EECS 448 – Team 14

Saher Elsayed

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Software patterns of our Prototype

Design patterns are formalized best practices that the programmer can use to solve common problems when designing an application or system. The design patterns team 14 used to design project 3 is a Structural Design Pattern in which Team 14 utilized Google Maps API to compose classes and objects. This brought attention to the new functionality that was inherited and applied to the MAPKU. Structural patterns explain how to assemble objects and classes into larger structures while keeping these structures flexible and efficient. Moreover, the Structural design pattern used is Composite, also known as: Object Tree. Composite structural design pattern has different variables to it: Component, Leaf, Container, and Client. The component is the interface that describes the operations that are significant to the simple and more complex elements of the tree and that could be represented through the clickable icons of the Jayhawks above each building along with the different buttons to calculate the routes, and add the stops. The second crucial part of the composite structural design pattern is the leaves of the tree which are the basic elements of the tree that don't have sub-elements and that could be demonstrated through the side bar that Team 14 have decided to use to illustrate to the client/user the basic direction for their route. For the third part of the composite structural design pattern, the container, also known as composite, has sub-elements: leaves or other containers, and this could be demonstrated through good maps API in which it encompasses the different leaves like labels, routes, different ways of transportation etc. Finally, the client works with all elements through the components interface and interact through both the simple and the more complex elements of the tree.