CIS 120 Homework 9 Proposal

Please do not write more than the space provided and do <u>not</u> change the size of any table.

Please indicate your name, the name of the game you plan to implement, and the core concepts you plan to use. Remember, you need to choose 4 core concepts. If you are using a concept, indicate **yes** and provide a description. If you are not using a concept, indicate **no** and leave the description blank.

Name: Yuecheng Zhu   Game:GodSaveTheQueen

1. Will you use **2-D arrays** in your game?
   ▢ Yes   ▢ No
   Describe how:

The game will be on the standard 8 x 8 chess board

2. Will you use **Collections** in your game?
   ▢ Yes   ▢ No
   Describe how:

To store the attack range of the white chess pieces, I use a Tree map.

3. Will you use **I/O (other than image I/O)** in your game?
   ▢ Yes   ▢ No
   Describe how:

Add it in the later phase. The player will be asked to type in the name of the player and the name of the beloved one to be saved.

4. Will you use **Inheritance/Subtyping for Dynamic Dispatch** in your game?

   ▢ Yes   ▢ No

   Describe how:

   > There is a class for the chess pieces. With subclasses
   > rook/bishop/knight/pawn/queen/king. Each will have different behavior. Basic methods
   > are color and attack.
   >
   > There is also a class for the two players. The subclasses are WhitePlayer and
   > BlackPlayer.

5. Will you have a **Testable component** in your game?

   ▢ Yes   ▢ No

   Describe how:

   > The interaction among chess pieces and the game board are separated. We test the
   > encapsulated model of the interaction of chess pieces.

6. Will you use **Recursion** in your game?

   ▢ Yes   ▢ No

   Describe how:

   >

7. Will you use a **Novel linked/recursive data structure** in your game?
    ▢ Yes   ▢ No
    Describe how:

8. Will you use an **Advanced topic** in your game?
    ▢ Yes   ▢ No
    Describe how: