Implementasi dan Analisis Desain *Reusability Framework* untuk Komponen *Event User Interface* pada Phaser 3

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Abstract

The growth of game development is now widely supported by software such as game engines and game frameworks. Phaser 3 is a popular HTML5 based game framework on the browser platform. However, Phaser 3 does not facilitate managing code of User Interface (UI) event component. The Game Developer Conference explained that the success of a game would be defined from the ease of use in the user (player) controls. The player will have control over the game being played, where control is very related to the UI of the game. Sometimes a game developer (developer) discovers that UI event component code, such as buttons or joysticks that have been created, must be regenerated on subsequent projects with the same function. By utilizing object-oriented that is packaged in a library to become a framework, developer productivity will increase so that there is no need to repeat the algorithm or code that has been created previously. Code reusability in designing frameworks will affect if it is compiled by design patterns. The reusability framework in managing UI event components is needed so that it can cover the weaknesses of Phaser 3. Based on conducted the calculation of reusability metrics and interviews with developers, it was found that the framework that was built has relatively high reusability, which is equal to 84,576%. Based on the calculation of reusability metrics conducted and interviews with developers, it was found that the Phaser 3 UI standard has less a reusability value of 64,241%, while the framework that was built has relatively higher reusability, that is equal to 84,576%.

Keywords: reusability, Phaser 3, framework, component, user interface.