

ABSTRACT

Mathematics is the basic arithmetic that must be mastered in various aspect of science and for some students to Junior High School (SMP) is a difficult lesson to learn on their own without the help of educators or friends who are proficient. But not always of the teaching staff or friends who have advanced is capable of providing the time in learning mathematics.

Therefore, built a web tutorial system that can help students to learn independently and easily. This web tutorial system can provide video tutorials, practice questions, text messaging, and live streaming are used for direct explanation that can be recorded. Web tutorial system is built using PHP as the programming language, MySQL as the database server, ffmpeg as the media format, red5 as the streaming server. Web tutorial system was built based on the needs and do not ignore the code of ethics in education.

After testing and implementation, obtained several conclusions, including: the applications of the tutorial makes it easy for students to learn mathematics independently, it's based on subjective testing with a value of 66,7%. Web tutorials can serve 150 simultaneous users on local network with an average response time of 74,6 ms (0,00746 s) and the average speed of 853.658 kbps.

Key words: The VOD, mathematics, tutorial, MySQL, PHP, ffmpeg, Red5,

FMLE, Junior High School