

(P)BNJ – Brian Li, Nakib Abedin, Jefford Shau

APCS pd07

FP – UML Diagram

2022-05-28

Time Spent: 1.0 hrs

Maze
- String[][] _maze
+ void setPos(int int String) + String getPos(int int) + String toString

Map
- Queue<Character> turnOrder
+ String toString() + void playTurns()

MazeGenerator
- String[][] _maze - ArrayList<Room> _rooms - ArrayList<ArrayList<Tile>> _mazes - int _rows - int _cols;
+ String toString() - void buildRooms() - int randNum() - void cleanup() - int cleanup(int int) - void buildBorders() - void carveMaze() - void mazeToSpace() - void generate(int int) - void carve(int int) - void uncarveMaze()

- void uncarve(int int)
- boolean canCarve(int int)
- boolean canUncarve(int int)
- void openGates()
- void markGates()
- boolean isGate(int int)
- + String getGeneratedMaze()

## Tile

- int r
- int c

- + int getRow()
- + int getCol()
- + void setTile()
- + String toString()

## Room

- int \_tlr
- int \_tlc
- int \_brr
- int \_brc
- ArrayList<Tile> gates

- + void markGates()
- + void removeGates()

## Hero (extends Character)

- String input
- rest are inherited by parent

- + void moveUp()
  - + void moveRight()
  - + void moveDown()
  - + void moveLeft()
  - + void playTurn() [overridden]
- rest are inherited from parent

Monster (extends Character)
inherits from parent
<ul style="list-style-type: none"> <li>+ void playTurn() [overridden]</li> <li>+ void move()</li> </ul>

Character
<ul style="list-style-type: none"> <li>- int health</li> <li>- int attack</li> <li>- int speed</li> <li>- int currentR</li> <li>- int currentC</li> <li>- String lastTile</li> </ul>
<ul style="list-style-type: none"> <li>+ void setHealth()</li> <li>+ int getHealth()</li> <li>+ int getAtk()</li> <li>+ int getSpeed()</li> <li>+ boolean canAttack()</li> <li>+ void attack()</li> <li>+ void attack(int r, int c)</li> <li>+ void playTurn()</li> <li>- void processTile()</li> </ul>