

## Project Task - Installation of Redmine, you have to setup it on-prem with database:

## Steps to install Redmine on ubuntu:

1. Update server: Open the terminal and run the below command to update the package lists and upgrade the installed packages.

Command:

```
sudo apt update
```

```
sudo apt upgrade -y
```

```
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo apt update
[sudo] password for adityajha:
Hit:1 http://security.ubuntu.com/ubuntu focal-security InRelease
Hit:2 http://us.archive.ubuntu.com/ubuntu focal InRelease
Hit:3 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:4 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
233 packages can be upgraded. Run 'apt list --upgradable' to see them.
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo apt upgrade -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade.... Done
The following NEW packages will be installed:
ubuntu-pro-client-l10n
The following packages will be upgraded:
accountsservice amd64-microcode apparmor apport apport-gtk apt apt-utils avahi-autoipd avahi-daemon
avahi-utls base-files bind9-dnsutils bind9-host bind9-libs bluez bluez-cups bluez-obexd bolt bsdutils
ca-certificates cpp-9 cups cups-browsed cups-bsd cups-client cups-common cups-core-drivers cups-daemon
cups-filters cups-filters-core-drivers cups-ipp-utils cups-ppdc cups-server-common distro-info
distro-info-data dnsmasg-base fdisk firefox fonts-opensymbol fwupd-flwupd-signed gcc-10-base gcc-9-base
ghostscript ghostscript-x gir1.2-accountsservice-1.0 gir1.2-gst-plugins-base-1.0
gir1.2-javascriptcoregtk-4.0 gir1.2-rsvg-2.0 gir1.2-webkit2-4.0 gnome-control-center
gnome-control-center-data gnome-control-center-faces gnome-shell gnome-shell-common gstreamer1.0-alsa
gstreamer1.0-gl gstreamer1.0-plugins-base gstreamer1.0-plugins-base-apps gstreamer1.0-plugins-good
gstreamer1.0-pulseaudio gstreamer1.0-x intel-microcode iptables iptables-ping iptutils tracepath
krb5-locales libaccountsservice0 libapparmor1 libapt-pkg6.0 libatonic1 libavaht-clients1
libavaht-common-data libavaht-common3 libavaht-core7 libavaht-glib1 libblkid1 libbluetooth2 libc-bin
libc6 libc6-dbg libc6p2 libc6p2-bin libc6i-0 libcuc2 libcups2 libcupsfilters1 libcupsimage2
libcurl3-gnutls libdw1 libelf1 libfdtski1 libflac8 libfontencbed1 libfreeptep1 libfwupd2 libfwupdplugln5
libgcc-s1 libglib2.0-0 libglbt2.0-bin libglbt2.0-data libgnutls30 libgomp1 libhogweed1 libgs9
libgs9-common libgssapi-krb5-2 libgststreamer-glib1.0-0 libgststreamer-plugins-base1.0-0
libgststreamer-plugins-good1.0-0 libltp4t2 libltpot2 libjavascriptcoregtk-4.0-18 libkScrypto3
libkathpathase4 libkbrb5-3 libkbrbSupport0 libldap-2.4-2 libldap-common libldb1 libldb1-data libldots2
libmount1 libnssqclientnt2 libncurses6 libncursesw6 libnetplan0 libnghttp2-14 libnss-systemd
libpan-cap libpan-modules libpan-modules-bin libpan-runtime libpan-systemd libpanmp libperl5.30
libpoppler-cpp0v5 libpoppler-glib8 libpoppler9 libprocps8 libpython3.8 libpython3.8-minimal
libpython3.8-stdlib librsysvg-2 librsysvg2-common libsnartcos1 libsnbsclint libsndffile libsonnp-base
libsonnp3 libsqlites3 libssh-4 libssl1.1 libstdc++6 libsystemd0 libsysvndx libtiff5 libtinfo6
libwinbind libuid1 libvpbx libwbcli2 libwebkit2gtk-4.0-37 libwebp6 libwebpdemux2 libwebpmux3
libx11-0 libx11-data libx11-kcb1 libx1n2 libxpnm4 libxtables12 linux-firmware mount ncurses-base
ncurses-bin netplan.0 openssl-client openssl openvpn perl perl-base perl-modules-5.30 poppler-utls
printer-driver-foo2jzs printer-driver-foo2jzs-common printer-driver-splix procs python3-apport
python3-cryptography python3-debian python3-distinfo python3-ldb python3-louis python3-pil
python3-problem-report python3-renderpm python3-reporlab-accel python3-requests
python3-software-properties python3-update-manager python3-urllib3 python3.8 python3.8-minimal rftkill
rsync samba-lsb snapd software-properties-common software-properties-gtk sudo systemd systemd-sysv
```

- ## 2. Set hostname:

Set the hostname by running the below command:

```
sudo hostnamectl set-hostname ex.example.com
```

```
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo hostnamectl set-hostname ex.example.com
```

**sudo nano /etc/hosts**

This command opens the `/etc/hosts` file for editing.

```
GNU nano 4.8 /etc/hosts
127.0.0.1    ex.example.com
127.0.1.1    adityajha-VirtualBox

# The following lines are desirable for IPv6 capable hosts
::1          ip6-localhost ip6-loopback
fe00::0      ip6-localnet
ff00::0      ip6-mcastprefix
ff02::1      ip6-allnodes
ff02::2      ip6-allrouters
```

3. Install Apache Webserver: Run the below command to install Apache Webserver and the Passenger module for Apache, which is used to serve Ruby applications like Redmine.

Command:

