendrowicaksono.multiply.com/journal/item/54`

Figure 1.1: Put the file senayan*.tar.gz file into the web document root

Now, place the source SLiMS web document in the root of your web server that you will use.

For example: I use Ubuntu Linux and install Apache Webserver via the source code. Its web document root is located at /usr/local/apache/htdocs , while in OpenSUSE it's located in /srv/www. If you are using xampplite in Windows, the web document root is usually located in \xampplite\htdocs. Still in Windows, if you install Apache individually (not through an AMP package), a web document root usually is found in "Program Files\apachegroup\apache\htdocs"

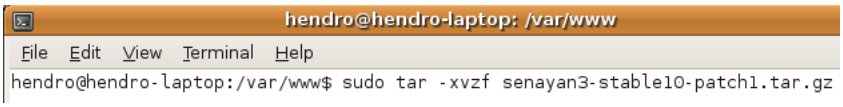

Figure 1.2: Extract file senayan*.tar.gz

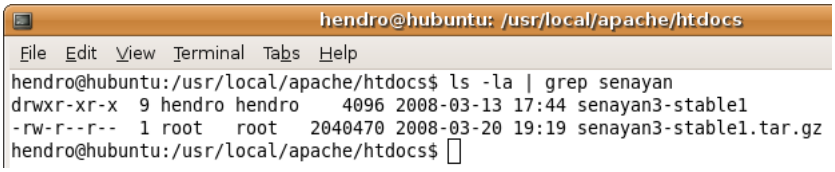

Figure 1.3: Senayan*.tar.gz extract completed

Extract the file senayan3-*.tar.gz in the same directory. In Windows you can use Winzip. On Linux you can use the default Linux tools. For example (I use Ubuntu) by running the command:

```
shell> sudo tar -xvxf senayan3-stable10-patch1.tar.gz
```

it will create a folder/directory named senayan3-stable10

```
hendro@hendro-laptop:/var/www$ cd senayan3-stable10
hendro@hendro-laptop:/var/www/senayan3-stable10$ mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 32
Server version: 5.0.75-0ubuntu10.2 (Ubuntu)

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> CREATE DATABASE senayandb;
Query OK, 1 row affected (0.00 sec)

mysql> quit
Bye
hendro@hendro-laptop:/var/www/senayan3-stable10$
```

Figure 1.4: Creating a database using the MySQL console

Now go to the newly formed folder senayan3-stable10 .

```
shell> cd senayan3-stable10
```

There are two sql files in which we will enter the data for the structure and Senayan application examples. To view them, run the command:

```
shell> ls -la install/*.sql
```

Assuming the user has access allowing them to create a database (eg, root), then create a database with the name “senayandb”:

```
shell> mysql -u root -p
mysql> CREATE DATABASE senayandb;
mysql> SHOW DATABASES;
mysql> quit;
```

