

CSC207

Three Musketeers

A3

〔BingMing, Razi, Thomas, Nasim〕

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Audio

In-game audios

J



Save & Hint

Save game features

&

In-game Hints



Irregular Moves

Surprises Enemy

Special Move

V

T

Audience & Agent Change

> R

Audience reactions &

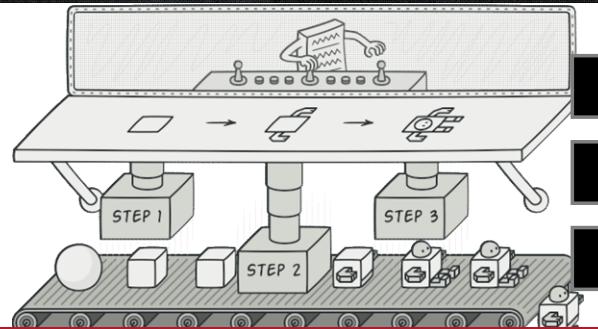
Change enemy agent in game



Assignment 3

Description

Save & Hint



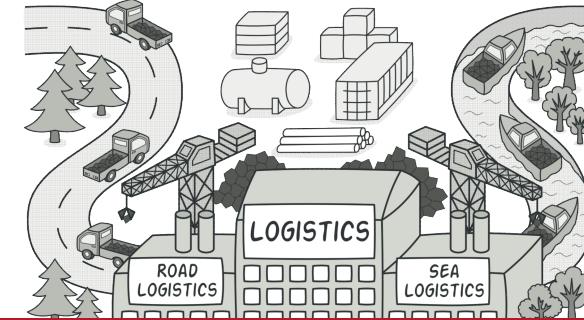
Save Feature

- Builder Pattern is used to minimize the amount of params.
- Create different save objects to save different game features.
- Saved file names are linked to the saving timestamp.

Hints

Audience

Board



Hint Feature

- Factory Pattern is used to maximize the type of hints with small amount of params.
- Create different types(levels) of hints according to the user input.
- Presets to make the process simple.
- Easy to create new hints.

