# 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**



2. Set hostname:
   Set the hostname by running the below command:
   **sudo hostnamectl set-hostname ex.example.com**

**sudo nano /etc/hosts**

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



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**



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**

**systemctl enable mariadb**
**mysql_secure_installation**





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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;**



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**

Configure Redmine and set the password:







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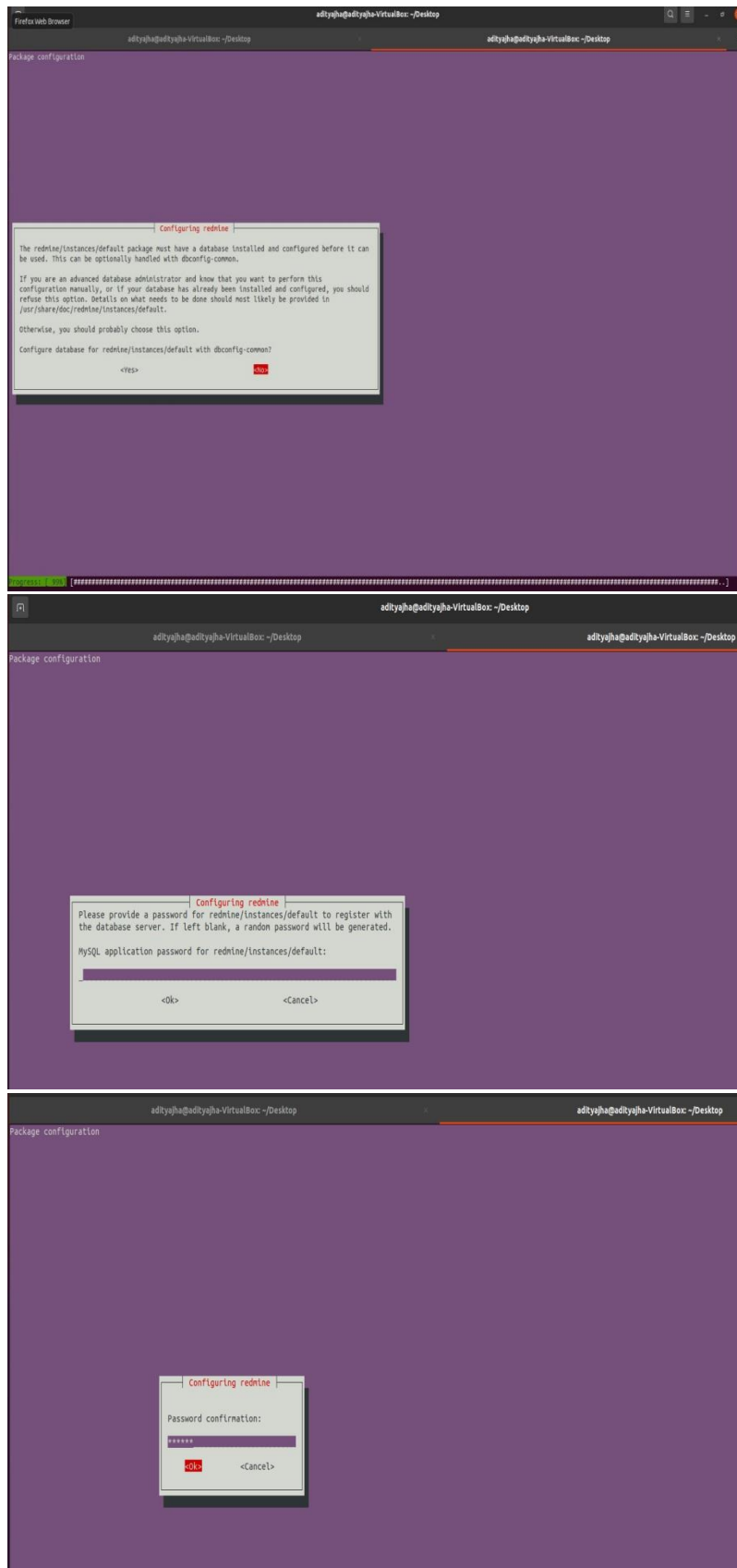
**sudo apt install bundler**



**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`.

**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
notifier ajha@adityajha-VirtualBox:~/Desktop$ ln -s /usr/share/redmine/public /var/www/html/redmine
....ailed to create symbolic link '/var/www/html/redmine': Permission denied
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"