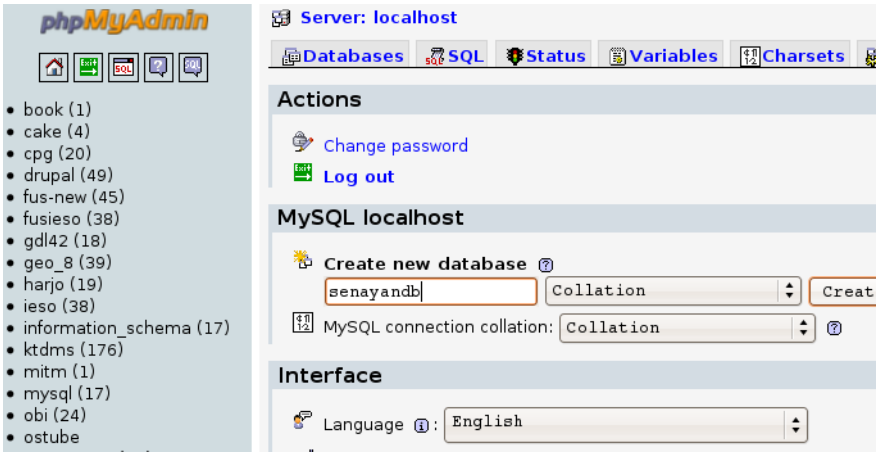

Figure 1.5: Creating a database with the help of phpMyAdmin

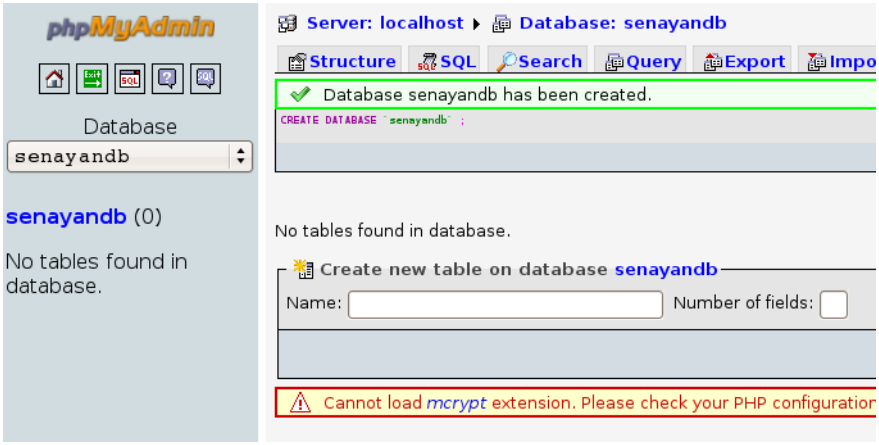

Figure 1.6: Database has been created with the help of phpMyAdmin

```
hendro@hendro-laptop:/var/www/senayan3-stable10$ mysql -u root -p senayandb < install/senayan.sql
Enter password:
hendro@hendro-laptop:/var/www/senayan3-stable10$ mysql -u root -p senayandb < install/sample_data.sql
Enter password:
hendro@hendro-laptop:/var/www/senayan3-stable10$
```

Figure 1.7: Dump the Senayan data to a SQL database via MySQL console

Next create a Senayan data structure and install the sample data.

```
shell> mysql -u root -p senayandb < install/senayan.sql
shell> mysql -u root -p senayandn < install/sample_data.sql
```