**sudo apt install apache2 libapache2-mod-passenger -y**

```
Running hooks in /etc/ca-certificates/update.d...
done.
adityajha@adityajha-VirtualBox:~/Desktop$ sudo apt install apache2 libapache2-mod-passenger -y
[sudo] password for adityajha:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils fonts-lato javascript-common libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap libcurl4 libjs-jquery liblua5.2-0 libruby2.7 passenger rake
  ruby ruby-minitest ruby-net-telnet ruby-power-assert ruby-rack ruby-test-unit ruby-xmllrpc ruby2.7
  rubygems-integration
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom nodejs passenger-doc python rails ri
  ruby-dev bundler
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils fonts-lato javascript-common libapache2-mod-passenger
  libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libcurl4 libjs-jquery liblua5.2-0
  libruby2.7 passenger rake ruby ruby-minitest ruby-net-telnet ruby-power-assert ruby-rack
  ruby-test-unit ruby-xmllrpc ruby2.7 rubygems-integration
0 upgraded, 26 newly installed, 0 to remove and 0 not upgraded.
Need to get 10.6 MB of archives.
After this operation, 46.9 MB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libapr1 amd64 1.6.5-1ubuntu1 [91.4 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libaprutil1 amd64 1.6.1-4ubuntu2.2 [85.1 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libaprutil1-dbd-sqlite3 amd64 2.6.1-4ubuntu2.2 [10.5 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libaprutil1-ldap amd64 1.6.1-4ubuntu2.2 [8.752 B]
Get:5 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libcurl4 amd64 7.68.0-1ubuntu2.21 [235 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu focal/main amd64 liblua5.2-0 amd64 5.2.4-1.1build3 [106 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 apache2-bin amd64 2.4.41-4ubuntu3.15 [1,186 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 apache2-data all 2.4.41-4ubuntu3.15 [159 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 apache2-utils amd64 2.4.41-4ubuntu3.15 [84.1 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 apache2 amd64 2.4.41-4ubuntu3.15 [95.6 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu focal/main amd64 fonts-lato all 2.0-2 [2,698 kB]
Get:12 http://us.archive.ubuntu.com/ubuntu focal/main amd64 javascript-common all 11 [6,066 B]
Get:13 http://us.archive.ubuntu.com/ubuntu focal/main amd64 rubygems-integration all 1.16 [5,092 B]
Get:14 http://us.archive.ubuntu.com/ubuntu focal/main amd64 rake all 13.0.1-4 [61.6 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu focal/main amd64 ruby-minitest all 5.13.0-1 [40.9 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu focal/main amd64 ruby-net-telnet all 0.1.1-2 [12.6 kB]
Get:17 http://us.archive.ubuntu.com/ubuntu focal/main amd64 ruby-power-assert all 1.1.7-1 [11.4 kB]
Get:18 http://us.archive.ubuntu.com/ubuntu focal/main amd64 ruby-test-unit all 3.3.5-1 [73.2 kB]
Get:19 http://us.archive.ubuntu.com/ubuntu focal/main amd64 ruby-xmllrpc all 0.3.0-2 [23.8 kB]
Get:20 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libruby2.7 amd64 2.7.0-5ubuntu1.12 [3,534 kB]
Get:21 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 ruby2.7 amd64 2.7.0-5ubuntu1.12 [95.6 kB]
Get:22 http://us.archive.ubuntu.com/ubuntu focal/main amd64 ruby amd64 1:2.7+1 [5,412 B]
Get:23 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 ruby-rack all 2.0.8-7.2ubuntu0.1 [79.7 kB]
Get:24 http://us.archive.ubuntu.com/ubuntu focal/universe amd64 passenger amd64 5.0.30-1.1ubuntu3 [1,326 kB]
Get:25 http://us.archive.ubuntu.com/ubuntu focal/universe amd64 libapache2-mod-passenger amd64 5.0.30-1.1ubuntu3 [273 kB]
Get:26 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libjs-jquery all 3.3.1-1dfsg-3 [329 kB]
Fetched 10.6 MB in 47s (227 kB/s)
Selecting previously unselected package libapr1:amd64.
(Reading database ... 157148 files and directories currently installed.)
```

4. Install MariaDB Server: The below command will install MariaDB Server, enables it to start on boot, and runs the secure installation script to enhance the database security.

Command:

**sudo apt install mariadb-server mariadb-client -y**

```

Processing triggers for systemd (245.4-4ubuntu3.23) ...
adityajha@adityajha-VirtualBox:~/Desktop$ sudo apt install mariadb-server mariadb-client -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  galera-3 gawk libbaio1 libbcgl-fast-perl libbcgl-pn-perl libconfig-inifiles-perl libdbd-mysql-perl
  libdbi-perl libfcgi-perl libhtml-template-perl libreadline5 libsigsegv2 libsnappy1v5
  libterm-readkey-perl mariadb-client-10.3 mariadb-client-core-10.3 mariadb-common mariadb-server-10.3
  mariadb-server-core-10.3 socat
Suggested packages:
  gawk-doc libclone-perl libldb-perl libnet-daemon-perl libsql-statement-perl libipc-sharedcache-perl
  mailx mariadb-test tinycsa
The following NEW packages will be installed:
  galera-3 gawk libbaio1 libbcgl-fast-perl libbcgl-pn-perl libconfig-inifiles-perl libdbd-mysql-perl
  libdbi-perl libfcgi-perl libhtml-template-perl libreadline5 libsigsegv2 libsnappy1v5
  libterm-readkey-perl mariadb-client mariadb-client-10.3 mariadb-client-core-10.3 mariadb-common
  mariadb-server mariadb-server-10.3 mariadb-server-core-10.3 socat
0 upgraded, 22 newly installed, 0 to remove and 0 not upgraded.
Need to get 20.4 MB of archives.
After this operation, 169 MB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libsigsegv2 amd64 2.12-2 [13.9 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 gawk amd64 1:5.0.1-dfsg-1ubuntu0.1 [415 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-common all 1:10.3.39-0ubuntu0.20.04.2 [16.0 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu focal/universe amd64 galera-3 amd64 25.3.29-1 [898 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libdbi-perl amd64 1.643-1ubuntu0.1 [730 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libconfig-inifiles-perl all 3.000002-1 [40.6 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libbaio1 amd64 0.3.112-5 [7,184 B]
Get:8 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libreadline5 amd64 5.2+dfsg-3build1 [100 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libsnappy1v5 amd64 1.1.8-1build1 [16.7 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-client-core-10.3 amd64 1:10.3.39-0ubuntu0.20.04.2 [5,872 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-client-10.3 amd64 1:10.3.39-0ubuntu0.20.04.2 [1,127 kB]
Get:12 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-server-core-10.3 amd64 1:10.3.39-0ubuntu0.20.04.2 [6,250 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu focal/main amd64 socat amd64 1.7.3.3-2 [323 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-server-10.3 amd64 1:10.3.39-0ubuntu0.20.04.2 [4,202 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libbcgl-pn-perl all 4.46-1 [186 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libfcgi-perl amd64 0.79-1 [33.1 kB]
Get:17 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libbcgl-fast-perl all 1:2.15-1 [10.5 kB]
Get:18 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 libdbd-mysql-perl amd64 4.050-3ubuntu0.2 [83.2 kB]
Get:19 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libhtml-template-perl all 2.97-1 [59.0 kB]
Get:20 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libterm-readkey-perl amd64 2.38-1build1 [24.6 kB]
Get:21 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-client all 1:10.3.39-0ubuntu0.20.04.2 [12.5 kB]
Get:22 http://us.archive.ubuntu.com/ubuntu focal-updates/universe amd64 mariadb-server all 1:10.3.39-0ubuntu0.20.04.2 [12.7 kB]
Fetched 20.4 MB in 42s (483 kB/s)
Preconfiguring packages ...
Selecting previously unselected package libsigsegv2:amd64.
(Reading database ... 16019 files and directories currently installed.)
Preparing to unpack .../libsigsegv2_2.12-2_amd64.deb ...
Unpacking libsigsegv2:amd64 (2.12-2) ...
Setting up libsigsegv2:amd64 (2.12-2) ...
Selecting previously unselected package gawk.
(Reading database ... 160126 files and directories currently installed.)

```

## systemctl enable mariadb mysql\_secure\_installation

```

Processing triggers for libc-bin (2.31-0ubuntu9.14) ...
adityajha@adityajha-VirtualBox:~/Desktop$ systemctl enable mariadb
adityajha@adityajha-VirtualBox:~/Desktop$ mysql_secure_installation

```

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB  
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current  
password for the root user. If you've just installed MariaDB, and  
you haven't set the root password yet, the password will be blank,  
so you should just press enter here.

