DESIGN AND DEVELOPMENT OF CROSSWORD GAME SOFTWARE USING METHOD OF BACKTRACKING AND STEMMING PORTER ON ANDROID DEVICE

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Abstract
This Final Assignment will develop a crossword game software which is a combination of a board game and crossword puzzle game using Brite Force algorithm, Backtracking algorithm, and Stemming Porter algorithm on a smart phone with Android system operation to answer those needs. This Final Assignment have choosen the smart phone media with Android system operation because these devices are growing continuously and in demand at the most. This final Assignment using Android operation system because it provides an open platform for developers to create their own application as well as convenience that offered, and also has been used by many smartphone brands.

Backtracking algorithm is one of finding anagram problem solution method that suitable to use. It finds solutions by considering the closest solution of them only from among all that possible solutions. Brute Force algorithm for string matching and Stemming Porter algorithm for root finding in English are the proper fusion of methods in crossword game software development that aims to make more variation and more attractive gameplay.

The testing of the game has done by the program functionality test. From all of the tests that have done, it says that
the functionalities of this game which using that algorithms work successfully and can create a quite educational game.

**Keywords :** Board Game, Crossword Game, Brute Force, Backtracking, Stemming Porter, Android.