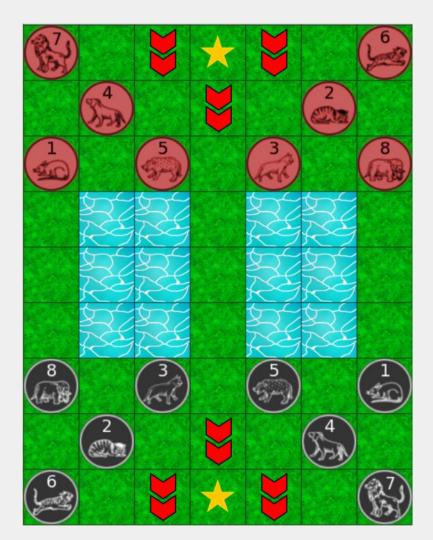
The Jungle Game

Chesshire Coders

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





The Jungle Game

Jungle is a two-player strategy game.









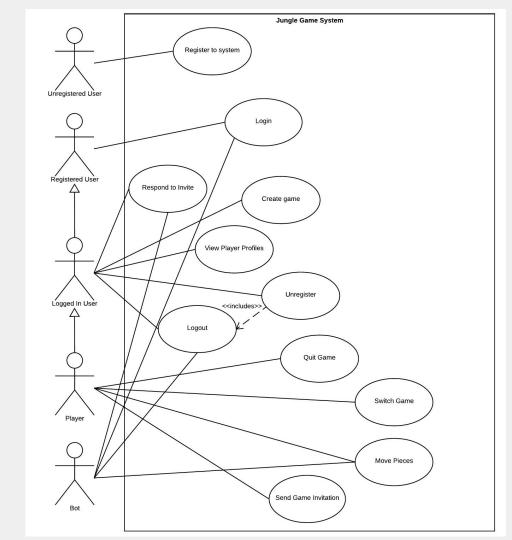


Den

River

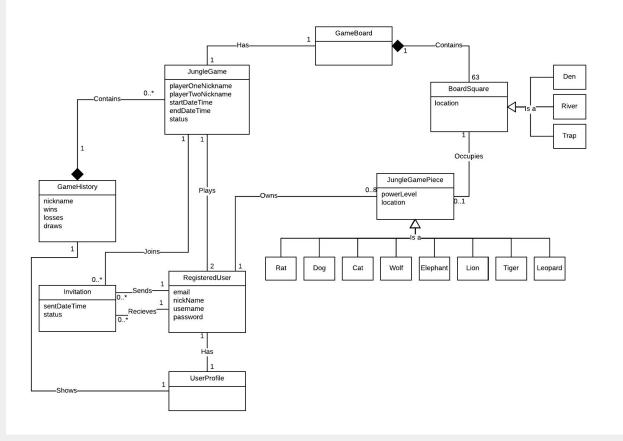
Trap

Use Case Diagram

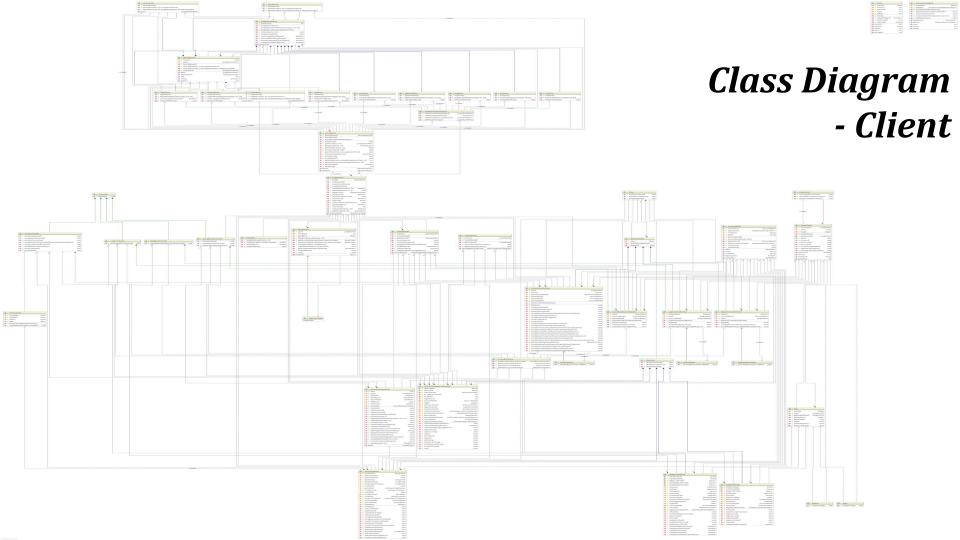


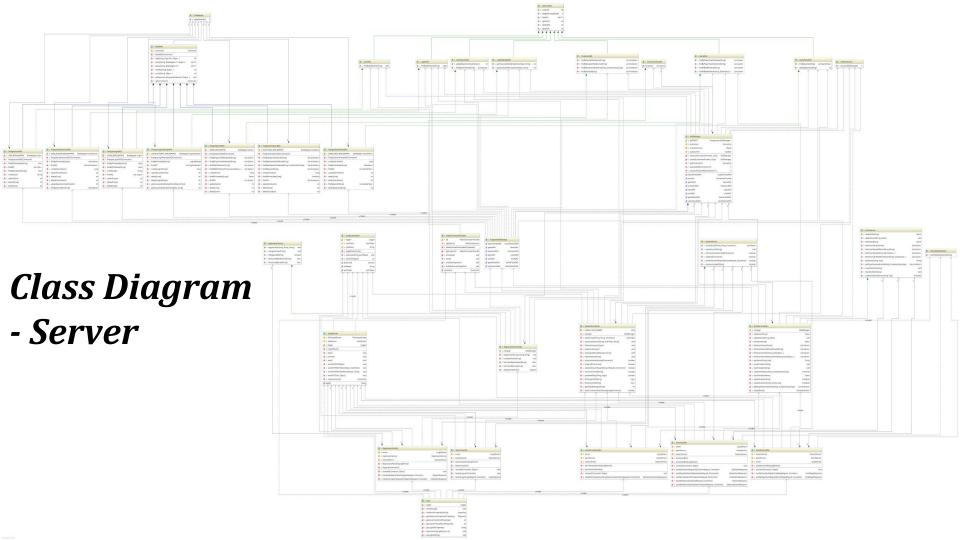
Domain Model

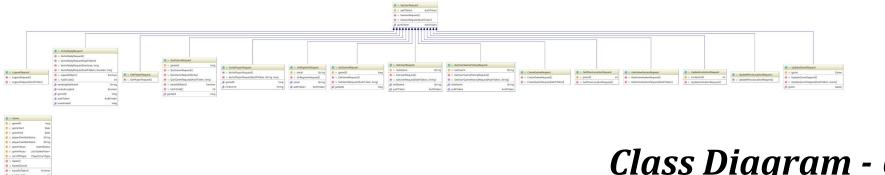
Domain Model - Chessire Coders, P5



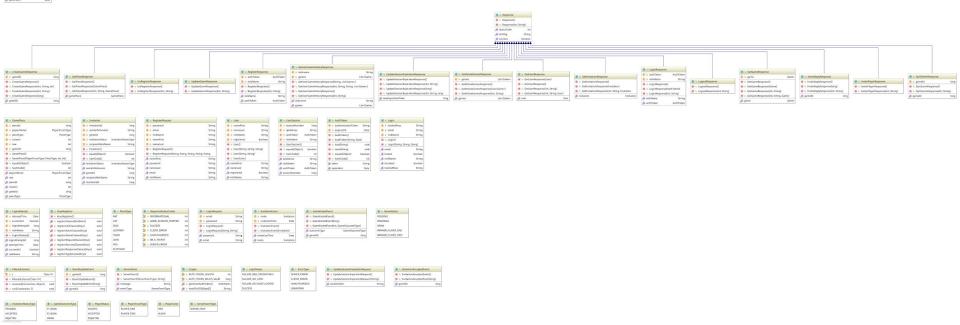
Design Document







Class Diagram - Util.



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
 - o IntelliJ IDEA
- Added instructions for setting up database.
 - Using Docker + PostgreSQL
 - o 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 T	raceability I	ink Matrix				
	BaseController	Controller	GameBoardController	HomeController	LoginController	RegisterController	JungleGamePiece	BaseView	View
#1: Register to the system	x	х				х		х	х
#2: Create a new game	x	х		х			х	х	x
#3: Invite other users to a game	X	x	x					х	х
#4: Respond to Game Invitation	X	X		x				х	х
#5: Quit Game	X	х	x					х	х
#6: Unregister from System	х	X		х				Х	х
#7: View Player Profile	x	x		x				х	х
#8: Log in to System	х	X			x			Х	х
#9: Log out of System	x	x		х				х	х
#10: Move Game Piece	X	X	х				х	х	x
#44: 0:::b=b 0-::-		15.2		162					521

