Design Patterns

The game supports five design patterns which serve the application's design :

1. **Singleton Pattern :**

   This pattern is concerned with the **Player** class and **MouseMove** class as the game supports single player only .

2. **Iterator Pattern :**

   This pattern is mainly used to loop over arraylists of (GameObject) type instead of using **for** loops all over the application .

3. **State Pattern :**

   This pattern serves the required game levels , it switches to the required level according to the player's score which is passed as an argument .

4. **Memento Pattern :**

   This pattern is used to record the player's score in each round and display it by iterating over the memento list and restoring all of its elements during run-time .

5. **Factory Pattern :**

   This pattern is concerned with generating objects and adding them to an arraylist .It generates the object according to the object name passed as an argument .