New Leaf Term Project Report

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Chapter 1

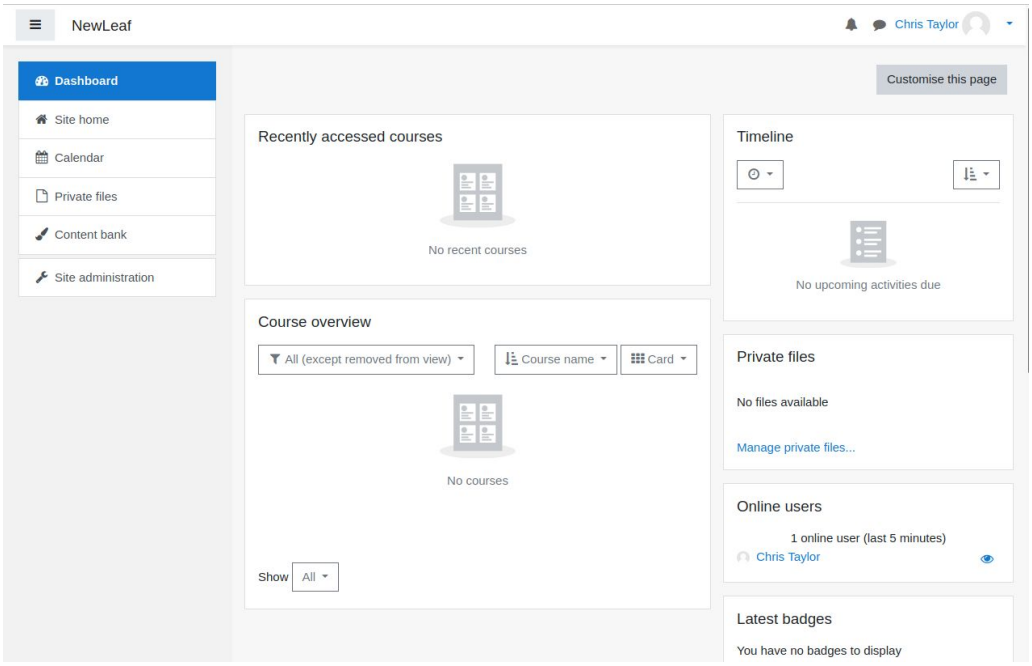
Introduction

Moodle is a popular and free learning management system (LMS) designed to provide educators with a "single robust, secure and integrated system" to create personalized learning environments. It is an active project written primarily in PHP. We chose Moodle because its mission of providing a free and robust LMS resonated with us, especially as online learning has become increasingly important in the last few months due to Covid-19, as well as because of its popularity and its extensive documentation for both users and contributors.

Building Moodle and Configuring the Testing Environment

This section will briefly describe the methodology we used to build Moodle and initialize the testing environment; more detailed descriptions of this process can be found here on our team project wiki. First, we built Moodle by cloning the Moodle repository from GitLab and following Moodle's installation guide, which involved the installation and configuration of PHP, MySQL, and the Apache web server.

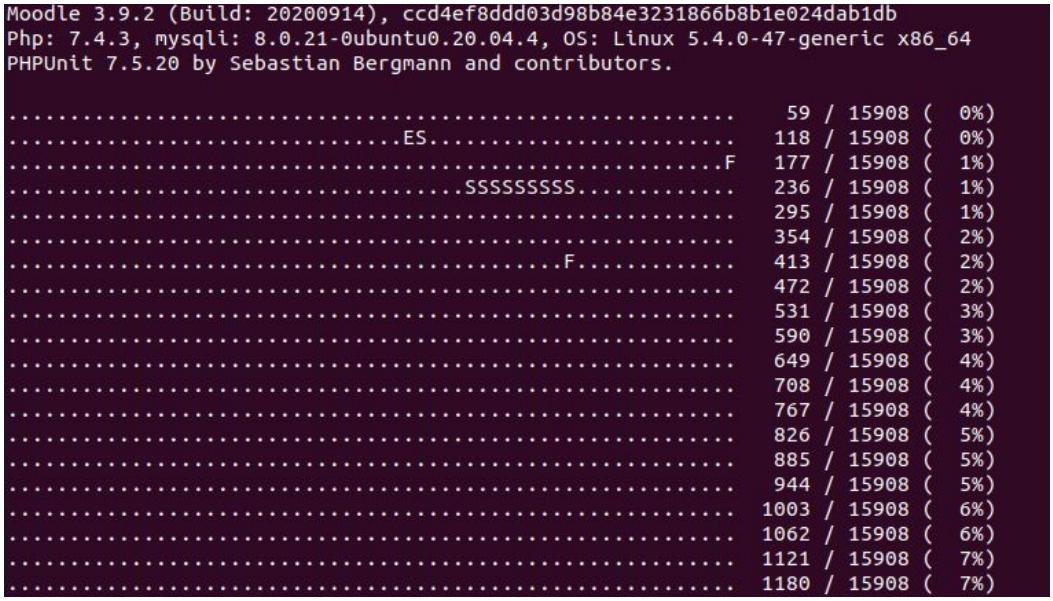
After completing the initial installation process we were able to interact with the full application in a web browser running on our local machine.