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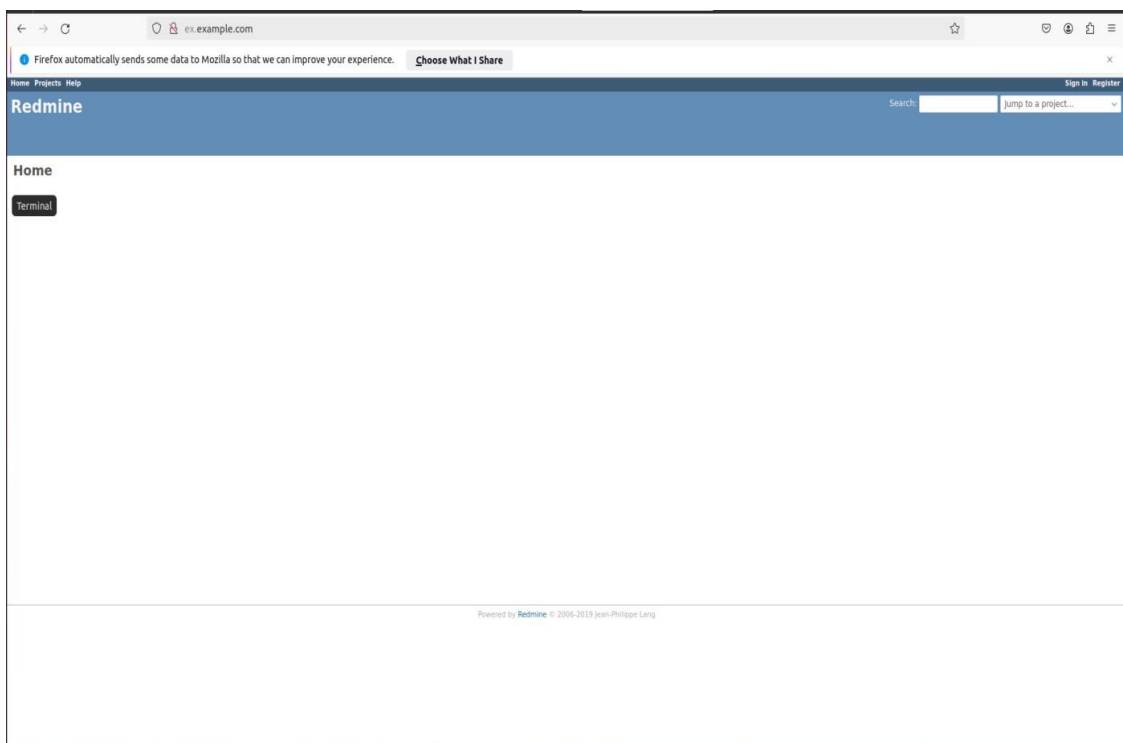
Login details:
Login:- admin
Password:- admin
This is temporary set the password after it. This will expire after one time login





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



**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



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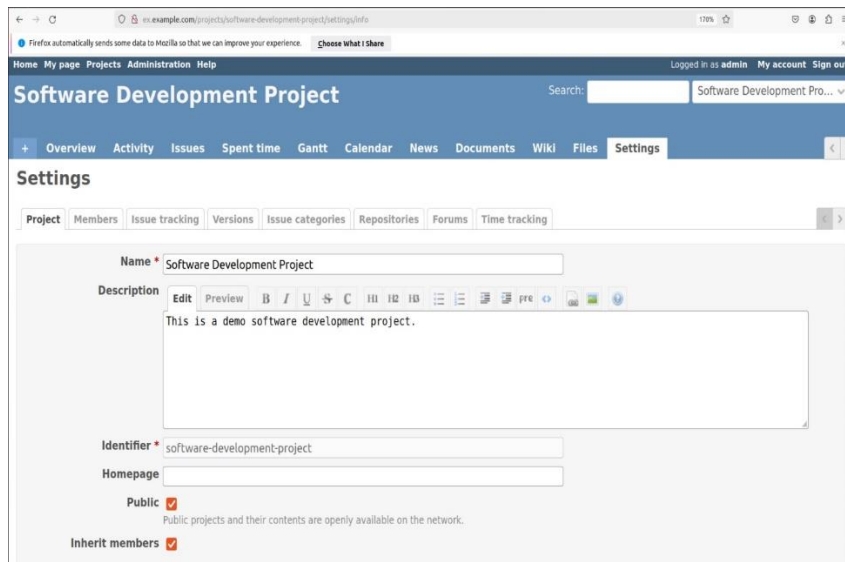
Step 2: Create Users