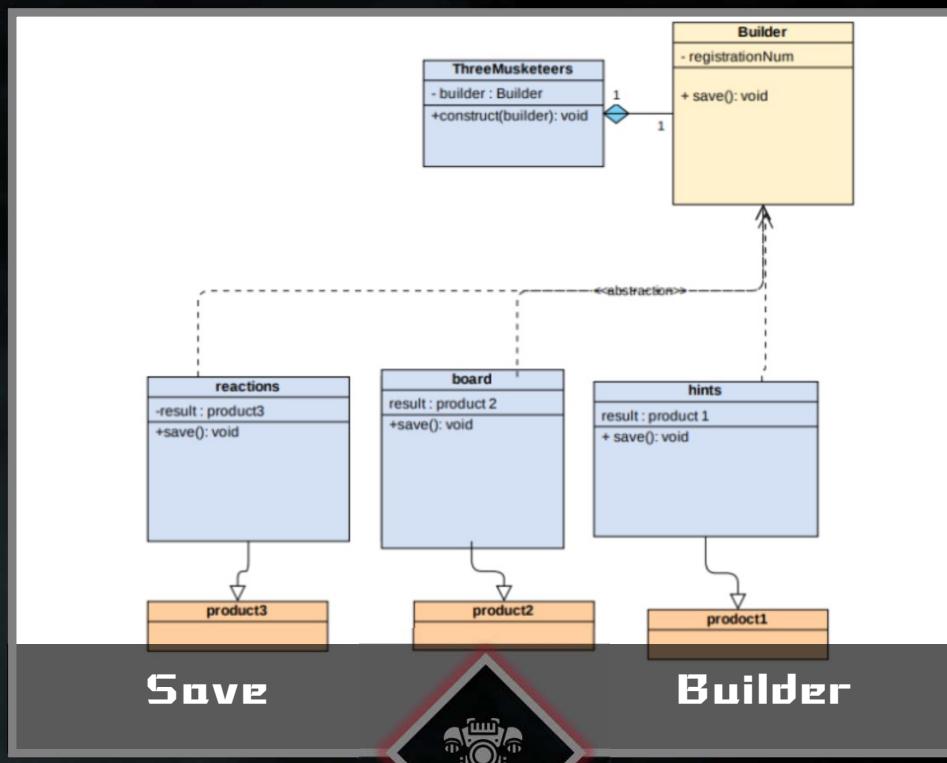
BingMing Zhang



Assignment 3

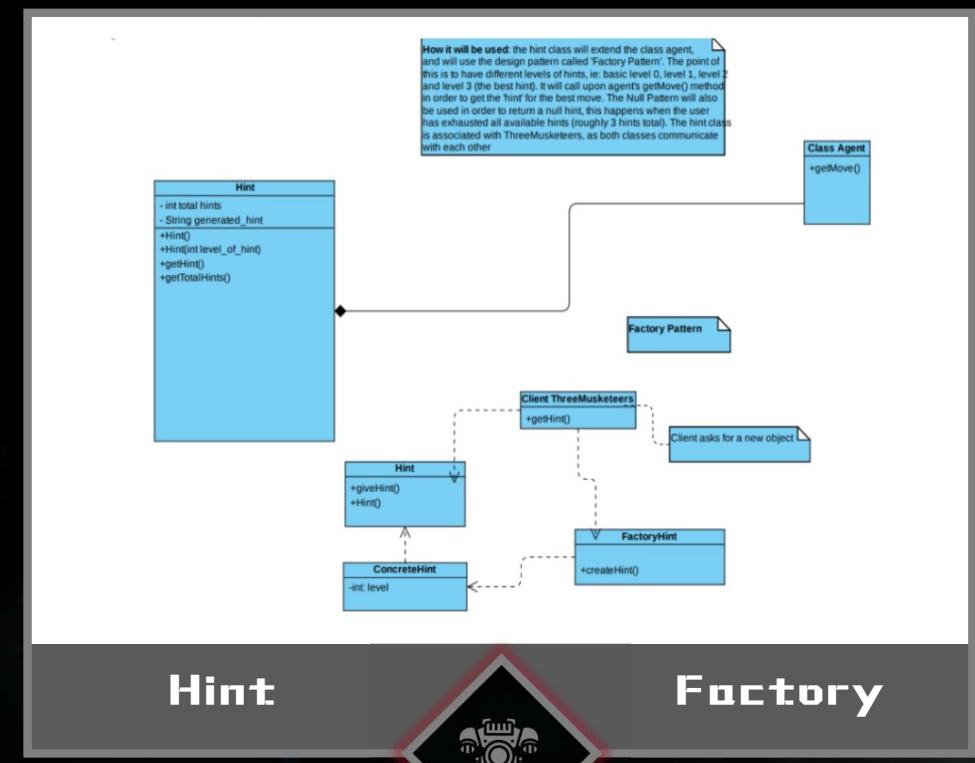
Description

Design Patterns



Save

Builder



Hint

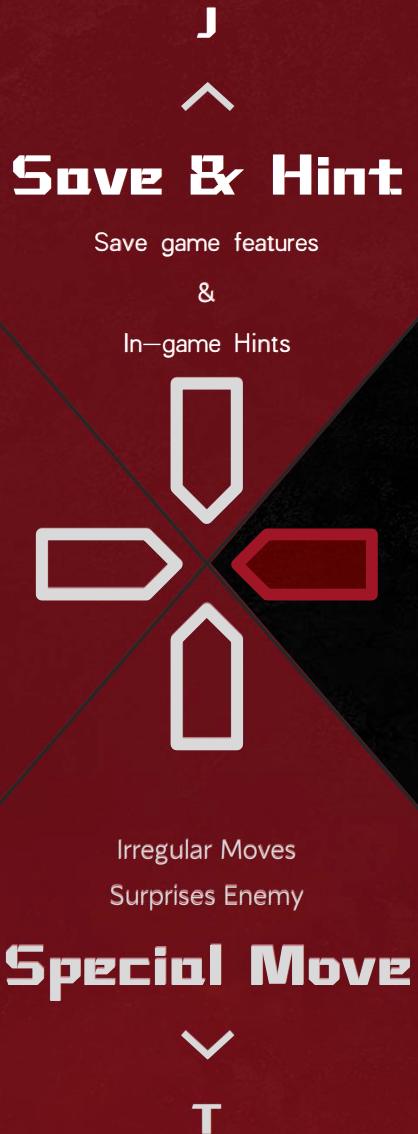
Factory

BingMing Zhang

N <

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Assignment 3

Description

Audience & Agent Change

Audience

- > 1 Without Audience 

Stimulation: 862

- > 2 With Audience 

Stimulation: 3756



Agent Change

- > 1 Without Agent Change 

Flexibility: 132

- > 2 With Agent Change 

Flexibility: 5716



Razi Messinger



Assignment 3

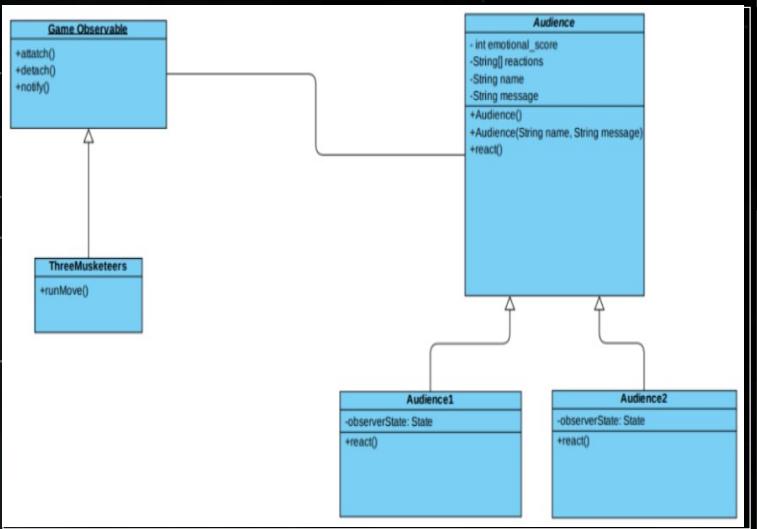
Description

Design Patterns

Observer pattern is used because we have an audience like in real life, that is observing a game