Enter current password for root (enter for none):

```
adityajha@adityajha-VirtualBox:~/Desktop$ sudo mysql_secure_installation
```

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB  
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current  
password for the root user. If you've just installed MariaDB, and  
you haven't set the root password yet, the password will be blank,  
so you should just press enter here.

Enter current password for root (enter for none):

OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB  
root user without the proper authorisation.

Set root password? [Y/n] Y

New password:

Re-enter new password:

Password updated successfully!

Reloading privilege tables..

... Success!

By default, a MariaDB installation has an anonymous user, allowing anyone  
to log into MariaDB without having to have a user account created for  
them. This is intended only for testing, and to make the installation  
go a bit smoother. You should remove them before moving into a  
production environment.

Remove anonymous users? [Y/n] y

... Success!



## 5. Create a Database for Redmine:

The following command will connect to the MySQL server, create a database named `redminedb`, grant privileges to a user named `redmine` with a specified password, and then flush privileges.

Command:

```
sudo mysql -u root -p  
CREATE DATABASE redminedb CHARACTER SET utf8mb4;  
GRANT ALL PRIVILEGES ON redminedb.* TO  
'redmine'@'localhost' IDENTIFIED BY 'secure-password';  
FLUSH PRIVILEGES;  
exit;
```

```
adityajha@adityajha-VirtualBox:~/Desktop$ sudo mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 53
Server version: 10.3.39-MariaDB-0ubuntu0.20.04.2 Ubuntu 20.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> CREATE DATABASE redminedb CHARACTER SET utf8mb4;
Query OK, 1 row affected (0.015 sec)

MariaDB [(none)]> GRANT ALL PRIVILEGES ON redminedb.* TO 'redmine'@'localhost' IDENTIFIED BY 'secure-password';
Query OK, 0 rows affected (0.003 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]> exit;
Bye
```

## 6. Install and Configure Redmine:

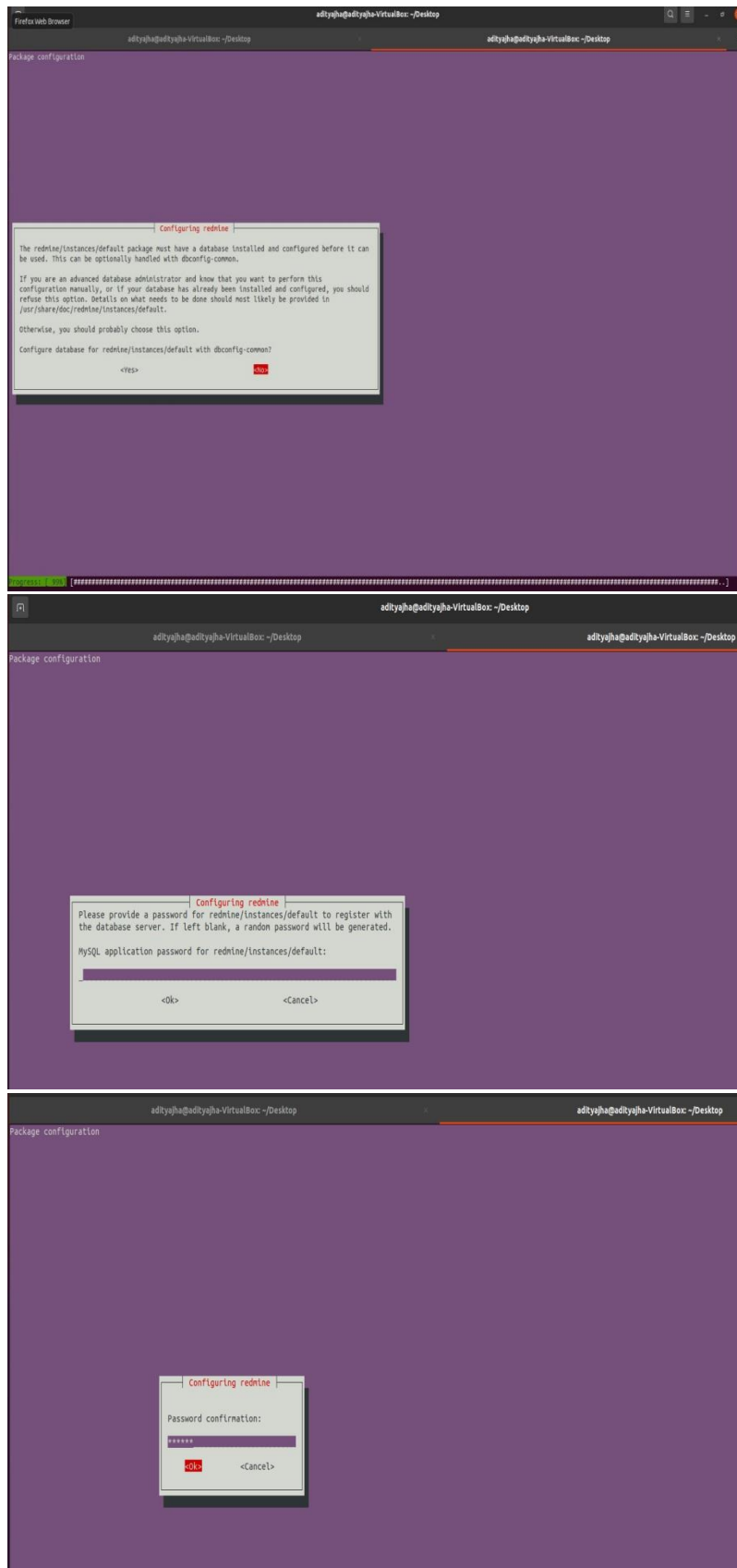
The below command will install Redmine, the MySQL adapter for Redmine, and Bundler (a Ruby gem manager).

Command:

```
sudo apt install redmine redmine-mysql
```

```
adityajha@adityajha-VirtualBox:~/Desktop$ sudo apt install redmine redmine-mysql
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  dbconfig-common dbconfig-mysql gsfontr inagenagick-6-common libfftw3-double3 libjs-chart.js
  libjs-jquery-ui libjs-raphael liblqr-1-0 libmagickcore-6.q16-6 ruby-actioncable ruby-actionmailer
  ruby-actionpack ruby-actionpack-action-caching ruby-actionpack-xml-parser ruby-actionview
  ruby-activejob ruby-activemodel ruby-activerecord ruby-activestorage ruby-activesupport
  ruby-addressable ruby-arel ruby-atomic ruby-builder ruby-bundler ruby-coderay ruby-concurrent
  ruby-crass ruby-css-parser ruby-erubi ruby-eventmachine ruby-globalid ruby-hike ruby-htmlentities
  ruby-tin ruby-jquery-rails ruby-toofah ruby-nail ruby-narcel ruby-method-source ruby-nlme-types
  ruby-nlme-types-data ruby-nlme-types ruby-nlme-types ruby-nlme-types ruby-nlme-types ruby-nlme-types
  ruby-net-http-persistent ruby-net-ldap ruby-nlme ruby-nlme ruby-nlme ruby-nlme ruby-nlme ruby-nlme
  ruby-public-suffix ruby-rack-test ruby-rails ruby-rails-deprecated-sanitizer ruby-rails-dom-testing
  ruby-rails-html-sanitizer ruby-rails-observers ruby-railties ruby-rchdf ruby-rchdf-font
```