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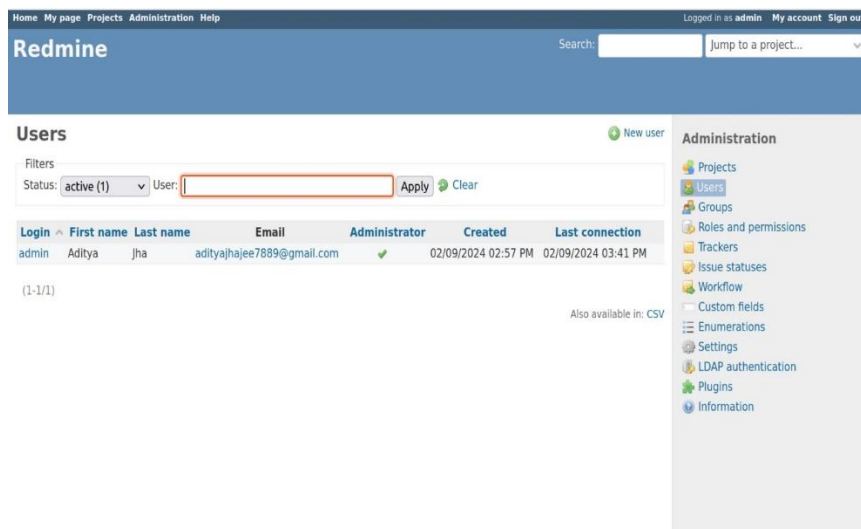


- Add two users:
  -User 1:
    o Login: user1
    o Password: password1
    o First Name: John
    o Last Name: Doe
    o Mail: john.doe@example.com

Click on "Create and continue"



-User 2:
- o Login: user2
- o Password: password2
- o First Name: Jane
- o Last Name: Smith
- o Mail: jane.smith@example.com



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."
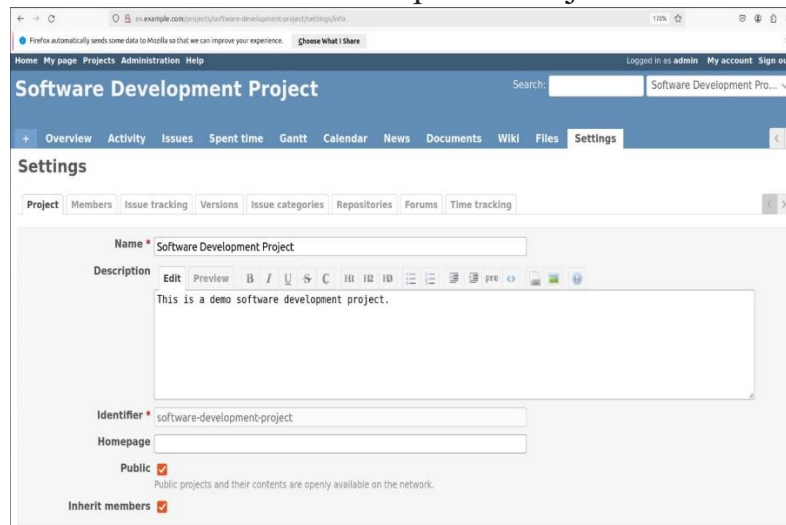


- Navigate to the "Members" tab. Click on "New member"
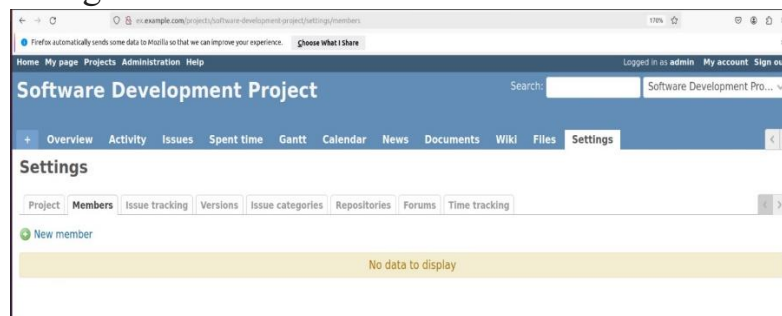