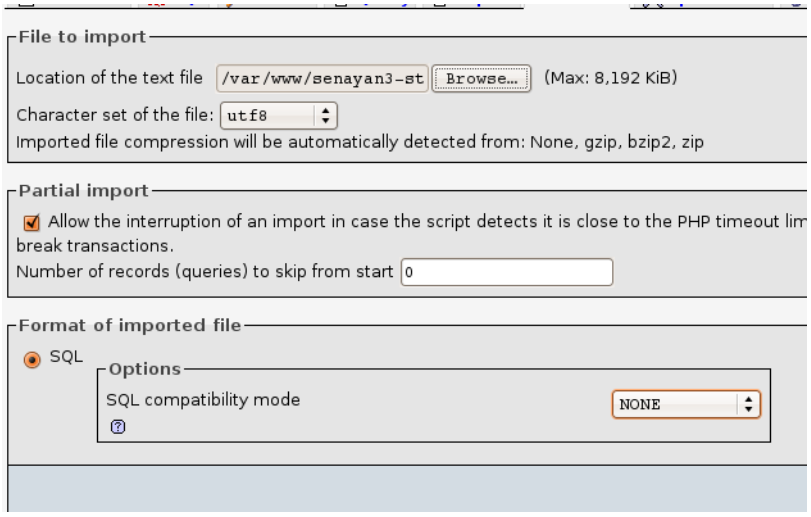

Figure 1.8: Import data.sql with PhpMyAdmin

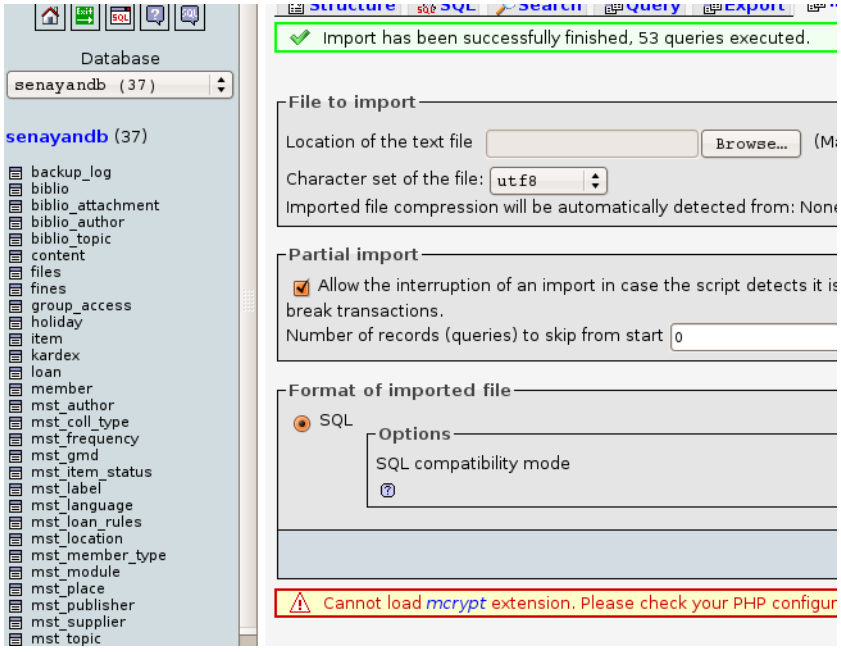

Figure 1.9: Successful import using PhpMyAdmin

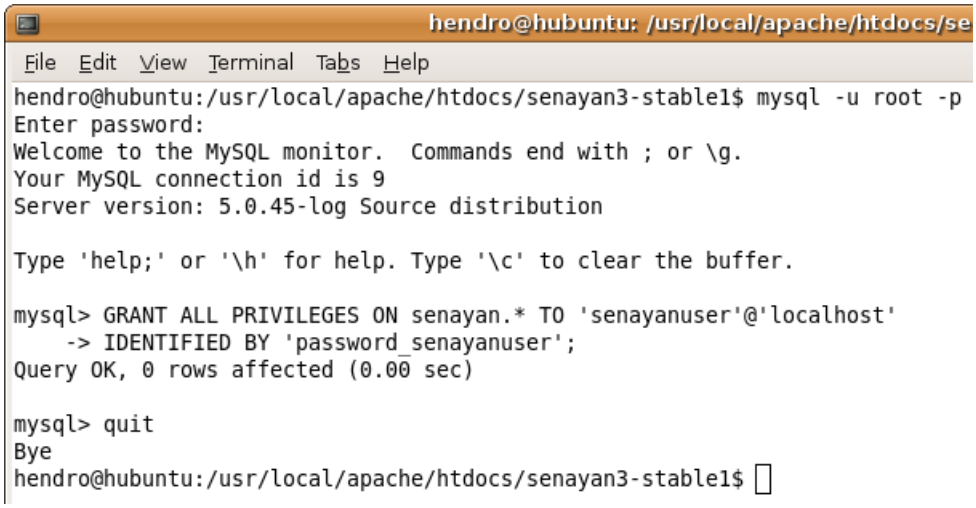

Figure 1.10: Creating a database user via the MySQL console

Optionally, for security reasons, you can create a user specifically for the Senayan database. I run the following command:

```
shell> mysql -u root -p
mysql> GRANT ALL PRIVILEGES ON senayandb.* TO
'senayanuser'@'localhost' IDENTIFIED BY 'password_senayanuser';
```

```
/* LOCAL DATABASE CONNECTION config */
// database constant
// change below setting according to your database
define('DB_NAME', 'senayan');
define('DB_USERNAME', 'senayandb_username');
define('DB_PASSWORD', 'senayandb_password');

// define any other sysconfig variables below
$sysconf['index']['type'] = 'index';
```

Figure 1.11: Configuring a database connection in the file sysconfig.local.inc.php

```
/* LOCAL DATABASE CONNECTION config */
// database constant
// change below setting according to your database
define('DB_NAME', 'senayan');
define('DB_USERNAME', 'senayanuser');
define('DB_PASSWORD', 'password_senayanuser');

// define any other sysconfig variables below
$sysconf['index']['type'] = 'index';
```

Figure 1.12: The configuration database that has been customized

Now edit the sysconfig.local.inc.php [1] file in your favorite editor (eg: notepad, or vim), and change the database connection config. If your database name is different, change the value of the DB_NAME. Likewise with DB_USERNAME and DB_PASSWORD. Save the changes, then close your editor. Beginning from Senayan3-stable15, if you want to install SLiMS you do not need to change the configuration in the file sysconfig.inc.php, but do local database configuration in sysconfig.local.inc.php instead. The location of this file is the same as the location of the file sysconfig.inc.php. In Unix / Linux, the Apache web server must be able to write to the directories holding images and files. This can be done in two ways. Firstly by changing directory permissions so that it can be written (change mode). As root do:

```
shell> chmod -R 777 images
shell> chmod -R 777 files
shell> chmod -R 777 repository
```

A second way is to change the ownership of the user directory (you should first know the user who runs the web server process. For example, user "daemon", nobody, etc.). As root do:

```
shell> chown -R daemon images
shell> chown -R daemon files
shell> chown -R daemon repository
```

[1] Starting from version Matoa, SLiMS uses sysconfic.local.inc.php for local configuration. That is, if there is a change, or a new configuration file sysconfig.local.inc.php, then that will be read by SLiMS first. Or if there are two configurations in files sysconfig.inc.php and sysconfig.local.inc.php and then SLiMS will read sysconfig.local.inc.php first. To add a configuration or change the local configuration, simply add/copy of sysconfig.inc.php only.
For example:
For mysqldump, in sysconfig.inc.php contents: $ sysconf ['mysqldump'] = '/usr/bin/ mysqldump';
copy the line, and paste into sysconfig.local.inc.php then adjust to the local conditions.
For example, so: $ sysconf ['mysqldump'] = '/psenayan/mysql/bin/mysqldump.exe';

Figure 1.13: The Senayan application can now be used

Now try to access the address `http://localhost/senayan3-stable10/`[2]
SLiMS should now be able to be used.

[2]Beginning from Stable 15 (Matoa), to display bibliographic data in the SLiMS OPAC , indexing must be done first. Indexing is in the System module