Configure Redmine and set the password:



## sudo apt install bundler

```
Setting up ruby-rails (2:5.2.3+dfsg-3) ...
adityajha@adityajha-VirtualBox:~/Desktop$ sudo apt install bundler
[sudo] password for adityajha:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu build-essential dpkg-dev fakeroot g++ g++-9 gcc
  gcc-9 libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libasan5 libbinutils
  libc-dev-bin libc6-dev libcrypt-dev libctf-nobfd0 libctf0 libfakeroot libgcc-9-dev libgmp-dev
  libgmpxx4ldbl libitm1 liblsan0 libquadmath0 libstdc++-9-dev libtsan0 libubsan1 linux-libc-dev make
  manpages-dev ruby-dev ruby2.7-dev ruby2.7-doc
Suggested packages:
  binutils-doc debconf debconf-i18n g++-multilib g++-9-multilib gcc-9-doc gcc-multilib autoconf automake
  libtool flex bison gcc-doc gcc-9-multilib gcc-9-locales glibc-doc gmp-doc libgmp10-doc libmpfr-dev
  libstdc++-9-doc make-doc
The following NEW packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu build-essential bundler dpkg-dev fakeroot g++
  g++-9 gcc gcc-9 libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libasan5
  libbinutils libc-dev-bin libc6-dev libcrypt-dev libctf-nobfd0 libctf0 libfakeroot libgcc-9-dev
  libgmp-dev libgmpxx4ldbl libitm1 liblsan0 libquadmath0 libstdc++-9-dev libtsan0 libubsan1
  linux-libc-dev make manpages-dev ruby-dev ruby2.7-dev ruby2.7-doc
0 upgraded, 37 newly installed, 0 to remove and 0 not upgraded.
Need to get 39.5 MB of archives.
After this operation, 197 MB of additional disk space will be used.
```

## nano /etc/apache2/mods-available/passenger.conf

Add the following line to the passenger.conf file:

**“PassengerDefaultUser www-data”**

It will set the default user for the Passenger module to `www-data`.

```
GNU nano 4.8 /etc/apache2/mods-available/passenger.conf
<IfModule mod_passenger.c>
  PassengerDefaultUser www-data
  PassengerRoot /usr/lib/ruby/vendor_ruby/phusion_passenger/locations.ini
  PassengerDefaultRuby /usr/bin/ruby
</IfModule>
```

**ln -s /usr/share/redmine/public /var/www/html/redmine**  
**touch /usr/share/redmine/Gemfile.lock**  
**chown www-data:www-data /usr/share/redmine/Gemfile.lock**  
**chown -R www-data:www-data /var/www/html/redmine**  
this will create a symbolic link, creates a 'Gemfile.lock' file, and sets ownership for Redmine

```
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo nano /etc/apache2/mods-available/passenger.conf
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo nano /etc/apache2/mods-available/passenger.conf
adityajha@adityajha-VirtualBox: ~/Desktop$ ln -s /usr/share/redmine/public /var/www/html/redmine
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo ln -s /usr/share/redmine/public /var/www/html/redmine
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo touch /usr/share/redmine/Gemfile.lock
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo chown www-data:www-data /usr/share/redmine/Gemfile.lock
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo chown -R www-data:www-data /var/www/html/redmine
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo chown -R www-data:www-data /var/www/html/redmine
```

## 7. Configure Apache for Redmine:

The following command will open the Apache configuration file for Redmine.

Command:

**sudo nano /etc/apache2/sites-available/redmine.conf**

```
adityajha@adityajha-VirtualBox: ~/Desktop$ sudo nano /etc/apache2/sites-available/redmine.conf
```

Add the below text to the file, this will configure Apache to serve Redmine at the specified server and URL path.

**<VirtualHost \*:80>**

**ServerAdmin admin@example.com**

**DocumentRoot /var/www/html/redmine**

**ServerName ex.example.com**

**<Directory /var/www/html/redmine>**

**RailsBaseURI /redmine**

**PassengerResolveSymlinksInDocumentRoot on**

**</Directory>**

**ErrorLog \${APACHE\_LOG\_DIR}/error.log**

**CustomLog \${APACHE\_LOG\_DIR}/access.log combined**

**</VirtualHost>**

```
GNU nano 4.8 /etc/apache2/sites-available/redmine.conf
<VirtualHost *:80>
  ServerAdmin admin@example.com
  DocumentRoot /var/www/html/redmine
  ServerName ex.example.com
  <Directory /var/www/html/redmine>
    RailsBaseURI /redmine
    PassengerResolveSymlinksInDocumentRoot on
  </Directory>
  ErrorLog ${APACHE_LOG_DIR}/error.log
  CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

## 8. Enable Redmine site in Apache:

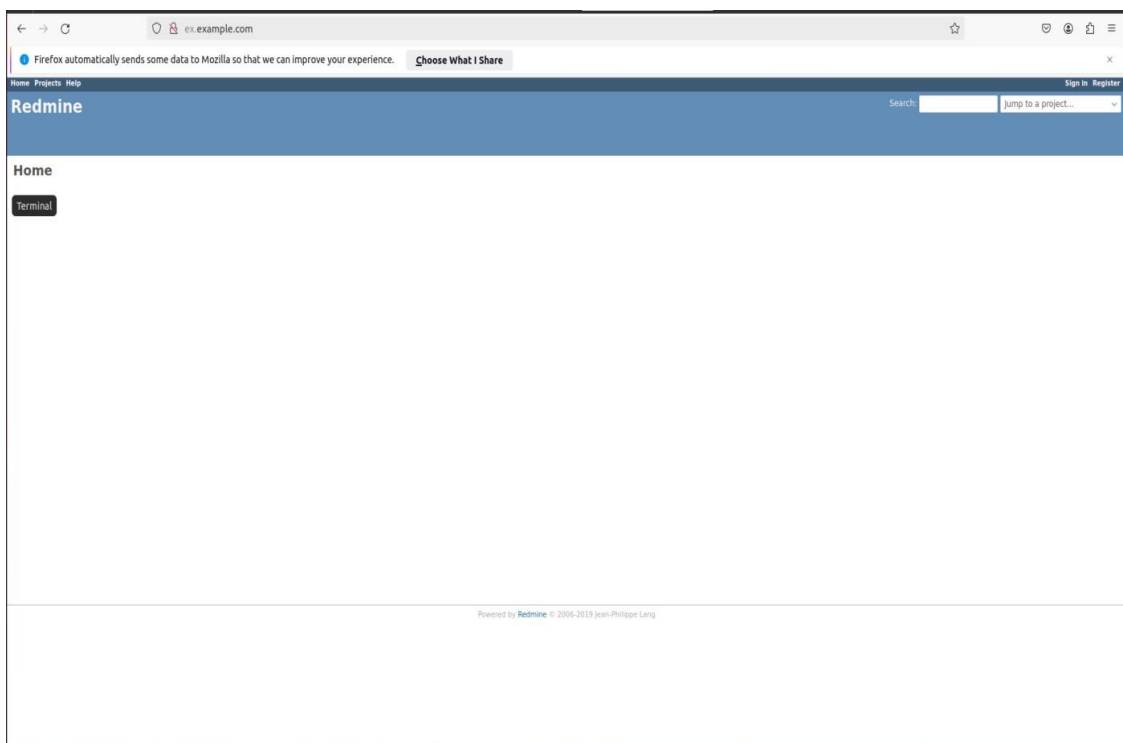
The below command will enable the Redmine site in Apache and restarts Apache to apply the changes.

Command:

