

The Jungle Game

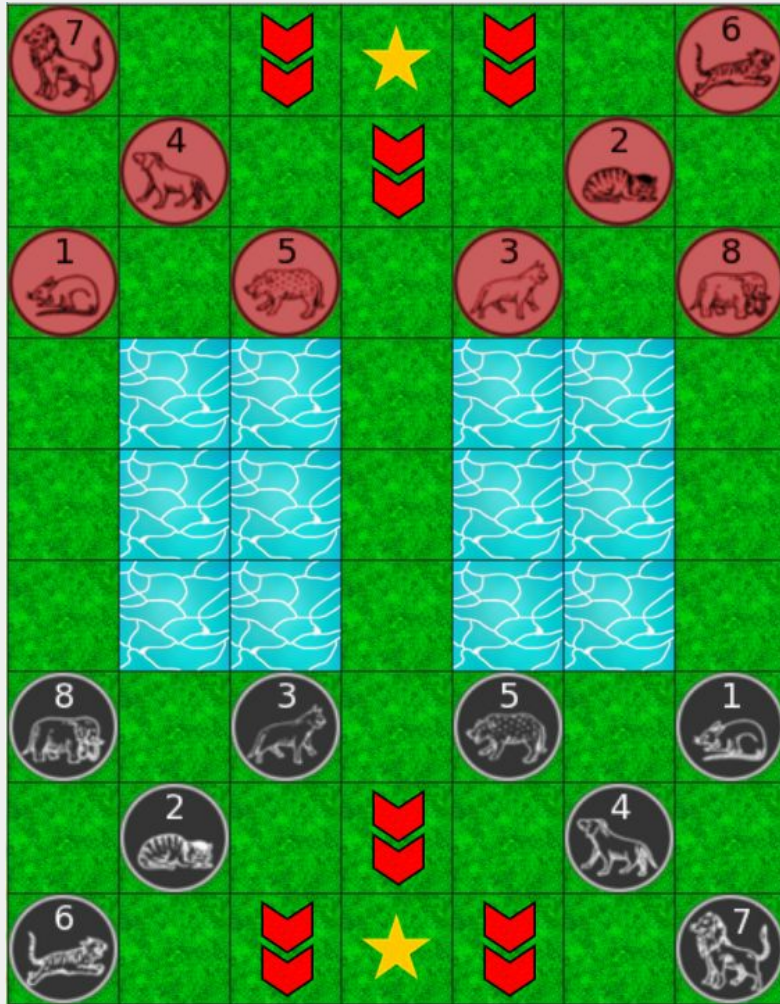
Cheshire Coders

- Angélica Fallas
- Adam Gundem
- Alexander Hennings
- Cameron Ackerman
- Taner King



The Jungle Game

Jungle is a two-player strategy game.



