

Application

- Handle login
- Render Welcome and Main Page

- Welcome
- Main

Login

- Validates user credentials
- Sends user to main page upon successful login

- Application
- Welcome

Register

- Inserts new users into database and creates profile
- Validates new credentials are correct format and unused
- Sends user to login page after successful registration

- Application
- Welcome

GamePage

- Display current state of the board
- Show selected piece
- Send move made to back end

- Main
- Match

Main

- Display current and past games from back end
- Display current user logged in
- Allow user to start a new game

- Match
- Login

Welcome

- Initial page user sees upon visiting website
- Allows user to go to login or register page
- Displays info about Jungle game and devs

HTTPRestful

- Handle register and login requests
- Start server

- Login
- Register

InitServer

- Initialize the server using an HTTPRestful object

- HTTPRestful

JungleBoard

- Create a new board
- Initialize the starting pieces
- Place pieces
- Get piece at certain position
- Make moves by updating piece locations
- Hold current game state variables for front end communication

- Piece

Piece

Rat, Cat, Wolf, Dog, Leopard, BigCat, Lion, Tiger, Elephant

- Hold information for each piece like rank, color, row and column
- Get and set piece positions
- Check and return legal moves for each piece
- Check if a move will trap the piece
- Check if a move will win the game
- Set winner and state of game for front end use

- JungleBoard
- Child classes

Rat

Piece

- Create Rat pieces
- Set Rat rank
- Check legal positions as Rat has special moves

- Piece

Cat		Piece
<ul style="list-style-type: none">• Create Cat pieces• Set Cat rank	<ul style="list-style-type: none">• Piece	

Wolf		Piece
<ul style="list-style-type: none">• Create Wolf pieces• Set Wolf rank	<ul style="list-style-type: none">• Piece	

Dog		Piece
<ul style="list-style-type: none">• Create Dog pieces• Set Dog rank	<ul style="list-style-type: none">• Piece	

Leopard		Piece
<ul style="list-style-type: none">• Create Leopard pieces• Set Leopard rank	<ul style="list-style-type: none">• Piece	

BigCat		Piece Lion, Tiger
<ul style="list-style-type: none">• Check legal moves for Lion and Tiger child classes as they have special moves	<ul style="list-style-type: none">• Piece• Lion• Tiger	

Lion		BigCat, Piece
<ul style="list-style-type: none">• Create Lion pieces• Set Lion rank	<ul style="list-style-type: none">• BigCat• Piece	

Tiger		BigCat, Piece
<ul style="list-style-type: none">• Create Tiger pieces• Set Tiger rank	<ul style="list-style-type: none">• BigCat• Piece	

Elephant		Piece
<ul style="list-style-type: none">• Create Elephant pieces• Set Elephant rank	<ul style="list-style-type: none">• Piece	

RetrieveMatches

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| <ul style="list-style-type: none">• Communicate with database to pull all active and past matches for a user | <ul style="list-style-type: none">• Match |
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RetrieveProfile

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| <ul style="list-style-type: none">• Communicate with database to pull user profiles | <ul style="list-style-type: none">• Profile |
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Profile

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| <ul style="list-style-type: none">• Hold information about each user• Display statistics about player | |
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Match

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| <ul style="list-style-type: none">• Move data between JungleBoard and GamePage• Communicate with database to pull current state of games• Set game state variables | <ul style="list-style-type: none">• JungleBoard• GamePage |
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