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LIGHTWEIGHT E-LEARNING USING BLUDIT CMS FOR STUDENT WITH LOW-BANDWITH INTERNET

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Abstract

More student can use internet to learn but the speed of the internet is not the same on every area. Many student in remote or faraway places had trouble to learn with internet because of the low-bandwith internet. Bludit CMS is a flat-file content management system that can make a website without using databases, that make a website is lightweight. This paper explains the posibility to make an open educational resource and or e-learning platform using Bludit CMS that can be use to learn by student with low-bandwith internet.

Keywords: e-learning platform, flat-file cms, low-bandwith internet learning, bludit

1 INTRODUCTION

As the internet penetration and internet user in the world getting higher, e-learning is booming everywhere. The problem is every place has different speed and stability of the internet, especially in remote areas. Internet in developed country is different with internet in developing countries. This happen to make e-learning accessibility differs in some parts of the world.

Education is a basic human right (UNESCO, 2022). E-learning is one of the method for people doing distance learning. E-learning can be use asynchronously and not limited to time and space.

On around 2016, flat-file content management system (CMS) is gaining more user and recogniztion. Flat-file CMS didn't use database, that make it very lightweight. An e-learning website that is lightweight more likely to be easily accesed with student with low-bandwith internet.

The question of the study is can a flat-file CMS (Bludit) be use for e-learning alternative? How to do it?

The aim of this study is to give reference for educator on the use of flat-file CMS, in this case Bludit, to make e-learning more accessible especially for student with low-bandwith or slow internet.

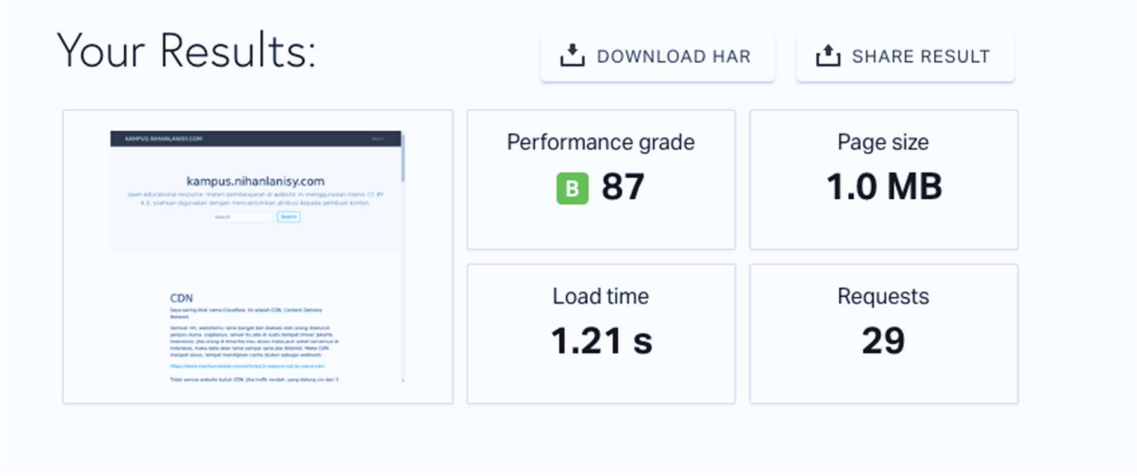
2 METHODOLOGY

This study using RnD Method with ADDIE Model. ADDIE Model using five-step process: Analysis, Design, Development, Implementation, and Evaluation. The data gathered for analysis is from the Bludit official documentation and forum. And then the author install Bludit CMS on the webserver using the default template and making the content for e-learning. And then, the website is live and evaluated. For this study, the domain of the website is kampus.nihanlanisy.com. The website then evaluated with https://tools.pingdom.com/ to know how easy and lightweight the website is (using Asia-Tokyo server).

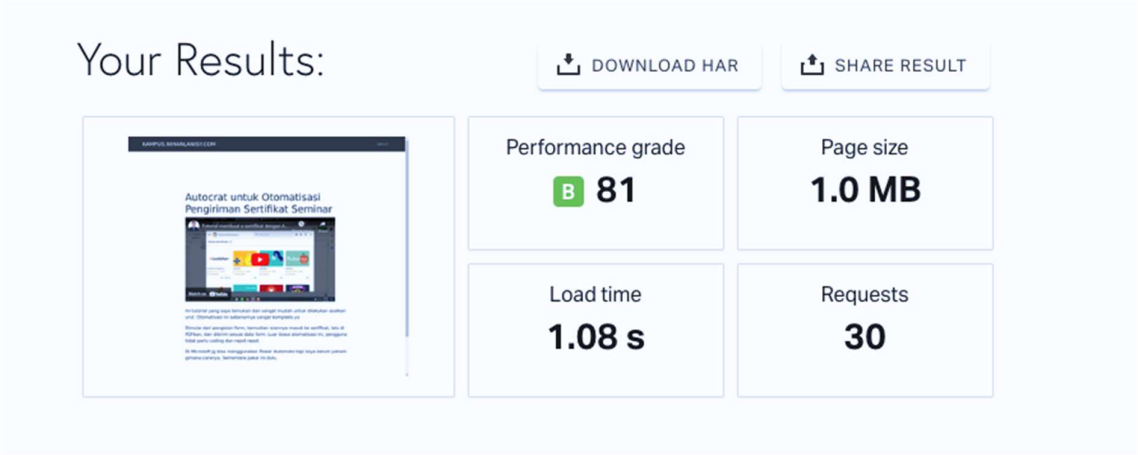
3 FINDINGS AND DISCUSSION

Bludit in the official documentation stated that. "*Bludit is a web application to build your own **website** or **blog** in seconds; it's completely **free and open source**. Bludit is a Flat-File CMS, which (in this case) means that Bludit uses files in the **JSON** format to store the content. You don't need to install or configure a database; you only need a web server with PHP support.".* Bludit is not the only flat-file CMS around, there're Grav, Nibbleblog, Flatpress, etc. Those flat-file CMS share similar characteristic with major difference on the user interface of the admin panel.

The website that been made (kampus.nihanlanisy.com) is a simple blog that contains material as e-learning to learn about website making. The content is distributed as a blog that can be searched, without feature for grading, discussion, etc. The main goal is to serve the learning material first. Below is how it loaded for the homepage https://kampus.nihanlanisy.com. The loadtime is 1.21 second and the homepage is as low as 1MB in size.



And then for the test of an example page of https://kampus.nihanlanisy.com/autocrat (picture below), with an embedded video and text it is only needed 1.08s for 1MB page size.



From those two simple test, we can see that Bludit can be used to deliver learning material for E-learning for low-bandwith internet.

4 CONCLUSION

Bludit, as a flat-file CMS, can be use for e-learning with simple feature. Bludit is not design specifically like Moodle, that feature-rich for e-learning. For future research, flat-file CMS that specifically designed for e-learning can be develop.

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