Each member of the audience needs to be updated (in real time) with the new information

Each member reacts based on this new information



[Observer]

Each agent is only instantiated one time

One agent is played per game instance

When users change agents, the old one is destroyed and a new one is created

[Singleton]

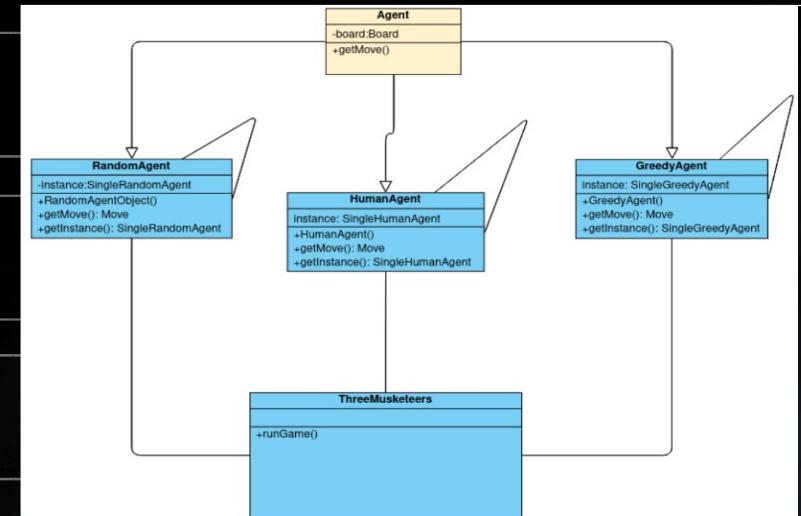
Observer
Audience

Observable
Game
Observable

Human Agent

Random Agent

Greedy Agent



Razi Messinger

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Audio

In-game audios

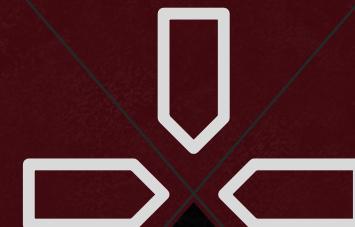
J
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Save & Hint

