

ABSTRACT

The progress of education goes in line with the times, and programming science is an essential thing in the world of education. However, based on the survey we asked high school students, it was found that 94.4% of the respondents also felt the same way, namely, learning basic programming knowledge was very necessary. However, 77.8% of the respondents found it quite challenging to get the material. According to the respondent, it was pretty challenging to get the material and get a platform to learn to program.

The solution is offered through an application that we have built, namely Conlab. This application can help students get material about programming, and students can also directly practice through this application. The development of this application is carried out using the Iterative Incremental method and using the MVC architecture Framework, namely Laravel. The development method is deemed suitable for use with the research team's limited resources. In addition, this method allows for adaptation when development is carried out.

Based on the tests carried out using one of the White-Box methods, namely the Unit test, it was found that all the features built on this website successfully passed the testing. In addition, researchers also carried out load testing to see the maximum number of users who can access this application simultaneously. It was found that the maximum number of users who can access the application without request error is 211 users. Then the last test done is feature testing to direct users or User Acceptance Test. This test shows that all users who do testing feel that the features built are feasible.

Key Word : Education, Programming, Iterative Incremental, Unit Testing, Load Testing, User Acceptance Test.