```
sudo a2ensite redmine.conf  
systemctl restart apache2
```

```
adityajha@adityajha-VirtualBox:~/Desktop$ sudo a2ensite redmine.conf
Enabling site redmine.
To activate the new configuration, you need to run:
  systemctl reload apache2
adityajha@adityajha-VirtualBox:~/Desktop$ systemctl restart apache2
```

Now, access the Redmine web interface with “ex.example.com”





Login details:

Login:- admin

Password:- admin

This is temporary set the password after it. This will expire after one time login

The screenshot shows the Redmine web interface in a browser window. The address bar displays 'ex.example.com/my/password'. A Firefox notification says 'Firefox automatically sends some data to example.com'. A modal dialog titled 'Save password for example.com?' is open, showing 'Username: admin' and 'Password: \*\*\*\*\*' with a 'Show password' checkbox. The main page has a blue header with 'Redmine' and navigation links. A red message bar states: 'Your password has expired or the administrator requires you to change it.' Below this is the 'Change password' section with fields for 'Password', 'New password', and 'Confirmation'. The 'New password' field has a note: 'Must be at least 8 characters long.' An 'Apply' button is at the bottom left. A security warning at the bottom center says: 'This connection is not secure. Logins entered here could be compromised. Learn More'. The footer indicates 'Powered by Redmine © 2006-2019 Jean-Philippe Lang'.

The My account page: Set the details accordingly and save.

Redmine

Home My page Projects Administration Help

Logged in as admin My account Sign out

Search Jump to a project...

✓ Password was successfully updated.

**My account** [Emails](#) [Change password](#)

**Information**

First name \*

Last name \*

Email \*

Language

**Email notifications**

For any event on all my projects

☒ I don't want to be notified of changes that I make myself

**Preferences**

Hide my email address ☒

Time zone

Display comments

Warn me when leaving a page with unsaved text ☒

Font used for text areas

My account

Login: admin

Created: 02/09/2024 04:27 AM

Atom access key

Missing a Atom access key ([Reset](#))

Powered by Redmine © 2006-2023 Jean-Pierre Lang

Now, to setup a demo project with users and some demo data:

Step 1: Create Project

- Go to the "Projects" tab.
- Click on "New project."
- Fill in the project details:
  - Name: Software Development Project
  - Identifier: software-development
  - Description: This is a demo software development project.
  - Status: Active

Then, click on "Create"

Redmine

Home My page Projects Administration Help

Logged in as admin My account Sign out

Search Jump to a project...

Projects Activity Issues Spent time Gantt Calendar News

**New project**

Name \*

Description

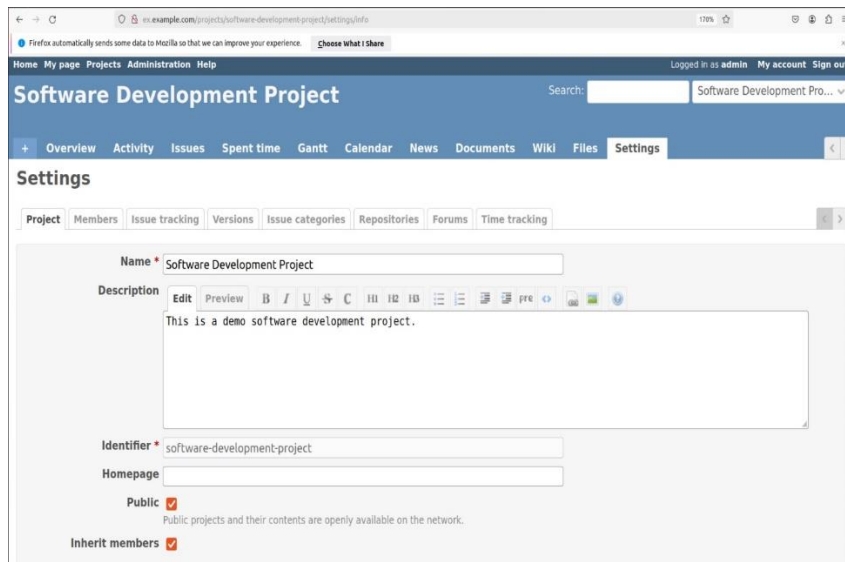
Identifier \*

Homepage

Public ☒

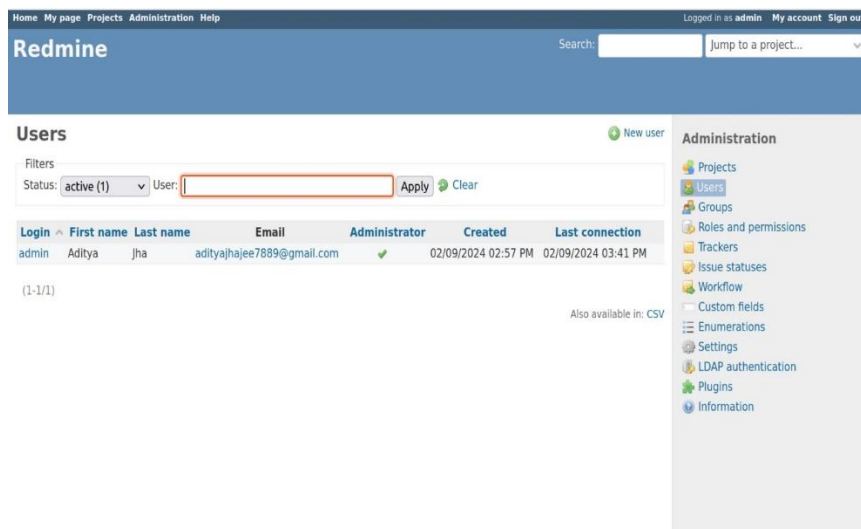
Inherit members ☐

Project Task



## Step 2: Create Users

- Go to the "Administration" tab.
- Click on "Users."
- Click on "New user".



- Add two users:
  - User 1:
    - Login: user1
    - Password: password1
    - First Name: John
    - Last Name: Doe
    - Mail: [john.doe@example.com](mailto:john.doe@example.com)