Rat



Cat



Fox



Dog



Leopard



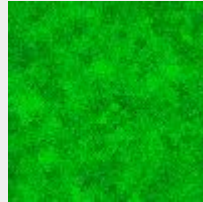
Tiger



Lion



Elephant



Normal



Den

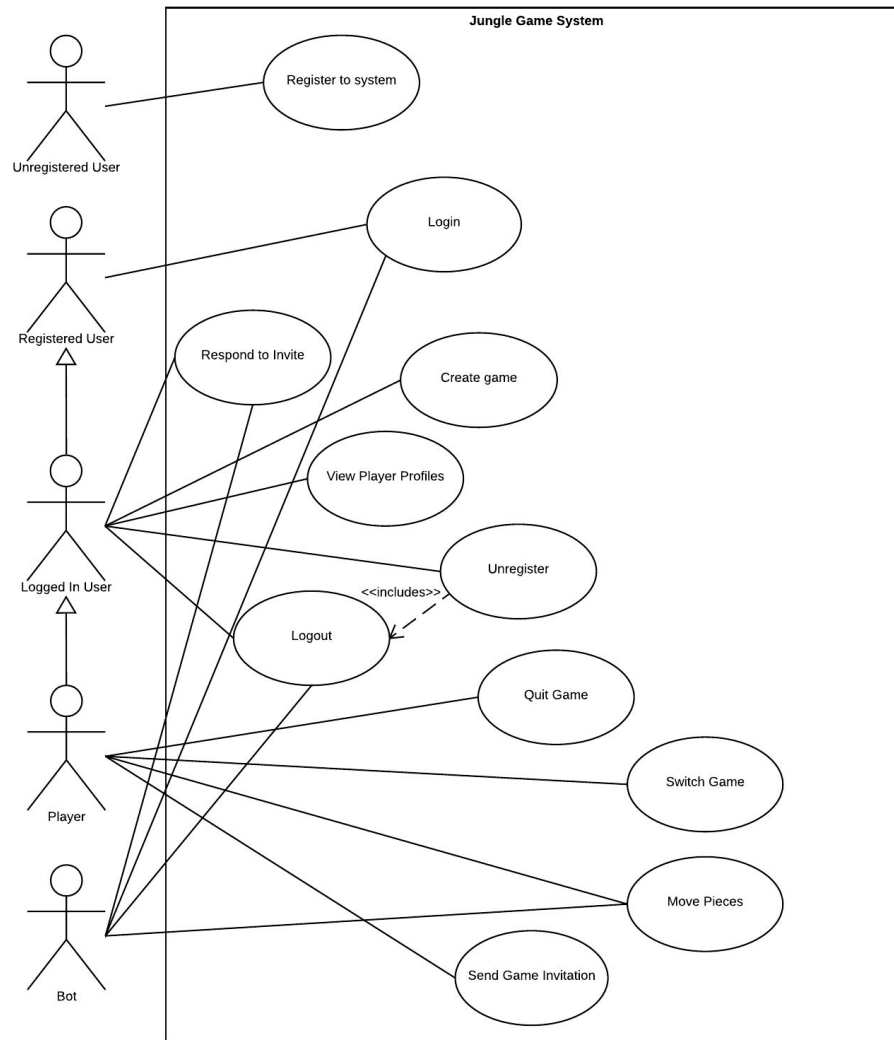


River



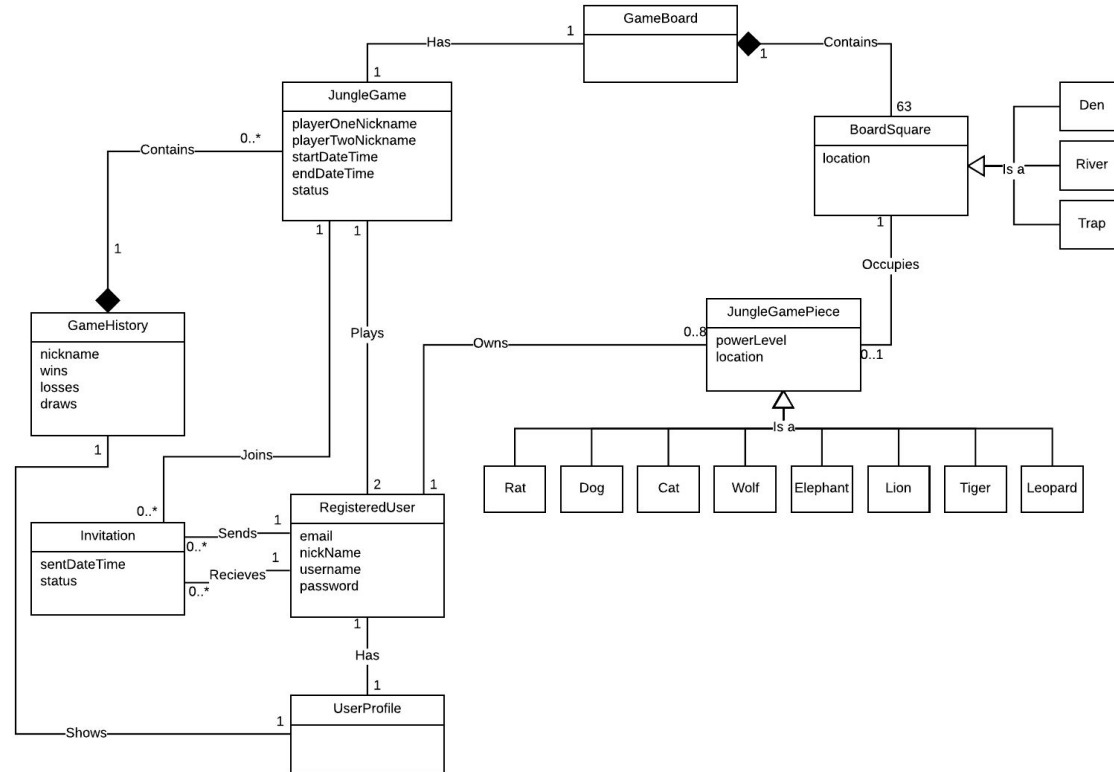
Trap

Use Case Diagram

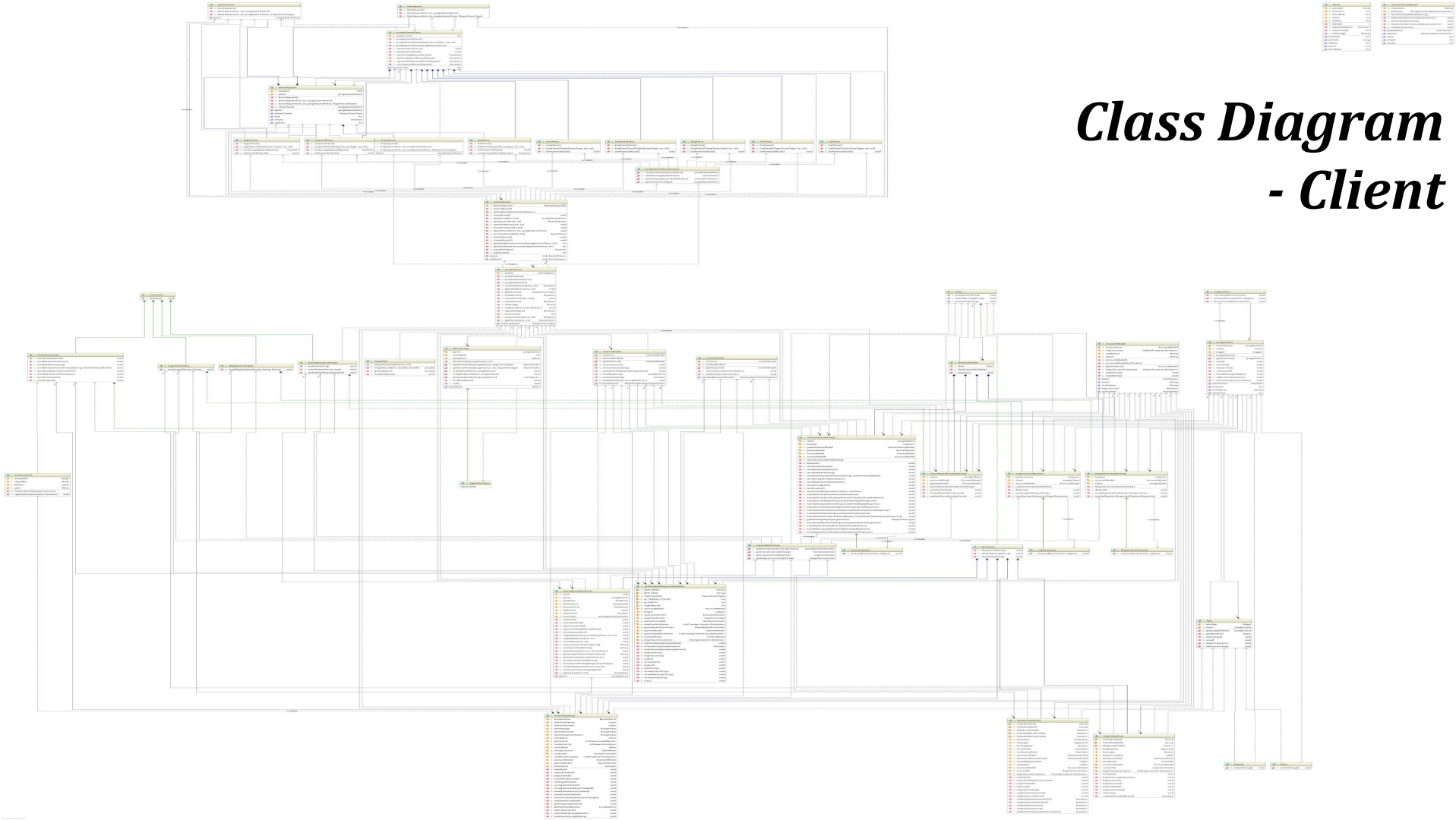


Domain Model

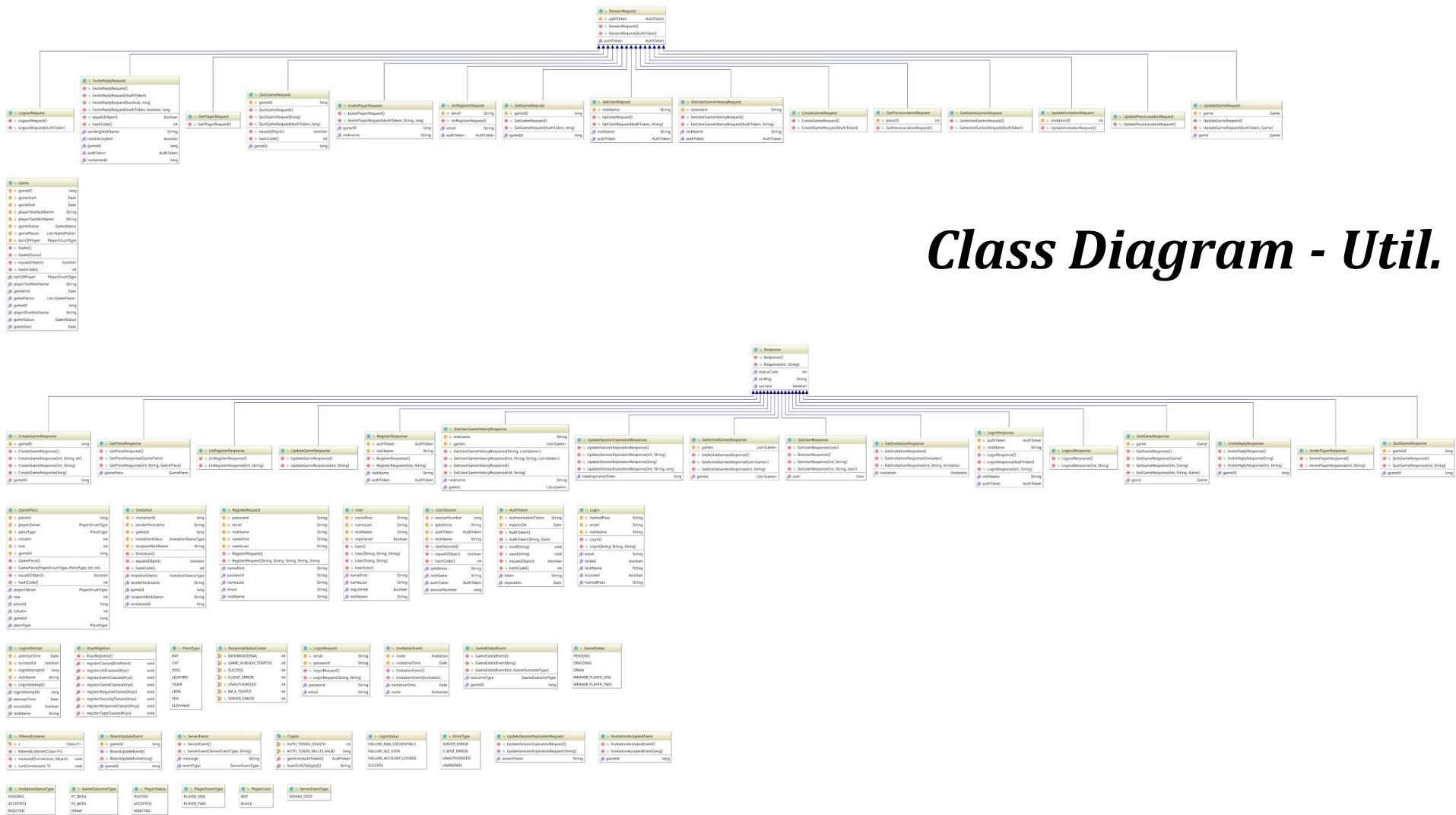
Domain Model - Chessire Coders, P5



Design Document







Testing

Over 40 unique tests for Client side.

Over 25 unique, comprehensive Server side acceptance tests.

Development Manual Changes

- Now uses GitHub's Wiki.
- Added IDE specific instructions.
 - Eclipse
 - IntelliJ IDEA
- Added instructions for setting up database.
 - Using Docker + PostgreSQL
 - Using H2