- Add both users to the project:
  -User 1 with role "Developer."
  -User 2 with role "Reporter."
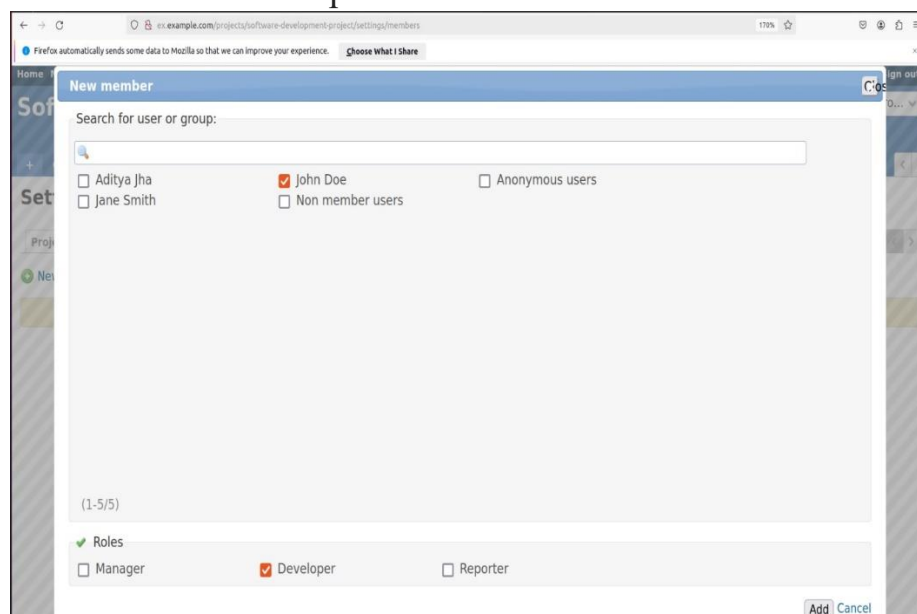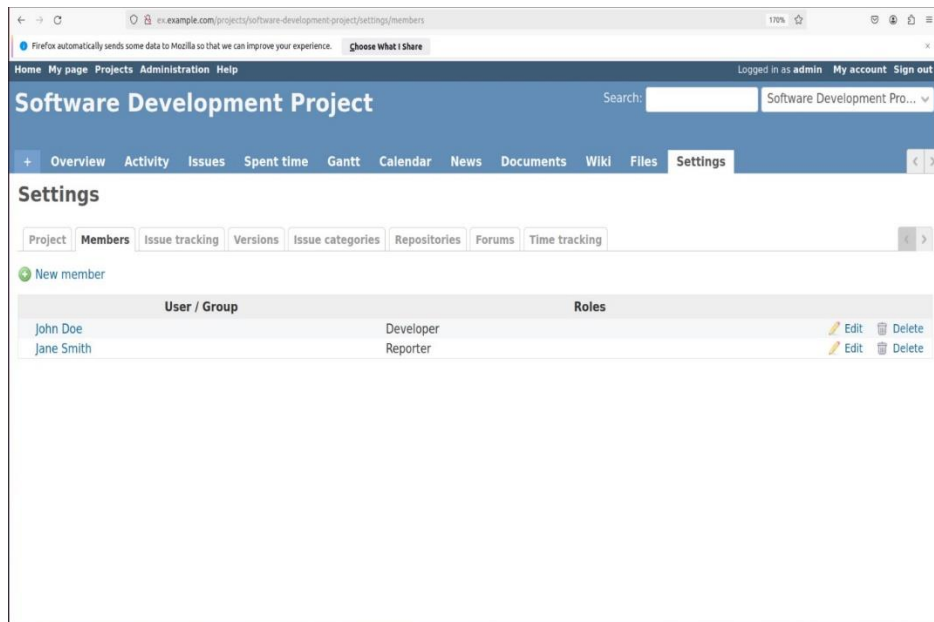
Step 4: Create issues:

