My Project

Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 3

Class Documentation

3.1 Board Class Reference

Inheritance diagram for Board:

3.2 GameMaster Class Reference

Collaboration diagram for GameMaster:

Public Member Functions

- GameMaster (GameState newstate)
- String saveGame (String filepath)
- String makeMove (int x, int y)
- int getTurn ()
- int getPlayerHealth (int nr)
- int getField (int player, int x, int y)

3.2.1 Detailed Description

Runs the game by accepting input from player and modyfing the gamestate accordingly until the game is finished.

3.2.2 Constructor & Destructor Documentation

3.2.2.1 GameMaster()

```
GameMaster.GameMaster (
            GameState newstate ) [inline]
```

Creates a new GameMaster which can run the game.

Parameters

newstate	- gamestate to be run by GameMaster.

3.2.3 Member Function Documentation

3.2.3.1 getField()

```
int GameMaster.getField (
            int player,
            int x,
            int y )  [inline]
```

Reveals content of given player's boards (field designated by given coordinates).

Parameters

player	player number.
x	rows.
y	columns.

Returns

content of designated field.

3.2.3.2 getPlayerHealth()

```
int GameMaster.getPlayerHealth (
            int nr )  [inline]
```

Returns designated player's hitpoints.

Parameters

nr	nr of player.

Returns

remaining hitpoints of player with given nr.

3.2.3.3 getTurn()

```
int GameMaster.getTurn ( )  [inline]
```

Returns number of current turn.

Returns

current turn;

3.2.3.4 makeMove()

```
String GameMaster.makeMove (
            int x,
            int y )  [inline]
```

Orders game to register attack on given coordinates.

Parameters

x	row letter.
y	column number.

Returns

attack report.

3.2.3.5 saveGame()

```
String GameMaster.saveGame (
            String filepath )  [inline]
```

Saves gamestate to a file with given path.

Parameters

filepath	path for save file

Returns

Save report

The documentation for this class was generated from the following file:

- GameMaster.java

3.3 GameMasterGUI Class Reference

Inheritance diagram for GameMasterGUI:

Collaboration diagram for GameMasterGUI:

3.3.1 Detailed Description

Player interface.

The documentation for this class was generated from the following file:

- GameMasterGUI.java

3.4 GamePrep Class Reference

Collaboration diagram for GamePrep:

Public Member Functions

- GamePrep ()
- String loadGame (String filepath)
- String makePlacement (int x, int y, Boolean horizontal)
- GameState encapsulate ()

3.4.1 Detailed Description

Prepares a new gamestate or loads a saved gamestate.

3.4.2 Constructor & Destructor Documentation

3.4.2.1 GamePrep()

```
GamePrep.GamePrep ( )  [inline]
```

Initializes GamePrep.

3.4.3 Member Function Documentation

3.4.3.1 encapsulate()

```
GameState GamePrep.encapsulate ( ) [inline]
```

Finalizes preparation and creates a GameState using initialized boards and ships.

Returns

GameState prepared for playing.

3.4.3.2 loadGame()

```
String GamePrep.loadGame (
            String filepath ) [inline]
```

Loads saved GameState.

Parameters

filepath	path for file with saved GameState.

Returns

loading operation report.

3.4.3.3 makePlacement()

```
String GamePrep.makePlacement (
            int x,
            int y,
            Boolean horizontal ) [inline]
```

Processes ship placement request.

Parameters

x	row.
y	column.
nr	placed ship's number.
length	placed ship's length
horizontal	placed ship's orientation.

Returns

placement report.

System.out.println(horizontal);

The documentation for this class was generated from the following file:

- GamePrep.java

3.5 GamePrepGUI Class Reference

Inheritance diagram for GamePrepGUI:

Collaboration diagram for GamePrepGUI:

3.5.1 Detailed Description

Graphical User Interface for GamePrep class.

The documentation for this class was generated from the following file:

- GamePrepGUI.java

3.6 GameState Class Reference

Inheritance diagram for GameState:

Collaboration diagram for GameState:

Public Member Functions

- GameState ()
- GameState (Board p1, Board p2)
- GameState (Board p1, Board p2, Ships ready_ships)
- void turnInc ()
- int getTurn ()
- String attack (int x, int y)
- int getPlayerHealth (int nr)
- int getField (int player, int x, int y)

3.6.1 Detailed Description

Represents state of a single game of Battleships.

3.6.2 Constructor & Destructor Documentation

3.6.2.1 GameState() [1/3]

```
GameState.GameState ( ) [inline]
```

Creates a new default gamestate with empty Boards.

3.6.2.2 GameState() [2/3]

```
GameState.GameState (
            Board p1,
            Board p2 ) [inline]
```

Creates a new default game-ready gamestate with given prepared boards.

Parameters

p1	player 1's board.
p2	player 2's board.

3.6.2.3 GameState() [3/3]

```
GameState.GameState (
            Board p1,
            Board p2,
            Ships ready_ships ) [inline]
```

Creates a new default game-ready gamestate with given prepared boards and ships registry.

Parameters

p1	player 1's board.
p2	player 2's board.
ready_ships	ships registry

3.6.3 Member Function Documentation

3.6.3.1 attack()

```
String GameState.attack (
            int x,
            int y )  [inline]
```

Performs attack on board (adequate to turn number) using given coordinates.

Parameters

x	row.
y	column.

Returns

attack report.

3.6.3.2 getField()

```
int GameState.getField (
            int player,
            int x,
            int y )  [inline]
```

Returns content of field (desribed by given coordinates) on designated player's board.

Parameters

nr	player number.

Returns

content of board's field.

3.6.3.3 getPlayerHealth()

```
int GameState.getPlayerHealth (
            int nr )  [inline]
```

Returns number of designated player's remaining hitpoints.

Parameters

nr	player number.

Returns

> player's remaining hitpoints.

3.6.3.4 getTurn()

```
int GameState.getTurn ( )  [inline]
```

Reads turn number.

Returns

> turn number

3.6.3.5 turnInc()

```
void GameState.turnInc ( )  [inline]
```

Increments number of turns.∗ Performs attack on board (adequate to turn number) using given coordinates.

Parameters

x	row
y	column

Returns

> attack report

The documentation for this class was generated from the following file:

- GameState.java

3.7 Program Class Reference

Static Public Member Functions

- static void **main** (String[ ] args)

The documentation for this class was generated from the following file:

- Program.java

3.8 Ships Class Reference

Inheritance diagram for Ships:

Collaboration diagram for Ships:

Public Member Functions

- Ships ()
- String hit (int id)
- int getShipHP (int id)

3.8.1 Detailed Description

Represents ships' statuses.

3.8.2 Constructor & Destructor Documentation

3.8.2.1 Ships()

```
Ships.Ships ( )  [inline]
```

Builds a new ship hitpoints registry, gives every ship default number of hitpoints.

3.8.3 Member Function Documentation

3.8.3.1 getShipHP()

```
int Ships.getShipHP (
            int id )  [inline]
```

Read's hitpoints of ship desribed by given id.

Parameters

id	ship's id.

Returns

remaining HitPoints of ship with given id.

3.8.3.2 hit()

```
String Ships.hit (
            int id ) [inline]
```

Registers hit on the ship and returns attack report.

Parameters

id	id of attacked ship

Returns

attack report.

The documentation for this class was generated from the following file:

- Ships.java

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