Click on “Create and continue”

Firefox automatically sends some data to Mozilla so that we can improve your experience. [Choose what I share](#)

## Users » New user

**Information**

Login \*

First name \*

Last name \*

Email \*

Language

Administrator ☐

**Authentication**

Password \*

Must be at least 8 characters long.

Confirmation \*

Generate password ☐

Must change password at next login ☒

**Email notifications**

Only for things I watch or I'm involved in

☒ I don't want to be notified of changes that I make myself

**Preferences**

Hide my email address ☒

Time zone

Display comments

Warn me when leaving a page with unsaved text ☒

Font used for text areas

[Create](#) [Create and continue](#)

**Administration**

- Projects
- Users**
- Groups
- Roles and permissions
- Trackers
- Issue statuses
- Workflow
- Custom fields
- Enumerations
- Settings
- LDAP authentication
- Plugins
- Information

-User 2:

- Login: user2
- Password: password2
- First Name: Jane
- Last Name: Smith
- Mail: [jane.smith@example.com](mailto:jane.smith@example.com)

Firefox automatically sends some data to Mozilla so that we can improve your experience. [Choose what I share](#)

✓ User user1 created.

## Users » New user

**Information**

Login \*

First name \*

Last name \*

Email \*

Language

Administrator ☐

**Authentication**

Password \*

Must be at least 8 characters long.

Confirmation \*

Generate password ☐

Must change password at next login ☒

**Email notifications**

Only for things I watch or I'm involved in

☒ I don't want to be notified of changes that I make myself

**Preferences**

Hide my email address ☒

Time zone

Display comments

Warn me when leaving a page with unsaved text ☒

Font used for text areas

[Create](#) [Create and continue](#)

**Administration**

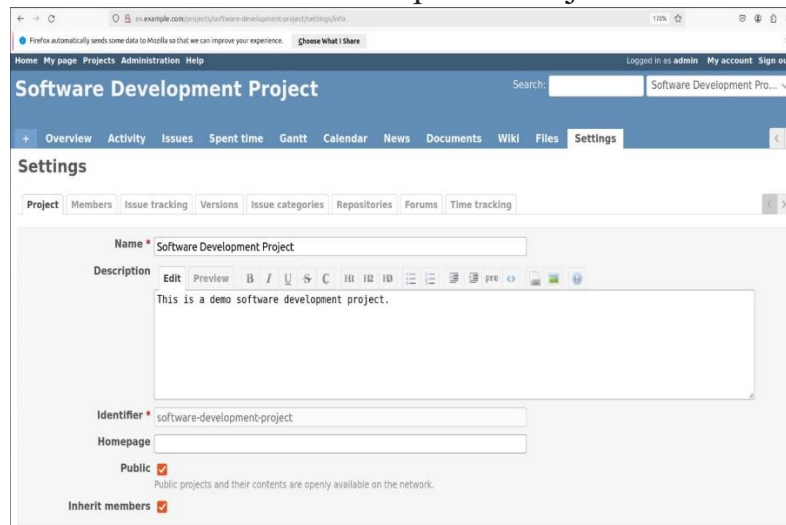
- Projects
- Users**
- Groups
- Roles and permissions
- Trackers
- Issue statuses
- Workflow
- Custom fields
- Enumerations
- Settings
- LDAP authentication
- Plugins
- Information

Make sure to check "Must change password" for both users.

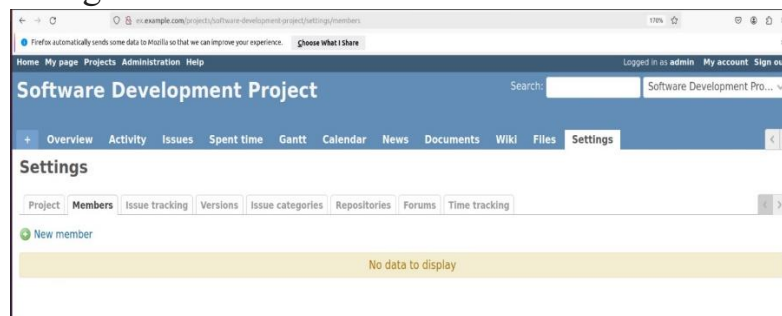


Step 3: Assign users to the project:

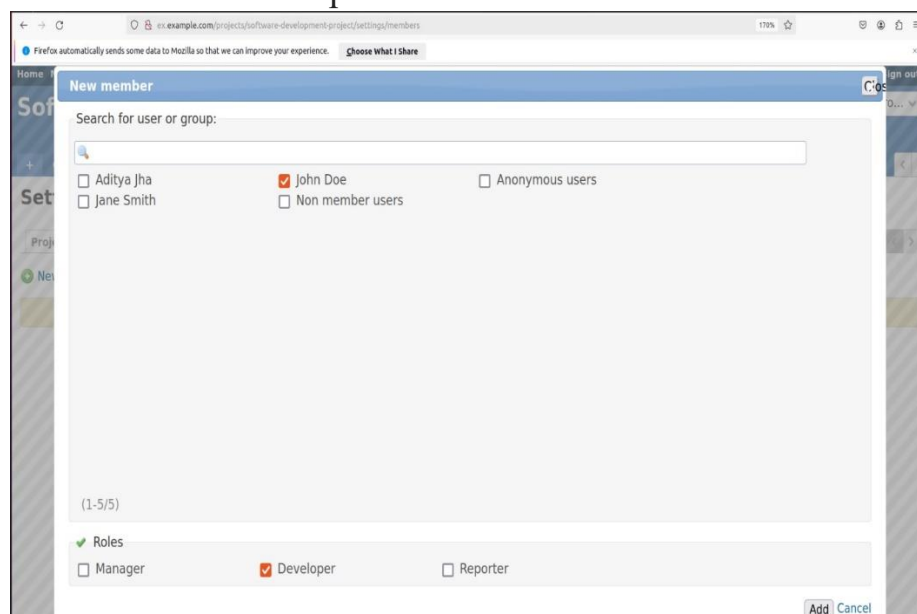
- Go back to the "Projects" tab.
- Click on "Software Development Project."

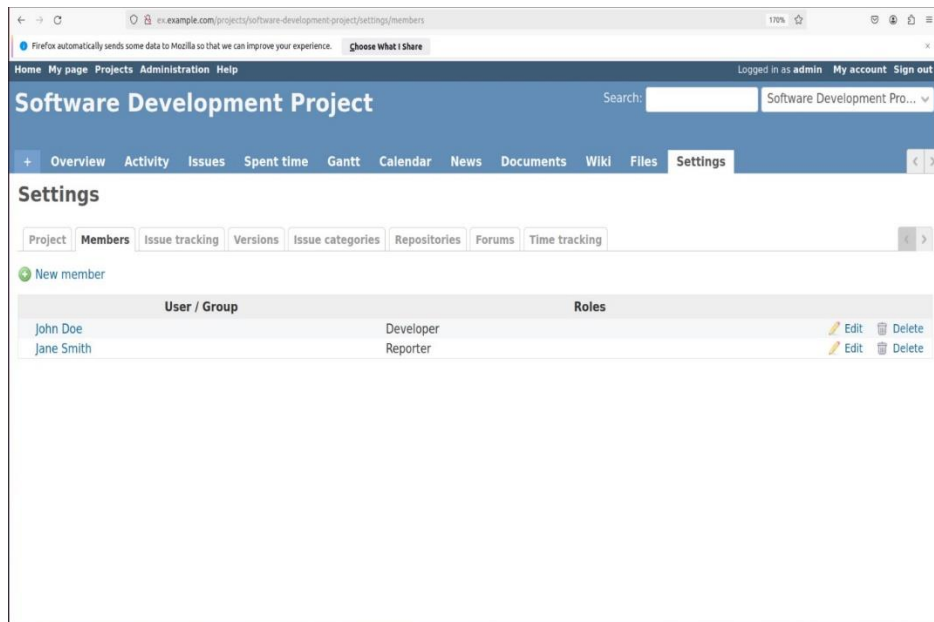


- Navigate to the "Members" tab. Click on “New member”



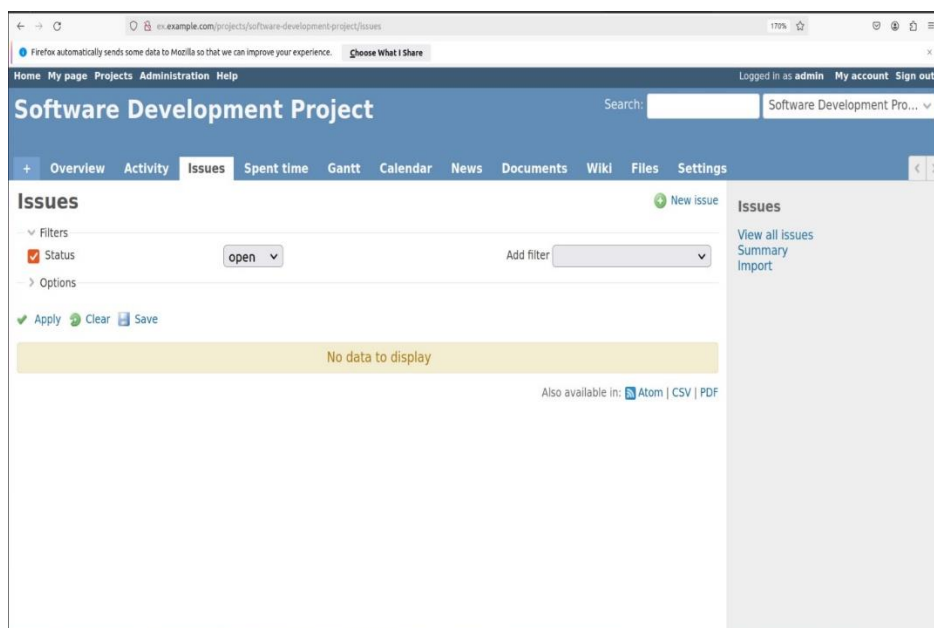
- Add both users to the project:
  - User 1 with role "Developer."
  - User 2 with role "Reporter."





Step 4: Create issues:

- Go to the "Issues" tab within the project.
- Click on "New issue."



- Create a few sample issues with various details, such as:
  - Subject: Bug Fixing
  - Description: Fix the critical bugs in the login module.
  - Assignee: User 1(John Doe)

-Priority: High

Click on “Click and continue”

**New issue**

Tracker \* Bug ☐ Private

Subject \* Bug Fixing

Description Edit Preview B I U S C H1 H2 H3   
Fix the critical bugs in the login module

Status \* New ☐ Parent task

Priority \* High ☐ Start date 02 / 10 / 2024

Assignee John Doe ☐ Due date 02 / 12 / 2024

Estimated time  Hours

% Done 0% ☐

Files Browse... No files selected. (Maximum size: 5 MB)

Create

-Subject: Feature Development