Save game features

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In-game Hints



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Special Move

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T



Special Moves



Allows for more dynamic gameplay
and less repetition

Special Moves

NEW

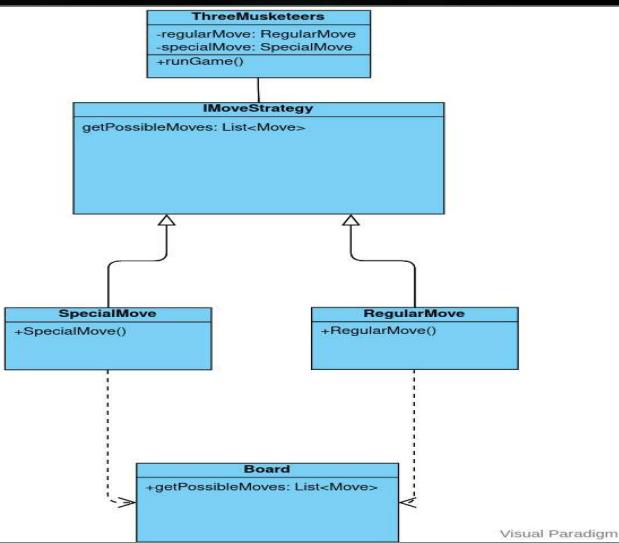


Switches up the strategies and
formulas that are used in the base
game



Design Patterns

Strategy Pattern



Each agent is given two strategies to use, a regular move and a special move

The strategy calls the necessary functions in `Board.java` to check all possible moves

Regular

A typical move that is performed in the base game



Special

A move that jumps two squares in any direction



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Special Move

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Music

Enemy	Dream Dragon
audioTrack1	Anomynous
Stay	Justin Bieber
Legends Never Die	Against the Current
Silver Scrapes	ProtoShredanoid

Play Options

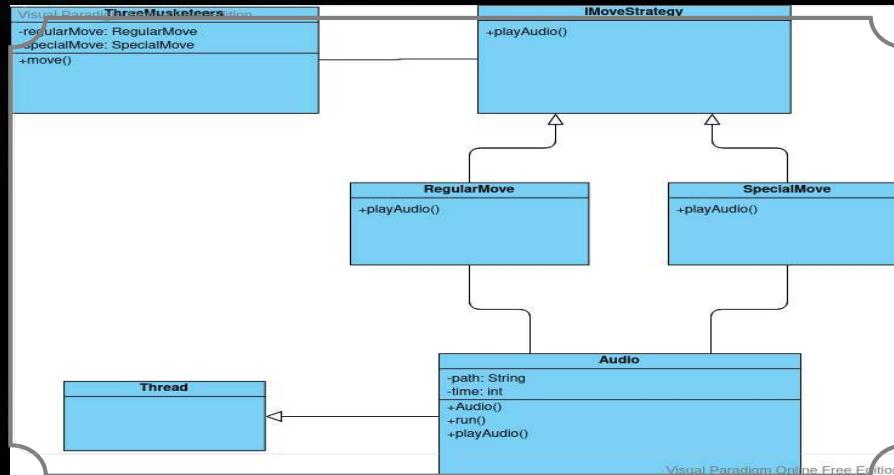




Assignment 3

Description

Design Patterns



Audio



Plays the audio (song)

RegularMoves & SpecialMoves



Helps connect the Audio to the ThreeMuskeeters class. For each move made, audio plays.

THANKS

Thanks for Watching!

2021