Project Sprint #5

The main tasks of this assignment are:
  (1) Adding the feature of recording a game into a text file. The user story and acceptance criteria of both record and replay are required, but the implementation of replay is for extra credit (up to 2 points in the weighted total).
  (2) Conducting a code review exercise.
  (3) Summarizing the lessons learned from Sprint 0 through Sprint 5.

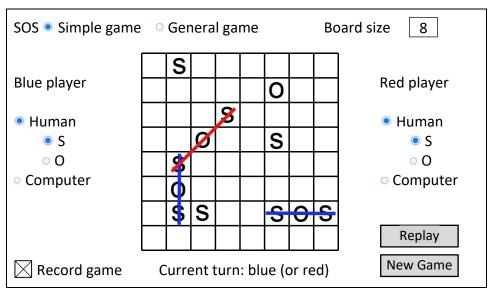The following is a sample GUI layout of the final product, where "Replay" is optional.

Figure 1. Sample GUI layout of the final product

Total points: 16

1. **Demonstration (6 points)**

   Submit a video of no more than 8 minutes, clearly demonstrating that you have implemented all the features in the following table. In the video, you must explain what is being demonstrated.

	Feature
1	A complete simple game of two human players is recorded
2	A complete general game of two human players is recorded
3	A complete simple game of human-computer players is recorded
4	A complete general game of human-computer players is recorded
5	A complete simple game of computer-computer players is recorded
6	A complete general game of computer-computer players is recorded

   If you have implemented the "replay" feature for extra credit, you should include its demonstration in the video.

2. **User Stories and Acceptance Criteria for the Record/Replay Requirements (1 points)**

   • **User Story Template**: As a <role>, I want <goal> [so that <benefit>]
Add or delete rows as needed.

ID	User Story Name	User Story Description	Priority	Estimated effort (hours)
20				
..				

User Story ID and Name	AC ID	Description of Acceptance Criterion	Status (completed, toDo, inPprogress)
20 story	20.1	AC 20.1 <scenario description> Given When Then	
	20.2	AC 20.2 <scenario description> Given When Then	
	…		
21 story	21.1	AC 21.1 <scenario description> Given When Then	
	…		

3. Code Review (2 points)

Apply source code review to one or two most important classes (and other classes if time permits) and report the findings. In addition to looking for bugs, the review should check: (1) whether the entire project has followed the coding standard in a consistent manner, (2) whether the project has followed the design principles introduced in class, and (3) whether there are code smells that indicate the need for refactoring. The following checklists provide basic guidelines. You may add new items to each of the checklists.

Make sure your answers resulted from the code review exercise. If there is no finding for an entry, you should provide an explanation. For example, if your answer to "Are the naming conventions violated?" is no, you should describe a naming convention and present an example. You will receive no credit for this part if your answers are simply yes or no without additional information.

Classes that have been reviewed:
Date/time duration of the code review exercise:

Checklist	Checklist Item	Findings
Coding Standards	Are the naming conventions violated?	
	Is the ordering convention of method arguments violated?	
	Any comments meaningless or inconsistent with the code?	
	Any code block has an inconsistent formatting style?	
	Any indentations inconsistent?	
	…	
Design Principles	Any class/method not well-modularized?	
	Any class with poor abstraction?	
	Is the visibility of any variable, method, and class inappropriate?	
	Is design by contract (pre/post-condition) violated?	
	Is the Open-Closed Principle violated?	

	Is the Single Responsibility Principle violated?			
Code Smells	Are there magic numbers?			
	Are there unnecessary global / class variable?			
	Is there duplicate code?			
	Are there long methods?			
	Is there any long parameter list?			
	Is there over-complex expression?			
	Is there switch or if-then-else that needs to be replaced with polymorphism			
	Any variable or method name whose intent is unclear?			
	Any similar methods in different classes?			
	…			
Bugs	**Buggy code snippet**	**What is the bug?**	**Why is it a bug?**	

4. **Summary of All Source Code (1 points)**

Source code file name	Production code or test code?	# lines of code
Total lines of code		

You will receive no credit for this assignment unless your complete source code is submitted.

5. Summarize the lessons learned from the entire project by answering the following questions from the perspectives of development processes, coding, design, refactoring, and testing **(6 points)**:
   - What did you personally gain from the project?
   - What does your project do well, and what could your project do better?
   - How could you improve your development process if you develop a similar game from scratch?

   Minimum requirement for (5): One full page single spaced, font size no bigger than 12 points.