- Added instructions for setting run configurations for all applications.

Refactoring & Design Patterns

Refactoring:

- Implemented MVC pattern in client
- Method and class extraction

New Design Patterns:

- Observer
- Factory/Abstract Factory
- Model-View-Controller

Existing Design Patterns

- Singleton
- Factory Method
- Abstract Factory Method
- Prototype
- Facade
- Decorator

Client Traceability Link Matrix

Client Traceability Link Matrix									
	BaseController	Controller	GameBoardController	HomeController	LoginController	RegisterController	JungleGamePiece	BaseView	View
#1: Register to the system	X	X				X		X	X
#2: Create a new game	X	X		X			X	X	X
#3: Invite other users to a game	X	X	X					X	X
#4: Respond to Game Invitation	X	X		X				X	X
#5: Quit Game	X	X	X					X	X
#6: Unregister from System	X	X		X				X	X
#7: View Player Profile	X	X		X				X	X
#8: Log In to System	X	X			X			X	X
#9: Log out of System	X	X		X				X	X
#10: Move Game Piece	X	X	X				X	X	X
#11: Switch Game	X	X		X				X	X

Client Traceability Link Matrix

		Controllers							Game		Game Board Squares					Game Pieces										Models				Views				UI
		App	JungleClient	Main	ControllerFactory	GameBoardControllerImpl	HomeControllerImpl	LoginControllerImpl	RegisterControllerImpl	JungleGame	GameBoard	BoardSquare	DenSquare	RiverSquare	TrapSquare	CatPiece	DogPiece	ElephantPiece	FoxPiece	LeopardPiece	LionPiece	RatPiece	TigerPiece	AccountModel	GameHistoryModel	GamesModel	InvitesModel	GameBoardViewImpl	HomeViewImpl	LoginViewImpl	RegisterViewImpl	InviteListCtrl		
#1: Register to the system	X	X	X	X			X																X											
#2: Create a new game	X	X	X	X		X		X															X		X									
#3: Invite other users to a game	X	X	X	X		X					X	X	X	X	X	X	X	X	X	X	X	X	X											
#4: Respond to Game Invitation	X	X	X	X		X				X													X		X		X						X	
#5: Quit Game	X	X	X	X		X				X	X												X		X									
#6: Unregister from System	X	X	X	X		X																	X		X									
#7: View Player Profile	X	X	X	X		X																	X		X									
#8: Login to System	X	X	X	X			X																X	X										
#9: Log out of System	X	X	X	X																			X		X				X		X			
#10: Move Game Piece	X	X	X	X		X					X	X	X	X	X	X	X	X	X	X	X	X			X		X							
#11: Switch Game	X	X	X	X		X					X	X											X		X		X							