-Description: Develop a new feature for user authentication.

-Assignee: User 2(Jane Smith)

-Priority: Normal

Click on “Create”

**New issue**

Tracker \* Bug ☐ Private

Subject \* Feature Development

Description Edit Preview B I U S C H1 H2 H3   
Develop a new feature for user authentication

Status \* New ☐ Parent task

Priority \* Normal ☐ Start date 02 / 10 / 2024

Assignee Jane Smith ☐ Due date 02 / 14 / 2024

Estimated time  Hours

% Done 0% ☐

Files Browse... No files selected. (Maximum size: 5 MB)

Watchers ☒ Jane Smith ☒ John Doe   
Search for watchers to add

Create Create and continue

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Project Task

Home My page Projects Administration Help

Logged in as admin My account Sign out

## Software Development Project

Search:  Software Development Pro...

+ Overview Activity **Issues** Spent time Gantt Calendar News Documents Wiki Files Settings

### Issues

[New issue](#)

Filters

☒ Status open Add filter

[Options](#)

[Apply](#) [Clear](#) [Save](#)

<input type="checkbox"/>	#	Tracker	Status	Priority	Subject	Assignee	Updated	
<input type="checkbox"/>	2	Bug	New	Normal	Feature Development	Jane Smith	02/10/2024 11:40 AM	...
<input type="checkbox"/>	1	Bug	New	High	Bug Fixing	John Doe	02/10/2024 11:38 AM	...

(1-2/2)

Also available in: [Atom](#) | [CSV](#) | [PDF](#)

### Issues

[View all issues](#)  
[Summary](#)  
[Import](#)

Now, let's try to login as user1.

← → ↻ ex:example.com/my/password 179%

Home My page Projects Help

## Redmine

Save password for example.com?

Username:

Password:

☐ Show password

[Not now](#) [Save](#)

Logged in as user1 My account Sign out

Search:  Jump to a project...

**Change password**

Your password has **changed** to change it.

Password \*

New password \*

Must be at least 8 characters long.

Confirmation \*

[Apply](#)

Project Task



As the password was temporary. So, set the password.

← → ↻ ex.example.com/my/password 170% ☆ 🔍 ⚙

Home My page Projects Help Logged in as user1 My account Sign out

Redmine Search: Jump to a project...

🚫 Your password has expired or the administrator requires you to change it.

Change password

Password \*

New password \*   
Must be at least 8 characters long.

Confirmation \*

⚠ This connection is not secure. Logins entered here could be compromised. [Learn More](#)

Apply

Home My page Projects Help Logged in as user1 My account Sign out

Redmine Search: Jump to a project...

✅ Password was successfully updated.

My account [Emails](#) [Change password](#)

Information

First name \*

Last name \*

Email \*

Language

Save

Email notifications

Only for things I watch or I'm involved in

☒ I don't want to be notified of changes that I make myself

Preferences

Hide my email address ☒

Time zone

Display comments

Warn me when leaving a page with unsaved text ☒

Font used for text areas

My account

Login: user1

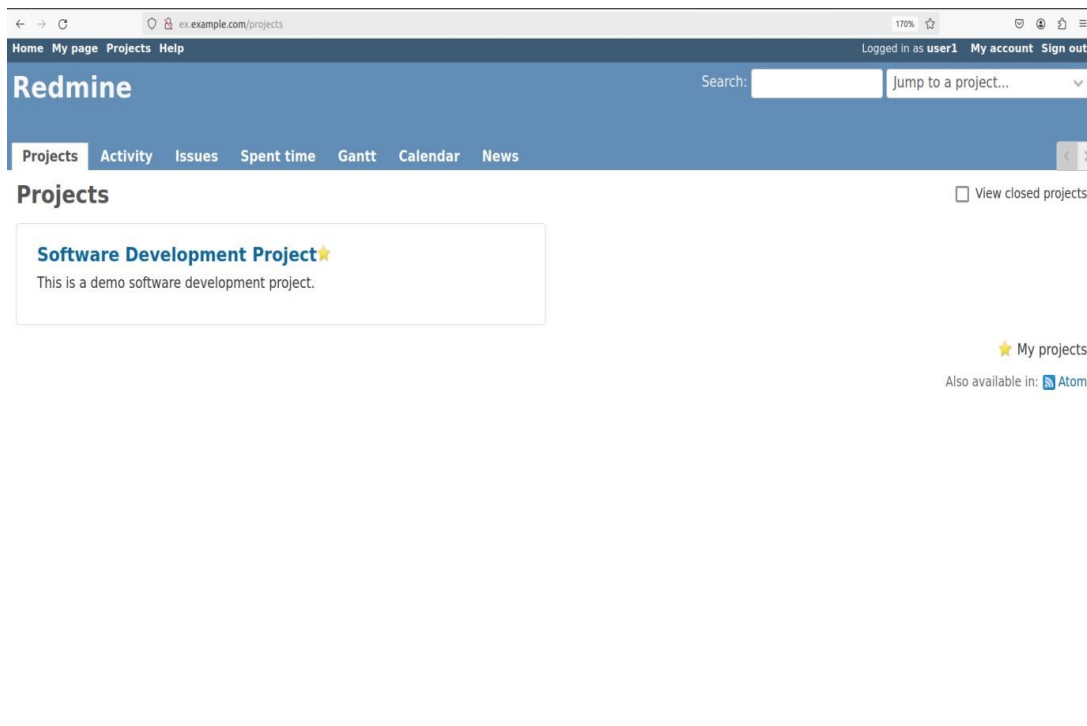
Created: 02/09/2024 06:53 PM

[Delete my account](#)

Atom access key

Missing a Atom access key [\(Reset\)](#)

Check for the project that was assigned to user1.



Now, let's connect to the MySQL server, switch to the Redmine database and run some queries.

1. Run “show tables;” to list the tables.

