## **ABSTRACT**

The use of technology is now a necessity for a concept and mechanism of web-based teaching and learning. Various ways and methods in learning have been attempted. In a global era like now it must be related to information technology for example in the field of Education especially at SMA Santa Maria 3 Cimahi. SMA Santa Maria 3 Cimahi was a result of the transfer of management from Priangan High School in 1992 and is currently under the Yayasan Salib Suci Bandung Foundation on June 15, 1992.

SMA Santa Maria 3 cimahi has several problems such as time that is too short to understand the subject matter in class and if students are unable to attend the class, then the student is left behind the subject matter taught in the classroom.

Based on these problems, the need for a learning system using e-learning applications. E-learning is a merger of computer technology, internet networks, and also a digital or online learning process. The use of e-learning functions as a learning medium that can be accessed without limits and e-learning is also very flexible so that it can pollute costs, and e-learning can unleash the potential of students by means of online discussion where students have no more fear to ask.

E-Learning applications will be developed using the Laravel framework and the Mysql database. The method used in this research is Extreme Programming. Extreme Programming is a methodology which is very flexible, fast, effective, and suitable to use a team with a small amount and a small scope. With this method produced features that can help students and teachers in the learning process include material features, task features, exam features, and features to see grades. With this research it is hoped that the e-learning application will be useful for progress in the learning process that will come.

Keywords: E-Learning, Extreme Programming, SMA Santa Maria 3 Cimahi.