

Design Pattern Paper COMP 2005 Group 1 Iteration 4

In the process of coding the Kingdomino board game there have been many situations in which the GRASP patterns were used. The patterns which were utilized for this project was controller, low coupling, high cohesion, creator, information expert.

Controller is essential for dealing with the input events and navigating the GUI. Controller was used in the game board class to change menus and the game mode. The menu bar is part of the controller pattern as it has been used to navigate other GUIs created like out display settings and player settings menu.

Low Coupling is important as coupling is the definition of how much different classes are dependent/reliant on each other. Low coupling has been implemented throughout our code and the classes can used and changes can be made without having to change internal implementation of other classes too.

High Cohesion is used as a pattern in the Kingdomino project. High Cohesion means that classes contain information that is important for that class's implementation. For this project we made it highly cohesive so that if any major changes need to be done it would be easier to do locate and it. High cohesion and low coupling go together hand in hand, and it is important for a well written code.

Information expert is a class which contains all the information and has the responsibility for accomplishing a task. In the Kingdomino board game, the information expert class is the game board class, game board has the responsibility of rotating and placing the tiles in the right places. This allows domino class to just focus on making the dominos and letting other classes utilized it to rotate and place them like the game board class does.

Another important pattern which has been used is the observer pattern. This pattern has been used to update other objects on changes. This is important for Kingdomino game as there is always changes happening to the objects within the board and other objects should be aware of the changes. This would make sure that the dominos are placed correctly.

Using these patterns helped us create the code for the Kingdomino board game and make any changes to the code during the process.