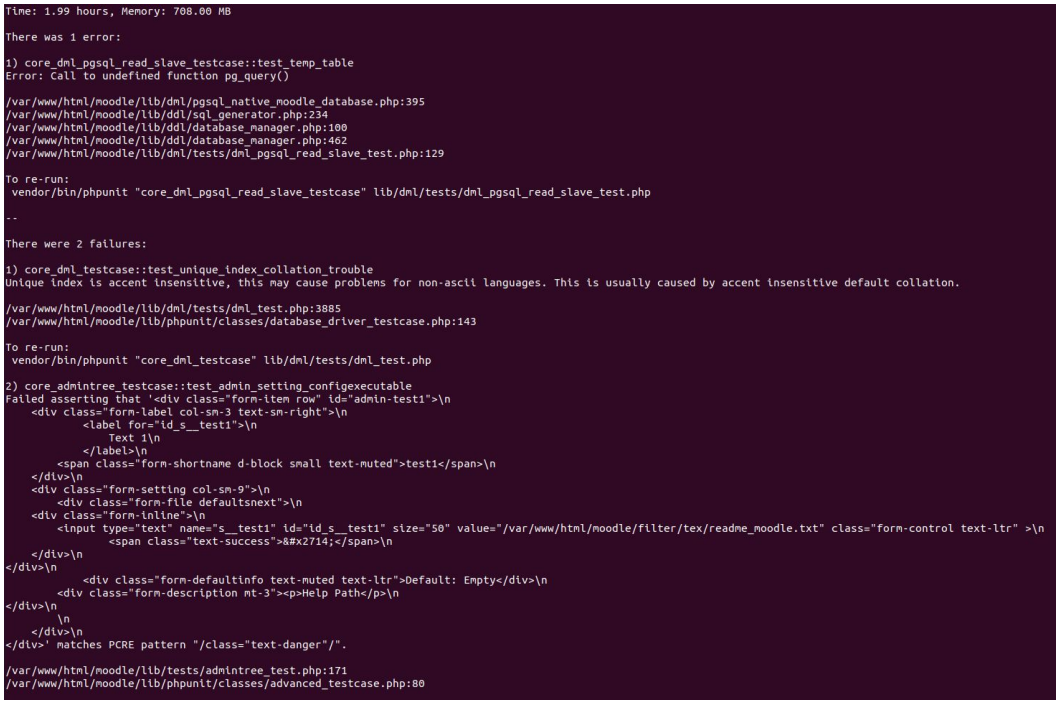


Pictured: The Moodle homepage after successfully installing the application on a local Ubuntu virtual machine.

Next, we initialized Moodle's testing environment by installing PHPUnit through the PHP Dependency Manager Composer and configuring it to work with the Moodle's pre-existing unit tests. After this process was complete, we were able to run all tests with the command:

vendor/bin/phpunit





Pictured: Output of vendor/bin/phpunit in the testing environment

This output demonstrates that the test environment is working properly and gives us some interesting insight into the Moodle testing environment, for example Moodle currently has nearly 16000 PHP unit tests.