```

MariaDB [redmine] > use redmine_default
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [redmine_default] > show tables;
+-----+
Tables_in_redmine_default
+-----+
| ar_internal_metadata |
| attachments          |
| auth_sources         |
| boards               |
| changes              |
| changeset_parents    |
| changesets           |
| changesets_issues    |
| comments             |
| custom_field_enumerations |
| custom_fields        |
| custom_fields_projects |
| custom_fields_roles  |
| custom_fields_trackers |
| custom_values        |
| documents            |
| email_addresses      |
| enabled_modules      |
| enumerations         |
| groups_users         |
| import_items         |
| imports              |
| issue_categories      |
| issue_relations       |
| issue_statuses       |
| issues               |
| journal_details      |
| journals              |
| member_roles         |
| members              |
| messages             |
| news                 |
| open_id_authentication_associations |
| open_id_authentication_nonces |
| projects              |
| projects_trackers     |
| queries               |
| queries_roles        |
| repositories         |
| roles                 |
| roles_managed_roles  |
| schema_migrations    |
| settings              |
| time_entries         |
| tokens               |
+-----+
```

2. Run “desc users;” to get the structure of the “users” table.

```
MariaDB [redmine_default]> desc users;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
login	varchar(255)	NO			
hashed_password	varchar(40)	NO			
firstname	varchar(30)	NO			
lastname	varchar(255)	NO			
admin	tinyint(1)	NO		0	
status	int(11)	NO		1	
last_login_on	datetime	YES		NULL	
language	varchar(5)	YES			
auth_source_id	int(11)	YES	MUL	NULL	
created_on	timestamp	YES		NULL	
updated_on	timestamp	YES		NULL	
type	varchar(255)	YES	MUL	NULL	
identity_url	varchar(255)	YES		NULL	
mail_notification	varchar(255)	NO			
salt	varchar(64)	YES		NULL	
must_change_passwd	tinyint(1)	NO		0	
passwd_changed_on	datetime	YES		NULL	

18 rows in set (0.006 sec)

3. Run “select \* from users;” to see the “users” table.

```
MariaDB [redmine_default]> select * from users;
```

id	login	hashed_password	identity_url	mail_notification	salt	firstname	lastname	admin	status	last_login_on	language	auth_source_id	created_on	updated_on	type
1	admin	e80b27d083844f5eead0cae9d7db594225a22c8			273172b48923e8d822479b486d6c6cae	Aditya	Jha	1	1	2024-02-09 05:12:37			2024-02-09 04:27:59	2024-02-09 05:15:40	User
2		NULL	all		NULL	Anonymous users		0	1	NULL			2024-02-09 04:28:13	2024-02-09 04:28:13	Group
3		NULL			NULL	Non member users		0	1	NULL			2024-02-09 04:28:13	2024-02-09 04:28:13	Group
4		NULL			NULL	Anonymous		0	0	NULL			2024-02-09 04:58:55	2024-02-09 04:58:55	Anonymous user
5	user1	d078727b385b95cef49a3b58cc77ad57a4092fe1			NULL	John	Doe	0	1	2024-02-10 01:01:44	en		2024-02-09 08:23:07	2024-02-09 23:57:38	User
6	user2	39dbd97a5bb478f9e4af82758bab0c1d65			NULL	Jane	Smith	0	1	2024-02-09 08:26:13	en		2024-02-09 08:26:13		User

4. Run “select \* from issues;” to check the issues that were created.

```
MariaDB [redmine_default]> select * from issues;
```

id	tracker_id	project_id	subject	description	due_date	category_id	status_id	assigned_to_id	priority_id	fixed_version_id	author_id
1	1	1	Bug Fixing	Fix the critical bugs in the login module	2024-02-12	NULL	1	5	3	NULL	1
2	1	1	Feature Development	Develop a new feature for user authentication	2024-02-14	NULL	1	6	2	NULL	1

2 rows in set (0.000 sec)

5. Run “select \* from projects;” to fetch the project data.

```
MariaDB [redmine_default]> select * from projects;
```

id	name	description	homepage	is_public	parent_id	created_on	updated_on	identifier	status
1	Software Development Project	This is a demo software development project.		1	NULL	2024-02-09 07:43:46	2024-02-09 07:43:46	software-development-project	1

1 row in set (0.001 sec)

6. Run “select \* from watchers;”.

```
MariaDB [redmine_default]> select * from watchers;
+-----+-----+-----+-----+
| id | watchable_type | watchable_id | user_id |
+-----+-----+-----+-----+
| 1 | Issue          | 1            | 6        |
| 2 | Issue          | 2            | 6        |
| 3 | Issue          | 2            | 5        |
+-----+-----+-----+-----+
3 rows in set (0.000 sec)
```

7. Run “select \* from wikis;”.

```
MariaDB [redmine_default]> select * from wikis;
+-----+-----+-----+-----+
| id | project_id | start_page | status |
+-----+-----+-----+-----+
| 1 | 1          | Wiki       | 1      |
+-----+-----+-----+-----+
1 row in set (0.001 sec)
```

The wiki that, I have created for the project “Software Development Project”.

