

P532: Team 4 Week 3's Architecture Description

Team:

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Description:

Introduction to Composite Design Pattern is a large part we cover in our project. Previously, the architecture was based on a single canvas component. We have changed the one canvas component to multiple layouts which are handled by one pane.

The Composite Pattern functionality is in the main Pane and Layout Managers. We have formed a tree layout where the BoardPane is treated as the main (Parent) Pane and FlowPane GridPane will be treated as children. CustomLayout implemented as GridPane is treated as a sub-Parent which has multiple button child. The buttons pause, undo, replay, save and load will be treated as leaf child and implement the request directly. Change layout button is a composite class and maintains the container of child objects and requests the children to take action.

Save and load actions are called in each required element class. We created a JSON object for each element. SaveAndLoadManager class handles the saving and loading of files and its stored location. We call the constructor of gameManager in SaveAndLoadManager class and store the list of objects in an arrayList and write the data in JSON file. Method load is used to retrieve data from the file. We have performed the Junit testing for each element in Project.

NOTE: We have used json-simple-1.1.1.jar for JSON Files.