**1.Which materials/key concepts from this course did you apply on the project?**

* On this project, we applied strategy pattern to implement different theme for the game. It is used to improve program’s flexibilities and code reusability such that other programmers can take the code and implement extra styles as they like.
  + MacalaBoard has ChangeTheme method which changes the theme of the board. It receives any themes which are BoardTheme.
  + Fancy Theme and Default Theme implement interface BoardTheme.
* We used Model Controller View model to implement our game.
  + Model: BoardData classwhich stores two arrays
  + Controller: MancalaBoard class which has undo button and each pit has listener act as button to manipulate model.
  + View: MacalaBoard class which display number of stones in each pit. It would update its state according to data change.
* We applied listener to each pits to make it a controller.
* We also specifically used mouse adapter instead of mouse listener to better serve its function and shorten the code.
* We also used GridBag Layout to set up the layout of the pits of player 1 and player 2.

**2.Which topics did you have to learn through self-study in order to complete the project?**

- Rules of Macala game.

- Gridbag layout. We were introduced to Gridbag layout but we had to learn exactly how to use it.