												Client Tra	aceability	/ Link M	atrix															
				1		Control	allers	Game	.ne		Game Br	Board Squares					Game P	Pieces					Mod	odels			Views		-	UI
	App	JungleClient	nt Main	ControllerFactory	y GameBoardControllerimpl	.pl HomeControllerimpl	LoginControllerimpi RegisterControllerimpi	pl JungleGame	GameBoard	BoardSquare	e DenSquare	e RiverSquare	e TrapSquare	e CatPiece	DogPiece	ElephantPiece	FoxPiece	LeopardPiecr	e LionPiece	RatPiece	TigerPiece	AccountModel	GameHistoryModel	GamesModel	InvitesModel	GameBoardViewImpl	HomeViewImpl	LoginViewImpl	RegisterViewImpl	InviteListCell
#1: Register to the system	x	X	X	X			x		T .													x							X	
#2: Create a new game	х	X	X	X		X	'	X	x	x	X	x	x	x	X	х	X	x	х	х	х	x		х			X			
#3: Invite other users to a game	x	x	X	x	X		, ·	1	'													x			X	x				$oxed{\Box}$
#4: Respond to Game Invitation	х	X	X	X		X			x							'						X		x	X		x			х
#5: Quit Game	x	X	X	X	x		'	X	x													x		x		x				
#6: Unregister from System	x	x	X	X		x	·		1						1 '	1						x					x			
#7: View Player Profile	x	X	X	X		X	'					,										X	X				x			
#8: Log in to System	х	X	X	X			x															X						x	X	
#9: Log out of System	x	X	X	X	· ·	X	'		()			,	,									X					x		,	
#10: Move Game Piece	x	x	X	X	X		1	x	x	x	X	x	X	x	X	X	X	x	x	x	X	x		x		x			,	

Server Traceability Link Matrix

Server Haceannity Link Matrix																																							
	JangleCorrection	JungleServer	Main	Gamekander	GermitistaryHendle	r invistorbande	RegistrationSandio	of SessionSander	UserNander 7	ConnectionProvider F	DAGCommand	DAOManager	HikariConnecticeFrovider	RoxMapper	BesicoAO	Garrigao	Garne/NeceDAG	Generic040	InvitationDAO	LoginkternyIDAO	LegH040	UserDAD U	IserSessionQAO Posts	gresDA08lenager	PostgresGeneDAO	PestgresGarrePieceQAQ	PostgresinvlationQA	PostgresLoginAttenprDAD	PostgresLegirQAO	PostgresüserDAG P	PostgresUserSessionQAQ	GameService	RegistrationService 1	JessionBervice	GameServiceImpl	InvitationServiceImpl	RegistrationServiceImpl	SessionServiceImpl	GarneStateException
#1: Register to the system	×	×	×				×			×	×	×	×	×	×			×				x		×						x			x	×			×	×	
62: Create a new game	×	×	×	×						×	x	×	×	×	×	x	×	×						×	x	x						×		×	×			×	
#3: Inside other users to a game	×	×	x	100		×				x	x	×	X	×	×		- 00	X	×					×		23	×					22.50		×		x		×	
66: Respend to Game invisions	X	X	x	×		×				x	x	×	X	×	×	x		X	×					x	х		×					x		x	×	×		×	×
MS Quit Game	×	×	x							x	x	×	×	×	×	х		X						x	х		1000					x		×	×			×	
Att: Unregister from Dystem	×	×	×				×			x	x	×	×	×	×			×				x		x						x	×		x	×			×	×	
#7: View Player Profile	×	×	×		×					x	x	×	×	×	×			×						×								×		×	×			×	
FR: Leg in to System	×	×	x		100000		×	×	×	x	×	×	×	×	×			×		×	×	x	×	×				×	x	x	×		×	×			×	×	
William and of System	×	×	x					×		×	×	×	×	×	×			×			×	x	x	x					x	×	×			x				×	
#10: Move Game Piece	×	×	x							×	×	×	×	×	×	×	×	×						x	x	x						×		×	×			×	
#11: Switch Gamo	×	×	×	×						x	×	×	×	×	×	×		×						×	x							×		×	×			×	

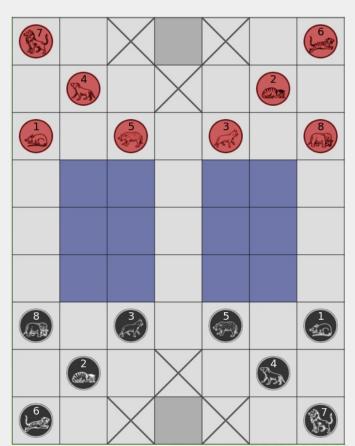
Utility Traceability Link Matrix

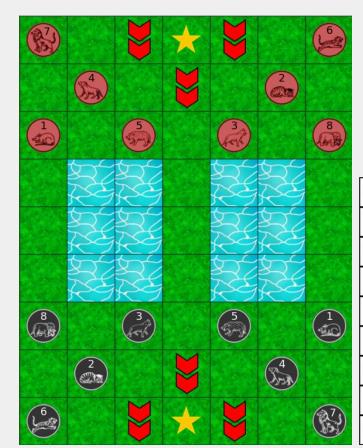
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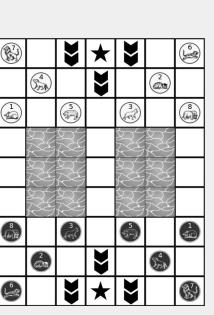
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Old Art

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