**The use of Pattern in the game of Blokus**

Design pattern is a very important part of the modern software development process. Design Patterns can be incredibly useful if used in the right situations and for the right reasons. We, the members of our group, have learnt about design patterns for the first time in this course and have tried our best to use the design patterns in the development of Blokus game that we belive has made us more efficient and our code re-usable and robust.   
  
The first design pattern that we used without even knowing it properly from the begining of the development is Information Expert. We created the class diagram and dvidied the responsibilites to each class Each class can fufil its tasks using its attributes and methods. For example, the responsibility of SettingsGUI class is to create a Settings interface for the Blokus game and opening a game board as per the settings chosen by the player. The next two patterns that we focused on are Low Coupling and High Cohesion. As mentioned above, the entire game is divided into different class, we tried to keep the each class indenpendent of each other as much as possible so that one class is not heavily dependent on another class. That allows us to manage the code base easily and makes the code re-usable. With regards to High Cohesion, we tried our level best to keep the Cohesion as high as possible, however, we could still work on it as there're still rooms to improve at this point. Another patten that we used is Controller by designing an interface called Player to implements two classes, namely HumanPlyaer nad Computer Player. By doing this we are not only keeping the player classes logic separate from the interface, it also makes the maintainability of the code easier. We have also used Singleton pattern by making a class named Main, the task of which is to instentiate a class named Blokus.

We believe, we could have applied more design patterns if given enough time. We could've used Pure Fabricatin Pattern to save and load the game. We could've also the Polymorphism patetrn better. Within this time contraint we used a numebr of patterns to make the code standard.