Server Traceability Link Matrix

Server Traceability Link Matrix

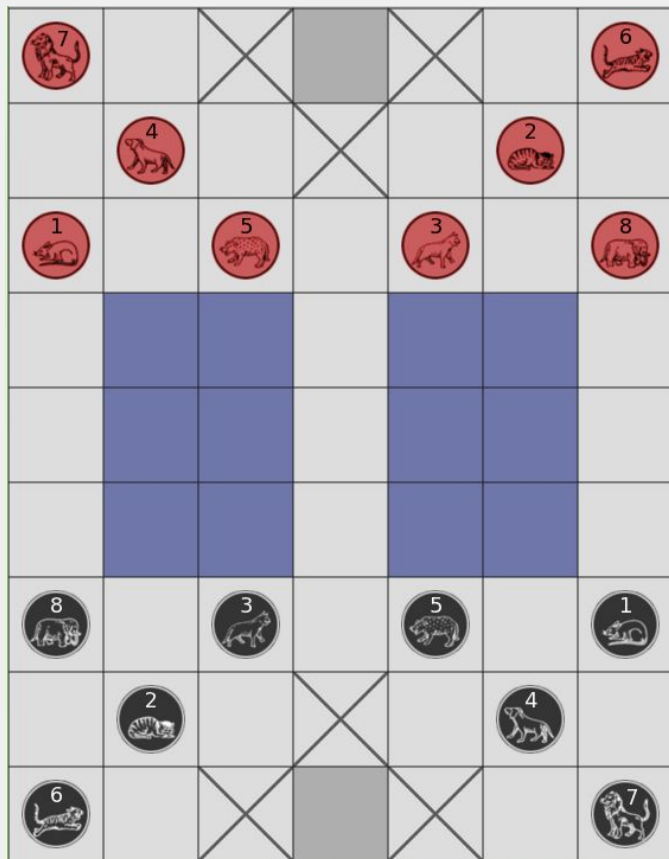
[illegible]

Utility Traceability Link Matrix

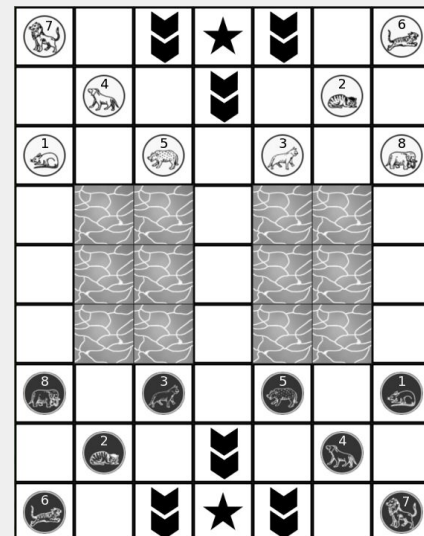
Util Traceability Link Matrix

[illegible]

Old Art



New Art



Extra Features: Bot (AI)

Algorithm:

- Negamax with Alpha Beta pruning

Challenges & Lessons Learned

Challenges:

- Using TDD.
- Automated Testing.
- Figuring out time and workload on github issues.
- Managing structure and operation on github branches.
- Constructing AI
- Clear communication across the three core sections to our code. (Client, Server, and UI)

Lessons Learned:

- Overlapping knowledge of the program code is critical to handling complications.
- An overall focus is more beneficial than working individually.
- Different perspectives and ideas improve the product when the main focus is maintained.
- Good design is critical too much quickly leads to complication.
- Wisely using your tools is helpful to manage shared knowledge.

***Questions
And
Discussion***