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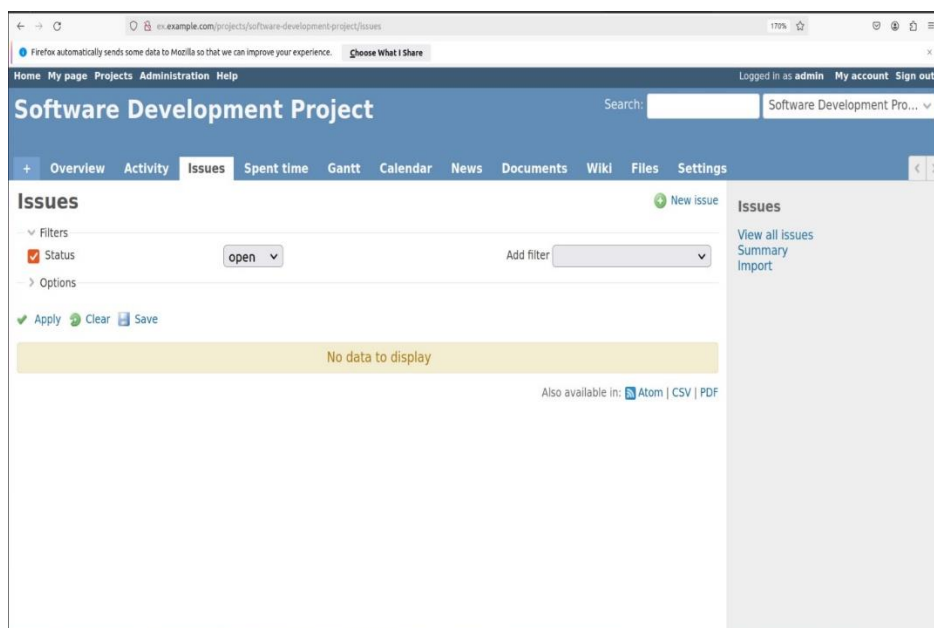


- Create a few sample issues with various details, such as:

  -Subject: Bug Fixing

   -Description: Fix the critical bugs in the login module.

   -Assignee: User 1(John Doe)

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-Priority: High

Click on "Click and continue"



-Subject: Feature Development

　-Description: Develop a new feature for user authentication.

　-Assignee: User 2(Jane Smith)

　-Priority: Normal

Click on "Create"



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Now, let's try to login as user1.

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





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Check for the project that was assigned to user1.
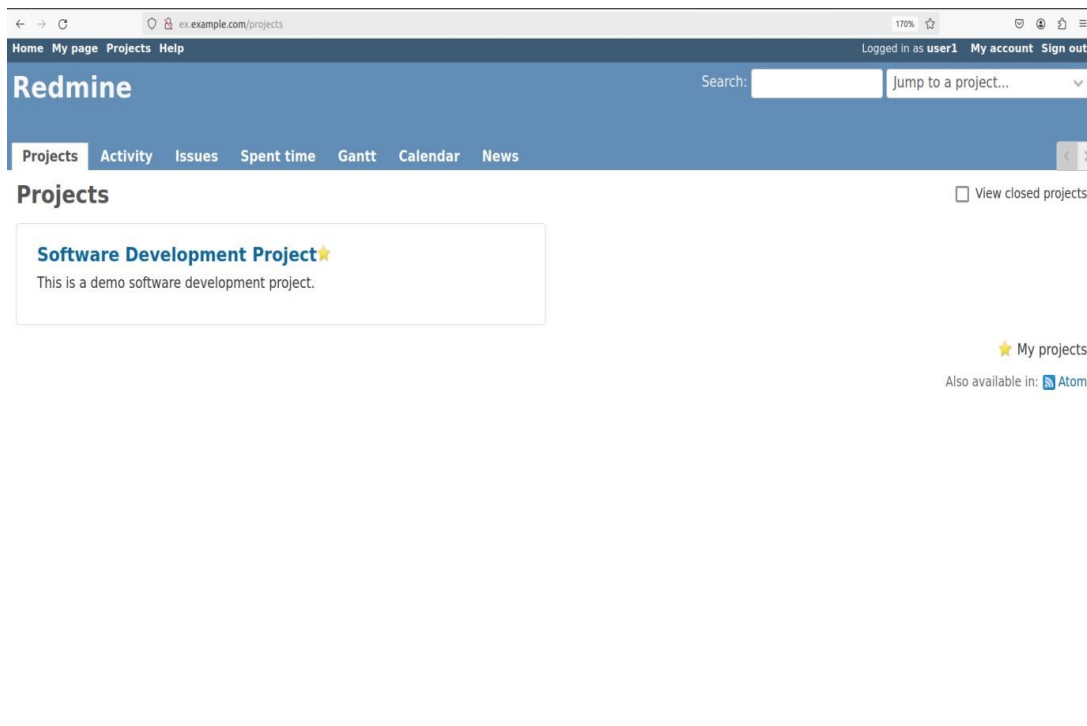


**Now, let's connect to the MySQL server, switch to the Redmine database and run some queries.**

1.  Run "**show tables;**" to list the tables.



2.  Run "**desc users;**" to get the structure of the "users" table.

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```
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.



4. Run "**select * from issues;**" to check the issues that were created.



5. Run "**select * from projects;**" to fetch the project data.



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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".



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